MANAGEMENT PLANS

AIR POLLUTION and EMISSIONS MANAGEMENT PLAN

REVISION STATUS		
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LIST OF ABBREVIATIONS

AAOİAŞ	Antalya-Alanya Otoyolu İnşaat Yatırım ve İşletme A.Ş.
AQECP	Air Quality and Emissions Control Plan
CLO	Community Liaison Officer
CO	Carbon Monoxide
E&S	Environmental and Social
EHS	Environmental, Health, and Safety
ENCON	ENCON Environmental Consultancy Co.
EPC	Engineering, Procurement and Construction (Limak İnşaat Şanayi ve Tic. A.Ş.)
ESIA	Environmental and Social Impact Assessment
ESMMP	Environmental and Social Management and Monitoring Plan
ESMS	Environmental and Social Management System
EU	European Union
GM	Grievance Mechanism
HC	Hydrocarbons
HSE	Health, Safety and Environment
H&S	Health and Safety
IFC	International Finance Corporation
KPIs	Key Performance Indicators
Limak	Limak İnşaat Şanayi ve Tic. A.Ş.
NO_x	Nitrogen Oxides (NO_2 and NO)
PM	Particulate Matter
RAMAQ	Regulation on Assessment and Management of Air Quality
RCA	Root Cause Analysis
SPV	Special Purpose Vehicle (Antalya-Alanya Otoyolu İnşaat Yatırım ve İşletme A.Ş.)
SO_2	Sulfur Dioxide
VOCs	Volatile Organic Compounds
WHO	World Health Organization

AIR POLLUTION and EMISSIONS MANAGEMENT PLAN

I. INTRODUCTION

Ministry of Transport, and Infrastructure (former Ministry of Transport, Maritime Affairs and Communications), General Directorate of Highways ("KGM" or "the Administration"), as the owner of the Antalya-Alanya Motorway Project, has tendered for a contract in accordance with the Law on Implementation of Some of the Investments and Services in the Framework of Build, Operate and Transfer Model (Law No: 3996). Following the tendering process, KGM has awarded Antalya-Alanya Otoyolu İnşaat Yatırım ve İşletme A.Ş. (AAOİAŞ or the Project Sponsor) with a Build, Operate and Transfer (BOT) contract for the implementation of the Project. Accordingly, AAOİAŞ will be referred as Project Sponsor[1] in the scope of this report. The main contractor for the Project has been designated as Limak and will henceforth be referred to as the Contractor (or EPC).

The project is designed to connect the districts of Serik and Alanya via the Manavgat district of Antalya province. The Project will enhance the existing transportation network services with its surrounding provinces: Burdur, Muğla, Konya, Isparta, Karaman and Mersin. Various environmental, social, and technical studies have been conducted along the initial route of the Project tendered by the KGM. Based on these studies, the route was optimized, incorporating engineering practices and addressing environmental and social considerations, particularly issues of involuntary and economic resettlement, before being finalized. According to the most current design, the total length of the Motorway, which will be a dual carriageway of mostly 3 and partially 2 lanes (3x2 and 2x2) in each direction, is 117.8 kilometers including the main carriageway and the access roads[2].

This Air Pollution and Emissions Management Plan ("APEMP" or "Plan") has been prepared by Antalya-Alanya Highway Construction Investment and Operation Inc. ("AAOİAŞ" or "SPV") for the Antalya-Alanya Highway Project ("Project") in accordance with national legislation, the Equator Principles ("EP"), the International Finance Corporation ("IFC") Performance Standards ("PSs"), and the international standards that reference the relevant legislative sections. The Plan covers the construction phase of the Project.

I.1 Project Description

The Project starts at Serik Interchange (Km: 52+000) and then proceeds eastward, following the corridor at the foothills of the Taurus Mountains within the boundaries of Serik and Manavgat districts, ending at north of Konaklı neighborhood of Alanya District (Km: 136+000). From this point onwards, the route turns southward with a 2x2 lane connection road and connects to the D400 state road at the Alanya West Interchange. As of April 2025, the current Project design includes a total of 117.8 kilometers of road, comprising 84 kilometers of main road (motorway) and 33.8 kilometers of access roads.

The map showing the construction components and road route within the scope of the Project's construction activities is provided in *Figure I-1.*

[1] The BOT Contract uses the term "Appointed Company" to refer Project Sponsor

[2] It should be noted that the environmental and social baseline characterization, maps and scoping assessments provided in this report are based on the most current design

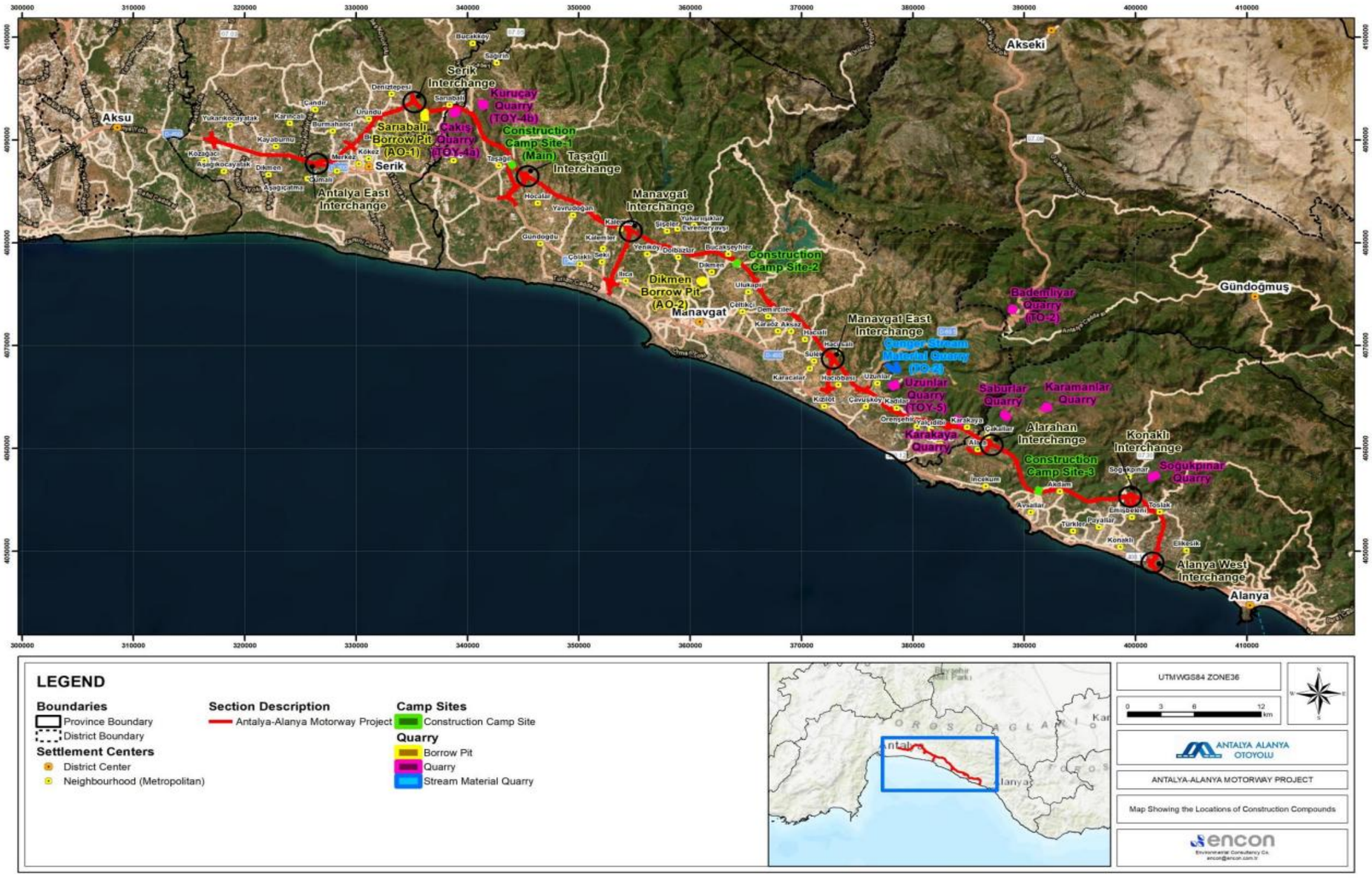

Figure I-1.Map Showing the Locations of Construction Compounds

Other structures to be built as part of the project are as follows:

- 16 viaducts,
- 22 bridges,
- 305 culverts,
- 25 interchanges,
- 56 overpasses,
- 43 underpasses, and
- 5 tunnels.

The activities that should be addressed within this plan and can be considered as emission sources are as follows:

I. Earthworks and Excavation-Filling Operations,
   - Excavation Work
   - Filling Operations
   - Material Storage

II. Material Transportation,
   - Truck Traffic
   - Use of Roads

III. Use of Construction Equipment,
   - Heavy Machinery (excavators, dozers, loaders, and trucks etc.)

IV. Dust Sources at the Construction Site
   - Dusting in Open Areas
   - Temporary Storage Areas

V. Dynamite and Blasting Operations
   - Blasting

VI. Worker and Construction Site Traffic
   - Personnel Vehicles
   - Use of Temporary Roads

I.2 Purpose and Scope

The purpose of this Plan:

- Defining country legislation and Project standards,
- Defining the duties and responsibilities of the personnel, and
- Identify air emission sources and outline mitigation, control, and monitoring measures to minimize adverse environmental and social impacts during the construction phase.

This management plan is a living document developed with the best available information and will be reviewed and revised as necessary due to the nature of the construction and progress.

The Plan has been developed in alignment with applicable national legislation and relevant international standards, including the requirements of international financial institutions. It outlines actions that should be done to manage dust and gas emissions effectively across construction-related activities and facilities. This plan will provide mitigation alternatives and an impact monitoring schedule in accordance with Turkish and international regulations and standards.

This Plan should be applied by all parties involved in the construction phase, including the Project Sponsor, Antalya-Alanya Otoyolu İnşaat Yatırım ve İşletme A.Ş. (AAOİAŞ), the Main Contractor (EPC or Limak), and all subcontractors. Responsibilities for implementation, monitoring, and reporting of air quality-related issues should be clearly assigned. Necessary updates to the Plan should be considered in case of changes in project design, construction methodology, or regulatory requirements.

Emissions during project construction will contribute to national air pollutant levels and thereby affect the health of nearby communities. The overall objective of this management plan is to identify and minimize air pollutant emissions and potential impacts from construction activities.

The plan refers to potential emission sources during construction and identifies how effective safeguards and appropriate emission controls will be implemented to ensure ambient air quality is maintained and minimize air quality impacts on adjacent receptors.

The primary air pollutants associated with construction of motorway projects include nitrogen oxides (NO_x – NO_2 and NO), particulate matter (PM), carbon monoxide (CO), hydrocarbons (HC), sulfur dioxide (SO_2), and volatile organic compounds (VOCs). Among these, particulate matter emissions are particularly significant and are expected to arise primarily from activities such as material extraction and supply, cut and fill operations, and the storage of excavated materials. This plan will be used to minimize the air quality impacts arising during the construction activities. The details necessary to minimize the impacts are addressed in *Section 5.*

Air pollutant levels derived from construction activities will be assessed against legal requirements and international standards. If the particulate matter level is found to be at risk of exceeding these conditions, preventive actions will be reviewed and enhanced by AAOİAŞ to reduce emissions to a reasonable level. Near sensitive areas such as residential units, schools, public parks, recreational areas and ecologically sensitive areas will be monitored to ensure minimal impact associated with the construction activities.

II. LEGISLATIVE FRAMEWORK AND REFERENCE STANDARDS

The Plan has been structured to align with both national and international requirements, including legislation, guidelines, and sectoral standards that define permissible emission levels and air quality thresholds. Accordingly, the following sources of reference will be used to guide the implementation and compliance procedures.

The regulations and standards to be applied in the project are provided in the following section.

II.1 National Requirements

The following Turkish laws and regulations will be used as the legal basis for managing air emissions during construction:

- Environmental Law No. 2872
- Regulation on the Assessment and Management of Air Quality
- Industrial Air Pollution Control Regulation
- Regulation on the Control of Exhaust Gas Emissions

- Regulation on Decreasing the Ozone Depleting Materials
- Regulation on Monitoring of Greenhouse Gas Emissions
- Regulation on the Control of Air Pollution Caused by Heating
- Regulation on Ozone Depleting Substances
- Regulation on Control of Exhaust Gas Emission and Quality of Petrol and Diesel
- Regulation on the Reduction in the Sulphur Content of Some Fuel Types
- Regulation on the Control of Odorous Emissions.

Ambient air quality limit values for various air pollutants defined in Turkish Regulation on Assessment and Management of Air Quality are presented in *Table.II.1*. . AAOİAŞ and its subcontractors are responsible for reviewing relevant local legislation and requirements to capture all requirements. The standards in *Table.II.1* are the target values for 2024 and further years.

Table.II.1Turkish Regulations: Ambient Air Quality Limit Values

Parameter	Duration	Limit Value*
SO_2	Hourly (cannot be exceeded more than 24 times in a year) **($\mu g/m^3$)**	350
	24 hour (cannot be exceeded more than 3 times in a year) **($\mu g/m^3$)**	125
	Long term limit **($\mu g/m^3$)**	60
	Annual and winter season (from 1 October to 31 March) **($\mu g/m^3$)**	20
NO_2	Hourly (cannot be exceeded more than 18 times a year) **($\mu g/m^3$)**	200
	Annual **($\mu g/m^3$)**	40
PM_{10}	24 hour (cannot be exceeded more than 35 times a year) **($\mu g/m^3$)**	50
	Annual **($\mu g/m^3$)**	40
Settled Dust	Short-Term Limit Value (**mg/m^2day)**	390
	Long-Term Limit Value (**mg/m^2day)**	210
CO	8 hour daily maximum **($\mu g/m^3$)**	10,000
Total VOC**	Hourly **($\mu g/m^3$)**	280
	24-hour **($\mu g/m^3$)**	70
In the Settled Dust	Pb and its compounds (long term limit value) (**mg/m^2day)**	250
	Cd and its compounds (long term limit value) (**mg/m^2day)**	3.75
	Tl and its compounds (long term limit value) (**mg/m^2day)**	5

** Regulation on Assessment and Management of Air Quality (RAMAQ)*
*** Industrial Air Pollution Control Regulation (IAPCR)*

II.2 International Standards and Conventions

In addition to national requirements, the following international guidelines frameworks, standards and agreements should be considered to ensure alignment with best practices and financial institution requirements:

To ensure responsible operations, AIIB adheres to policies addressing environmental and social impacts as outlined in its Environmental and Social Framework ("ESF") document. Updated in June 2024, the ESF reflects AIIB's commitment to international standards and sustainable development practices.

Moreover, the following standards, guidelines and directives should be used to align Project practices with international lender requirements and good practice environmental and social management:

- IFC Performance Standards (2012), specifically:
  - Performance Standard 3: Resource Efficiency and Pollution Prevention
  - Performance Standard 4: Community Health, Safety, and Security
- IFC Environmental, Health and Safety (EHS) General Guidelines (2007)
- IFC EHS Guidelines for Toll Roads (2007)
- IFC Guidance Notes (2012)
- Equator Principles IV (2020)
- EU Ambient Air Quality Directive (2008/50/EC)
- European Union Road Safety Policy Guidelines and Directives
- World Health Organization (WHO) Ambient Air Quality Guidelines (2005 and 2021)

These references should be used to guide the implementation, monitoring, and performance evaluation of air pollution and emissions control measures on-site throughout the construction phase.

IFC General EHS Guideline for Air Emissions and Air Quality refers to the limit values recommended by the World Health Organization Ambient Air Quality Guidelines which are presented in Table II.2. In addition, the newly adopted Directive (EU) 2024/2881 of the European Parliament and of the Council of 23 October 2024 on ambient air quality and cleaner air for Europe (see Table II.3) strengthens and updates the existing framework by setting more stringent air quality standards and reinforcing provisions on public information and air quality plans. AAOİAŞ and its subcontractors are responsible for reviewing relevant international standards to capture all requirements.

Table II.2.1 IFC General EHS Guidelines: Environmental Air Emissions a nd Ambient Air Quality Standards (WHO Ambient Air Quality Guidelines)

Parameter	Duration	Guideline Value (µg/m^3)*
SO_2	10 minute	500
	24 hour	20
NO_2	Hourly	200
	Annual	40
PM_{10}	24 hour	50
	Annual	20
$PM_{2.5}$	24 hour	25
	Annual	10

Parameter	Duration	Guideline Value (µg/m³)*
Ozone	8-hour Daily Maximum	100

Table II.3: EU Regulations: Ambient Air Quality Limit Values

Parameter	Duration	Guideline Value (µg/m3)*	Permitted Exceedances / Notes
Particulate Matter (PM_{10})	24-hour average	50 µg/m³	Not to be exceeded more than 35 times/year
	Annual average	40 µg/m³	
Particulate Matter ($PM_{2.5}$)	Annual average	25 µg/m³	
Nitrogen Dioxide (NO_2)	1-hour average	200 µg/m³	Not to be exceeded more than 18 times/year
	Annual average	40 µg/m³	To be reduced to 20 µg/m³ by 2030
Sulfur Dioxide (SO_2)	1-hour average	350 µg/m³	Not to be exceeded more than 24 times/year
	24-hour average	125 µg/m³	Not to be exceeded more than 3 times/year
Carbon Monoxide (CO)	Maximum daily 8-hour mean	10 mg/m³	
Lead (Pb)	Calendar Year	0,5 µg/m³	
Cadmium (Cd)	Calendar Year	5,0 ng/m³	

II.3 Project Standards

To ensure compliance with national and international air quality requirements, the strictest limits among Turkish regulations, international standards should be applied during the construction phase of the Project. Table II.4 outlines the applicable pollutant limits, which should be used for monitoring and mitigation planning. If exceedances occur, corrective actions should be implemented immediately by Limak and its subcontractors.

Table II.4 Reference Limits and Standards for Monitoring and Mitigation

Pollutant	Averaging Period	Turkish Legislation	IFC/WHO (µg/m³)	EU Regulation	Applied Limit
SO_2 (µg/m³)	Hourly (max 24 exceedances/year)	350	-	350	350
	24-hour (max 3 exceedances/year)	125	20	125	20
	Long-term	60	-	-	60
	Annual (winter period)	20	-	-	20
	10-minute	-	500	-	500

NO_2 (µg/m³)	Hourly (max 18 exceedances/year)	200	200	200	200
	Annual average	40	40	40	40
PM_{10} (µg/m³)	24-hour (max 35 exceedances/year)	50	50	50	50
	Annual average	40	40	40	40
$PM_{2.5}$ (µg/m³)	Annual average	-	10		10
	Annual average	-	25	25	25
Settled Dust (mg/m²day)	Short-Term Limit Value	390	-	-	390
	Long-Term Limit Value	210	-	-	210
CO (mg/m³)	8-hour daily maximum	10		10	10
	Maximum daily 8-hour average in one year	120	-	-	120
Ozone (O_3)	Long-term	120	-	-	120
Lead (Pb) in Settled Dust	Long-term	250	-	-	250
Cadmium (Cd) in Settled Dust	Long-term	3,75	-	-	3,75
Total VOC	Hourly	280			
	24-hour	70			

III. LINKAGE WITH OTHER PROJECT PLANS AND PROCEDURES

This Plan is supported by other management plans and procedures developed under the Environmental and Social Management System ("ESMS") of the Project. The following plans and procedures are particularly relevant and should be implemented in coordination with the Air Pollution and Emissions Management Plan:

- Solid Waste Management Plan,
- Spill Response Management Plan,
- Community Health and Safety Management Plan,
- Traffic Management Plan,
- Hazardous Material Management Plan,
- Blasting Management Plan,
- Demolition Management Plan,
- Environmental and Social Management and Monitoring Plan (ESMMP)

The effective integration of these plans should be ensured to maintain compliance with national regulations and international standards and to minimize the cumulative environmental and social impacts of construction activities.

IV. ROLES AND RESPONSIBILITIES

Antalya Alanya Otoyol İnşaat Yatırım ve İşletme A.Ş. (SPV) as the Project Sponsor and Limak (EPC) as the main contractor of the Project will be responsible for the following:

General Manager (SPV):

-Define and implement the overall business strategy and direction of the SPV in alignment with shareholder and stakeholder expectations.

-Ensure the provision of necessary resources and organizational support for the implementation of APEMP.

-Supervise and coordinate EPC contractors and subcontractors to ensure proper execution of construction, commissioning, and operational phases.

-Support the E&S Manager in preparing, disseminating, and implementing this plan.

E&S Manager (SPV):

-Review and ensure the preparation, revision, and implementation of APEMP in accordance with national laws, regulations, company policies, international standards and lender requirements.

-Ensure the development, revision, and execution of project-specific management plans, including the Environmental and Social Management and Monitoring Plan (ESMMP) in accordance with company policies and international standards.

-Monitor the environmental and social performance of EPC and subcontractors to ensure compliance

H&S Manager (SPV):

-Ensure the conditions and obligations specified in the health, safety, community related plans and documents are implemented and adhered to by EPC and subcontractors in accordance with company policies, regulatory obligations, international standards and lender requirements.
-Contribute to project risk assessments and job hazard analyses (JHAs) and ensure these are updated regularly.
-Ensure that all construction site activities are carried out safely by EPC and subcontractors.

Deputy E&S Manager (SPV):
-Lead the development, implementation, and continuous improvement of the Environmental and Social Management.
-Review the ESHS documents of subcontractors and suppliers and ensure that they comply with the Project ESHS requirements.
-Monitor performance through Key Performance Indicators (KPIs), reports, audits, and meetings.
-Oversee incident and non-compliance regarding to air quality , including investigations, corrective/preventive measures, and stakeholder communication.
-Support E&S Manager (SPV) executive decision-making by providing timely reports and insights on E&S performance, risks, and emerging trends.
-Lead community engagement strategies in collaboration with the Environmental Engineer and, and Social Chief to ensure effective grievance management and positive relations with project-affected communities.
-Ensure that EPC and subcontractor provide the necessary training through the review of training records and relevant training documents.

Social Chief (SPV):
-Supervise and mentor CLOs, ensuring their work aligns with project priorities and stakeholder engagement strategy.
-Develop and implement work plans and schedules for the CLO team.
-Ensure that complaints regarding air quality are recorded, processed, and resolved in a timely and transparent manner.
-Ensure accurate, timely, and complete reporting of CLO activities, stakeholder interactions, and grievance outcomes and inform the E&S Deputy Manager about the complaints and coordinate the assessment and solution of grievances with EPC team.
-Coordinate with the E&S Deputy Manager, CLOs and Environmental Engineer, and construction teams to address community-related impacts.

Project Director (EPC):
-Define and oversee the implementation of the overall EPC execution strategy in alignment with contract objectives and company standards.
-Lead interdisciplinary project teams, coordinating EPC functions to achieve key milestones.

-In case of non-compliance regarding to air quality, ensure appropriate corrective and preventive actions are taken in coordination with the E&S Manager and H&S Manager

E&S Manager (EPC):

-Facilitate coordination with the SPV's E&S Manager for compliance audits and reporting.

-Implement environmental and social measures through site practices and method statements.

-Ensure that all conditions and obligations outlined in the Plan are implemented and adhered to during project activities.

H&S Manager (EPC):

-Ensure the safe execution of construction activities in compliance with APE MP, H&S Plan, legal requirements, international standards, SPV and lender obligations.

-Prepare, review, and improve H&S Plans by integrating air quality control measures into site-specific risk registers, method statements, and monitoring programs.

-Supervise and support Contractors/Subcontractors to implement air quality mitigation measures, and monitor their compliance with H&S and APEMP requirements.

-Coordinate with SPV H&S Manager to address air quality -related incidents, risks, and community safety concerns.

-Ensure that all site personnel receive regular training and toolbox talks covering APEMP MP obligations, air quality risks, and safe working practices.

-Oversee emergency preparedness and response procedures for air quality incidents (e.g., blast vibration exceedances, community complaints).

-Conduct investigations of air quality -related incidents or complaints, ensure corrective/preventive actions are taken, and report findings to Project Director and SPV.

-Promote a safety-first culture by ensuring air quality risks are proactively managed and lessons learned are integrated into continuous improvement.

Line Manager:

-Ensure the implementation of watering and other dust suppression measures on site,

-Ensuring the appropriate selection of vehicles and equipment and monitoring their regular maintenance.

-Ensure the maintenance, watering, and compliance with speed limits on internal roads.

Environmental Engineer (SPV and EPC):

-Implement and monitor the Air Pollution and Emission Management Plan (APEMP) on-site, including subcontractor compliance.

-Conduct routine inspections and measurements of routine inspections and measurements of air quality and dust levels to ensure mitigation measures are effective.

-Maintain accurate records and databases for air quality monitoring, and support reporting for audits or regulatory compliance.

-Support training, toolbox talks, and inductions related to air quality awareness for site personnel.

-Participate in investigations of APEMP-related incidents and coordinate corrective/preventive actions with HSE and E&S teams.

-Implement and monitor the APEMP on-site, including subcontractor compliance.

-Conduct routine inspections and measurements of air quality; maintain records and report performance to E&S Manager and relevant stakeholders.

-Support training, toolbox talks, and inductions for site personnel on air quality awareness.

-Coordinate corrective/preventive actions for APEMP-related incidents in collaboration with HSE, E&S teams, and subcontractors.

-Liaise with external consultants, laboratories, and regulators for air quality monitoring, reporting, and permit compliance.- Assess on a daily basis the level of dust during construction activities at the RoW, access roads, camp site, general facilities and all temporary facilities.

-Integrate APEMP requirements into work plans, method statements, and construction activities.

Community Liaison Officer (CLO)(SPV and EPC):

-Communicate with project-affected communities about construction activities, including potential air quality impacts.

- Log, track, and follow up on community complaints or grievances related to air quality, ensuring timely resolution via the Grievance Mechanism (GM).

- Support monitoring and documentation of APEMP implementation at site level, including subcontractor activities affecting the community.

- Facilitate equitable community engagement and consultations, ensuring vulnerable or sensitive groups are informed about air quality impacts.

- Coordinate with E&S Manager and other project teams to integrate community feedback into APEMP updates and corrective actions.

V. AIR QUALITY AND EMISSIONS MANAGEMENT APPROACH

The primary air pollutants associated with motorway projects include nitrogen oxides (NO_x – NO2 and NO), particulate matter (PM), carbon monoxide (CO), hydrocarbons (HC), sulfur dioxide (SO2), and volatile organic compounds (VOCs). Among these, PM10 emissions are particularly significant and are expected to arise primarily from activities such as material extraction and supply, cut and fill operations, and the storage of excavated materials. Particulate matter can vary in size and composition; however, PM10—defined as particles with an aerodynamic diameter smaller than 10 µm—is commonly used as a standard indicator, as it represents particles likely to be inhaled. Therefore, regulatory limit values are generally defined for PM10 concentrations.

Additional emissions during the construction phase will originate from the operation of construction machinery, transport vehicles, and equipment, as well as from heating systems at camp facilities. Emissions such as PM10, NO_x, CO, SO2, VOCs, benzene, NH_3, and N_2O are expected,

primarily during working hours. The type and quality of fuel used will directly influence the level of pollutant emissions. Furthermore, seasonal heating demand, particularly during winter, will contribute to increased emissions. .

In the scope of the Environmental and Social Impact Assessment study of the Antalya Alanya Motorway Project, air quality baseline measurements were conducted to determine ambient air quality of the region and limitations of the activities during both construction and operation phases. As part of the baseline assessment, in addition to PM_{10}, $PM_{2.5}$, and settled dust, other air pollutants such as SO_2, NO_2, and Volatile Organic Compounds (VOCs) were also measured. Ambient air quality measurements were conducted at 21 locations during September–October 2024. The campaign covered PM_{10}, $PM_{2.5}$, settled dust, and heavy metals in settled dust. PM measurements were taken over 24-hour periods at each location, consistent with IFC's Environmental, Health and Safety (EHS) Guidelines for Air Emissions and Ambient Air Quality, which recommend 24-hour averaging periods for particulate matter to ensure comparability with WHO and national standards. SO_2 and NO_2 were monitored using passive sampling over a one-month period between September 21 and October 21, 2024, at the five selected locations. VOC measurements were conducted on October 17, 2024. The points where baseline measurements were taken are shown in the Figure V-1.

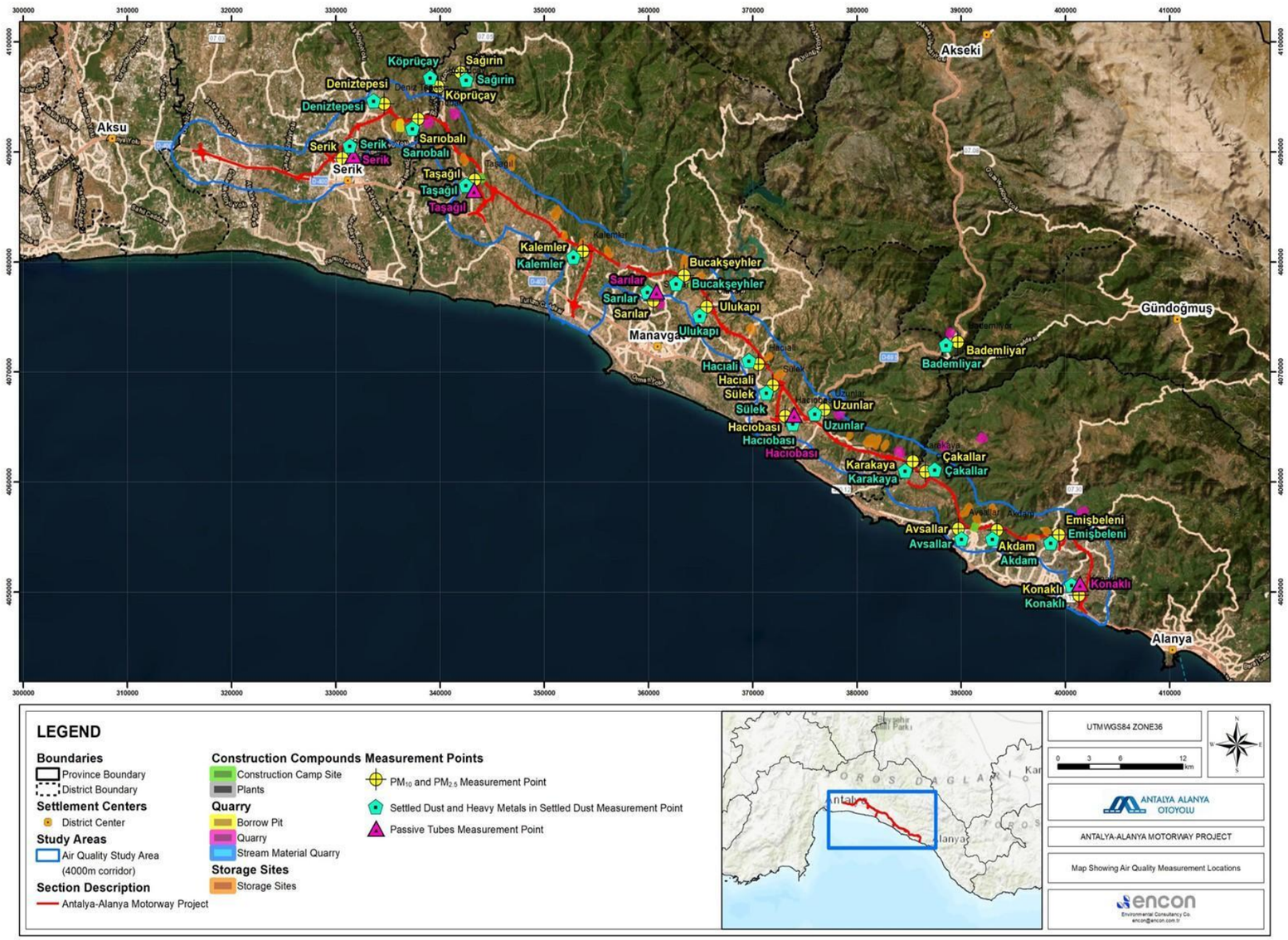

Figure V-1: Sampling Points of Air Quality Baseline Measurement Points

Sensitive receptors are defined as areas that host vulnerable populations, such as residential neighbourhoods, schools, healthcare facilities, and recreational areas, where people may be more susceptible to the adverse effects of air pollution. Within the scope of this Project, residential neighbourhoods located in close proximity to the motorway construction corridor are considered sensitive receptor zones.

A review of the Project alignment has identified several neighbourhoods across three districts—Serik, Manavgat, and Alanya—that are located within the immediate vicinity of the construction area. These are listed in Table V.1. Given their spatial proximity to active construction zones, these neighbourhoods warrant increased attention to ensure that air quality impacts are properly managed.

Table V.1 Settlements Located in The Vicinity of the Motorway Components

Districts	Neighborhoods		
Serik	• Aşağıçatma • Aşağıkocayatak • Burmahancı • Çandır	• Cumalı • Deniztepesi • Dikmen • Kayaburnu	• Kökez • Merkez • Sarıabalı • Üründü • Yukarıkocayatak
Manavgat	• Aksaz • Aşağıışıklar • Bucakşeyhler • Çakış • Çavuşköy • Cevizler • Demirciler • Dikmen • Dolbazlar • Evrenleryavşı • Gültepe • Gündoğdu	• Hacıali • Hacıisalı • Hacıobası • Hatipler • Hocalar • Ilıca • Kadılar • Kalemler • Karacalar • Karakaya • Karaöz • Kızılot • Odaönü	• Örenşehir • Sağırin • Sarılar • Side • Şişeler • Sülek • Taşağıl • Ulukapı • Uzunlar • Yalçıdibi • Yavrudoğan • Yeniköy • Yukarıışıklar
Alanya	• Akdam • Alara • Avsallar	• Çakallar • Elikesik • Emişbeleni • İncekum	• Konaklı • Soğukpınar • Toslak • Türkler

It should be noted that the current designation of sensitive receptors is based solely on geographic proximity to the construction corridor. Air quality dispersion modelling studies have not yet been conducted; as such, the extent and distribution of sensitive receptor areas may be revised once model-based assessments are carried out. These future evaluations will help define more accurately the zones potentially affected by construction-related air emissions and allow for a more refined monitoring and mitigation strategy.

The proximity of some settlements to the Project route—several of which are located directly beneath or adjacent to construction sites—necessitates a proactive air quality monitoring approach. Monitoring efforts should prioritize these sensitive receptors, particularly in areas where baseline data

indicates a potential for pollutant concentrations approaching regulatory thresholds. Measures such as continuous or periodic ambient air measurements, visual inspections, and responsive grievance mechanisms should be implemented to assess the effectiveness of air pollution mitigation strategies.

By aligning targeted air quality monitoring with the spatial distribution of sensitive receptors and integrating feedback from community stakeholders, the Project will be better equipped to maintain compliance with national and international standards, while also safeguarding the health and well-being of local communities. Air quality emissions during construction are closely associated with the locations and operations of site-specific emission sources along the Project corridor. These sources include construction camps; borrow pits, quarries, stream material quarries. The locations and their spatial distribution along the alignment is illustrated in *Figure V.2.*

These components span the entire motorway corridor and are located across Serik, Manavgat, and Alanya districts. Their proximity to settlements requires a targeted emissions monitoring and mitigation strategy. For instance, Construction Camp Sites at Km 64+400, 87+500, and 124+300 will host the workforce, contributing to heating-related emissions, while mechanical plants represent major dust and exhaust emission points. Quarries such as Soğukpınar, Karakaya, and Çenger Stream Quarry are located near residential neighborhoods, increasing the importance of dust suppression measures in those areas. The site layout captured in Figure V.2 allows a clear visualization of how these emission sources align with populated zones. The close proximity of several settlements to the Project route, including areas directly adjacent to construction sites, requires a proactive air quality monitoring approach. Possible problems caused by different types of emissions are listed below (see Table V.2)

Table V.2:Air Emissions and Issues

Emission Types	**Possible Problem**
Dust	Environmental, social, health
Greenhouse Gases (GHG)	Environmental
Exhaust Gases	Environmental, social, health
Vapor	Health, social
Gases	Environmental, social, health

According to the Project components, emission type also changes. The emission sources according to the components and their potential emission types are summarized below (see Table V.3).

Table V.3: Emission Sources in the Project Areas

Project Areas	**Emission Sources**
Road Construction	Excavation and embankment processes, transport vehicles, energy sources (electrical generators), working machinery, blasting activities
Disposal Areas	Excavation and embankment processes, transport vehicles, loading/unloading/disposal processes
Camp Areas	Energy sources (electrical generators), heating systems and transport vehicles inside the camp areas, blasting activities
Quarry and Borrow Areas	Site clearance, spot blasting, earthworks, "open-air" blasting excavation, rock extraction
Washing and Screening Plant, Crushing Plant	Emissions into the atmosphere caused by plant operations and electrical generators

Project Areas	Emission Sources
Concrete Batching Plants	Emissions into the atmosphere from batching plants aoperations and electrical generators
Vehicles	Exhaust emissions

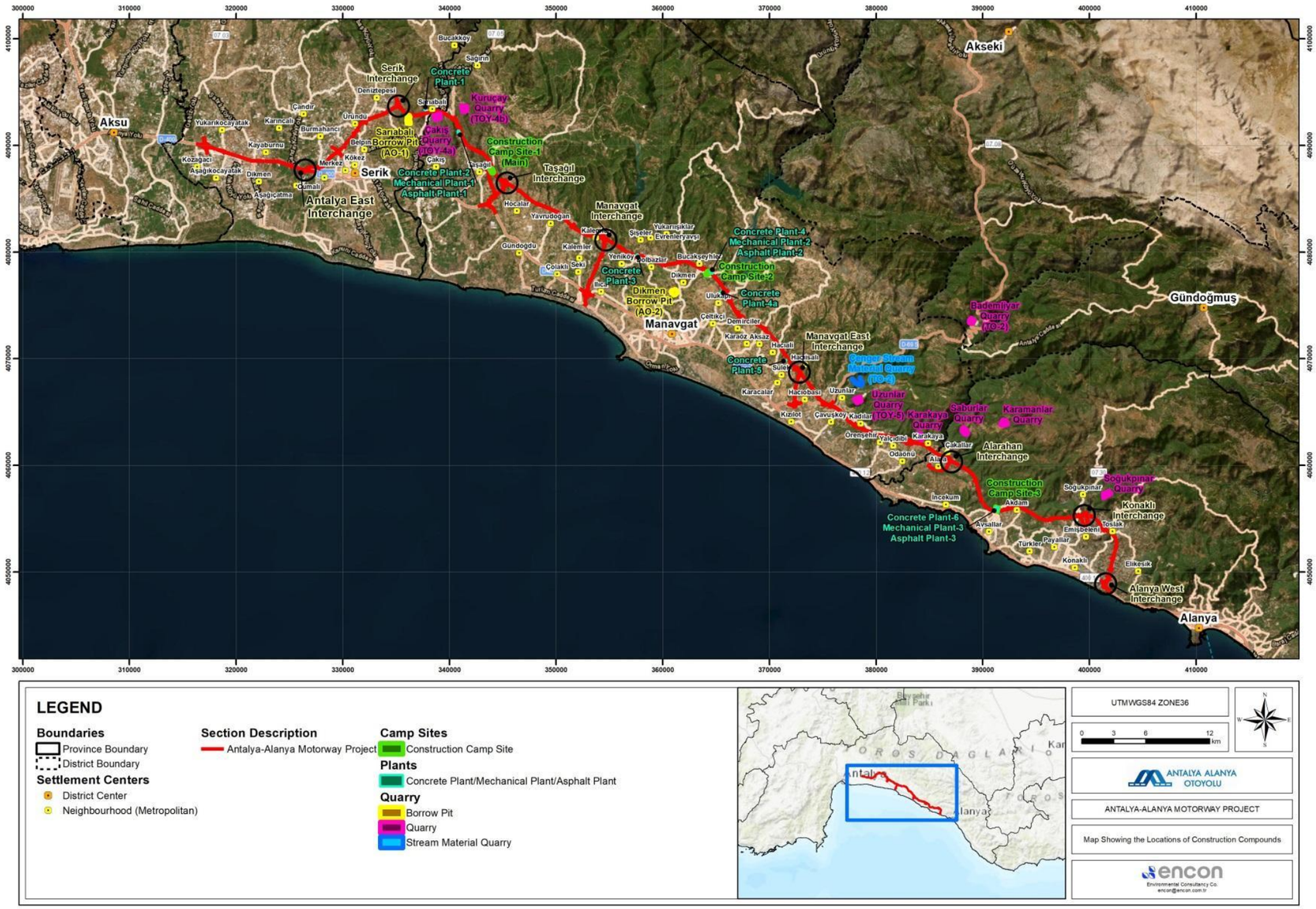

Figure V-2. Spatial Distribution of Construction Camp Sites, Plants, and Material Sources along the Project Route

VI. MITIGATION MEASURES FOR IMPACTS ON AIR QUALITY

The following measures will be implemented throughout the Project sites to prevent or minimize adverse impacts on air quality due to construction activities:

Material Handling and Storage:

- Dust emissions from sources such as conveyors, bins, and crushing-screening plants will be controlled through enclosures, covers, and dedicated dust suppression systems (e.g., water sprays, baghouse filters, or cyclones).
- All dust-emitting units within crushing-screening operations will be placed in enclosed structures equipped with appropriate dust control systems.
- The drop height of fine or dusty materials during loading/unloading will be minimized to reduce airborne dust.
- Loading and unloading operations will be conducted without scattering or throwing materials.

Open Area and Road Dust Controls:

- Open sources such as material stockpiles will be managed using covers, enclosures, or by maintaining adequate moisture content.
- Dust suppression measures including regular watering using water trucks or pressurized spraying systems will be applied on construction sites, service roads, access roads, and at quarry or storage areas. These measures will be enforced as needed, including nights, weekends, and non-working days.
- Speed limits (e.g., 30 km/h general, 20 km/h in residential/village roads) for all construction vehicles will be established and enforced to minimize dust resuspension.
- Project roads, especially those accessing quarries, will be upgraded and widened where necessary to support safe, low-dust vehicle movement.
- If nearby roads are actively used by traffic, continuous dust suppression will be applied to maintain safety and visibility. On unused roads, dust control will focus on residential and commercial areas.

Transport and Vehicle Controls:

- All trucks transporting excavated or raw materials will be covered with nylon tarpaulin.
- Construction vehicles will not be permitted to idle unnecessarily on- or off-site.
- A regular maintenance program will be in place to ensure engine efficiency and minimize emissions.
- Driving through residential settlements will be avoided when alternative routes exist.
- Vehicle exhaust emission measurements will be performed periodically.

Blasting Activities:

- Blasting operations will be conducted in full compliance with applicable regulations and aligned with industry best practices to minimize short-term dust releases.

Dust Barrier and Wind Protection:

- Windbreaks, fences, or vegetative barriers will be installed around material storage areas and other emission-prone zones to reduce dust dispersion.

Monitoring and Compliance:

- Air quality management will comply with legal regulations and applicable international standards.
- During the pre-construction phase, PM10 and PM2.5 will be measured for a period of one week at the locations which will be decided considering the sensitivity of receptors.

Given the current PM concentrations in Hacıali, additional targeted reduction measures are required. These include:

- Dust-generating activities will be limited during stagnant meteorological conditions (e.g., inversions or low wind scenarios).
- Intensive dust-producing operations will be relocated away from Hacıali where technically and logistically feasible.
- Road paving and soil stabilization techniques will be employed to reduce dust lift-off.
- The use of wind barriers or vegetation buffers will be prioritized between emission sources and residential receptors in Hacıali.
- PM_{10} measurements will be conducted in Hacıali (monthly monitoring and, if necessary, more frequent if required in case of any complaints)

GHG specific emissions

Türkiye's NDC commits to a 41% reduction in GHG emissions by 2030 relative to the Business-As-Usual (BAU) scenario, with a peak in emissions by 2038. GHG emissions generated during land preparation and construction phase of the Project can be considered as relatively short-term emissions when compared to the emissions of operation of the Motorway. Within this regard the following measures are suggested to mitigate the potential impacts of the Project on climate change through greenhouse gas emissions:

- High-efficiency and low-emission construction machinery will be prioritized at construction sites to minimize fuel consumption.
- Regular maintenance of equipment will be conducted to improve engine efficiency and reduce the idling time of stop-and-go heavy vehicles.
- Electricity demand during construction activities will be met as much as possible through renewable energy sources.
- The use of recycled and locally sourced materials will be encouraged to reduce indirect emissions from material transportation.
- An effective waste management plan will be implemented to control organic waste that may cause methane emissions.

All these measures will be monitored and reported to align with the Türkiye's 41% reduction target in 2030 ensure that the Antalya–Alanya Motorway serves as a low-carbon transport infrastructure in the long term from existing road network.

- Reduce the requirement for construction materials and excavation. The excavation-fill balance of the project has been optimized to minimize the transport of excavated material, thereby reducing both costs and greenhouse gas emissions.

- Substitute construction elements for lower-carbon alternatives (e.g., specifying concrete with a higher portion of ground-granulated blast furnace slag (GGBS) content which is widely available in Türkiye); and
- Use efficient construction processes, such as design for manufacture and assembly.
- Energy consumption including fuel usage by, for example, reducing the requirement for earth movements to/from and within the construction site will be minimized;
- The local sourcing of materials and local waste management facilities will be maximized.
- The Project with a view to maximizing the potential for reuse and recycling of materials/elements at the end-of-life stage will be specified and constructed. Approximately 90% of the excavated material from the project is planned to be used as fill.
- High efficiency mechanical and electrical equipment will be specified and constructed.
- Transport logistics (locations/routes) will be optimized to ensure efficient carriage of raw materials and promote fuel efficiency
- Vehicle idling times will be reduced through focus on scheduling of construction operations.
- The use of fuel-efficient transportation vehicles will be prioritized, and regular maintenance of vehicles ensured.
- The timing for works implementation (Traffic management) will be optimized to minimize traffic delays due to rehabilitation, widening or maintenance work zones on existing road sections.
- Energy efficiency specifications for new and retrofitted site accommodation (for example, usage of high-efficiency lightning, usage of led lighting, water fixture selection criteria, etc) will be created.
- Sourcing renewable energy will be considered if applicable.
- Energy efficiency usage among workers will be promoted.

AAOİAŞ will ensure that the mitigation measures listed above are implemented by Limak and its subcontractors. In addition, AAOİAŞ commits to review site management and implement suitable additional mitigation measures if monitoring show exceedances of Project standards for dust deposition, PM10 and/or PM2.5, or if complaints regarding dust mobilization / settlement are received.

Ongoing stakeholder engagement will include consultation with authorities, local communities and any other relevant stakeholders with regard to Air Quality Management during construction phase. Any grievances received from stakeholders will be managed in accordance with Grievance Mechanism as detailed in Project SEP.

VII. TRAINING

Upon hiring, all staff will receive structured training addressing sources of air emissions and dust, air quality degradation, and associated health risks, along with the corresponding mitigation strategies applicable to their responsibilities within the project (e.g., appropriate use of protective equipment, maintenance of machinery). In addition, personnel assigned to air quality monitoring will be provided with specialized training to ensure accurate and compliant performance of their duties.

VIII. MONITORING

A structured internal monitoring program will be implemented to assess the effectiveness of air quality and emissions mitigation measures outlined in this Plan during the construction phase of the Project. The scope and frequency of monitoring activities will be periodically reviewed and revised where necessary, based on site-specific conditions, air quality trends, stakeholder concerns, or changes in applicable environmental regulations.

Monitoring activities will be coordinated by E&S Manager and his/her team, in close collaboration with the H&S Manager and his/her team. Key responsibilities will include verifying the implementation of dust suppression practices, monitoring equipment and vehicle emissions, evaluating the maintenance status of construction machinery, and ensuring the consistent application of mitigation measures near sensitive receptors such as residential areas, schools, and healthcare facilities.

Regular air quality monitoring will be conducted at designated locations across all worksites to evaluate compliance with national ambient air quality standards and Project-specific emission limits. This will include the measurement of key parameters such as PM_{10}, $PM_{2.5}$, NO_x, and SO_2, as well as visual inspections for dust dispersion, and checks on the use of water spraying systems and covering of materials during transport and storage.

The performance of contractors and subcontractors in implementing air quality management requirements will be reviewed through environmental audits, site supervision reports, and field observations. Any identified non-conformities will trigger timely corrective and preventive action plans. Monitoring will also include follow-up assessments to confirm the effectiveness of implemented measures and to ensure recurrence is prevented.

In addition to internal monitoring, inspections may be carried out by relevant public institutions, including the Ministry of Environment, Urbanization and Climate Change, in accordance with Turkish legislation. The frequency and scope of these inspections will be determined by the authorities and may include review of monitoring data, on-site emission control practices, and documentation of compliance.

- Periodic visual inspections of activities resulting in impact to air quality. Visual inspections will reflect the ethos of ‘see it, own it’, in terms of identifying and addressing significant air quality impacts. Where significant impacts are observed, these will be recorded and closed out.
- Regular inspections during the site preparation phase to review air and dust issues and dust suppression techniques altered as required.

Dust monitoring will primarily be addressed through site inspection to ensure that good site practice with respect to dust control is being effectively implemented on site. Dust sampling is not considered to be an effective means of monitoring dust during construction due to the delay between sampling and the receipt of sampling results. More immediate real time means of identifying unacceptable levels of dust, such as visual observation, is required so that remedial measures can be

implemented immediately. Environmental Engineer will assess on a daily basis the level of dust during construction activities at the RoW, access roads, camp site, general facilities and all temporary facilities. Mitigation measures will be implemented as required immediately. If there is a complaint from the sensitive receptors about the dust generation, then dust measurement will be conducted. Dust monitoring samples will be taken at sensitive receptors' locations according to the ESIA requirements.

Monitoring efforts will be guided by the framework provided in Table VIII.1, which outlines the parameters to be monitored, the corresponding monitoring locations, frequency of measurements, and responsible parties. These monitoring activities will be essential for evaluating the effectiveness of air quality and emissions mitigation measures and ensuring full compliance with national regulations and Project standards.

Table VIII.1 Key Monitoring Activities

Parameter	Monitoring Station / Location	Monitoring Method	Monitoring Frequency	Responsible Parties
PM_{10}, $PM_{2.5}$, Settled Dust, NO_x, SO_x, VOC	Sensitive receptors*	Site measurements	Quarterly and upon grievance	AAOİAŞ, EPC , Accredited Laboratories
PM10	Hacıali and other sensitive locations which will be decided considering result of modelling studies	Site Measurements	Monthly and upon grievance	AAOİAŞ, EPC, Accredited Laboratories
Number of water trucks and frequency of road watering	Camp sites, road construction sites, quarries, stabilized roads	Visual inspection	Daily or more frequently during high risk, dry and windy conditions.	AAOİAŞ, Limak
Grievances related to dust and air emissions	The field subject to the complaint	Review of grievance logs	Weekly	AAOİAŞ, EPC,
Weather conditions and humidity	High-risk area due to flammable material storage and close to the forest area	Weather forecast report checking	Daily during summer period	AAOİAŞ, EPC
record findings	Around the site, particularly near receptors (including roads)	Site inspection Inspection log	Daily	SPV & EPC Environmental Engineer
Roads surface integrity and any damage	Internal haul roads	Site inspection	Weekly	Environmental specialist
Exhaust emission measurement for construction vehicle	Vehicles	Measurement	Annually	EPC Environmental Eng.

** Sensitive receptors have been discussed in detail under Chapter V. Air Quality and Emissions Management Approach.*

In cases of non-compliance identified through internal oversight or external audits, AAOİAŞ will ensure that corrective and preventive measures are promptly implemented in coordination with the Contractor (Limak) and relevant subcontractors.

All air quality-related findings, including exceedance of limit values, non-compliance incidents, or complaints received from surrounding communities, will be documented in accordance with national environmental regulations and Project procedures. In the event of serious violations—such as significant exceedance of short-term or long-term limit values—AAOİAŞ will ensure that the issue is reported to the competent authorities and that appropriate technical, procedural, and contractual actions are taken.

IX. KEY PERFORMANCE INDICATORS

The following Key Performance Indicators (KPIs) will be monitored, verified, and evaluated.

Table IX.1 Key Performance Indicators – Construction Phase KPIs

Monitoring Parameter / Performance Indicator	Target	Frequency	Responsible Party
On-site air quality training for workers	100% compliance	Monthly	AAOİAŞ, EPC
Complaints related to air quality	Less than five complaints per month	Continuous (upon each complaint)	AAOİAŞ, EPC
Speed limit enforcement for site vehicles	100% compliance with designated limits	Daily	AAOİAŞ, EPC Experts
Vehicle maintenance records	100% compliance with manufacturer's recommendations	Monthly	AAOİAŞ, EPC
PM_{10} and $PM_{2.5}$ particulate matter levels	Should not exceed WHO / IFC and national limit values	Quarterly/Monthly	AAOİAŞ, EPC Accredited Laboratories

X. AUDIT AND REVIEW

The implementation of this Plan should be regularly monitored and reviewed in accordance with the ESMMP. All incidents and non-conformities related to air quality management should be documented and reported as outlined in the Plan. Contractors and subcontractors should be subject to audits conducted by the Project Sponsor within the scope and schedule defined in the Contractor and Subcontractor Management Plan. These audits and the associated records should be managed in compliance with the Project's established management plans. Records to be reviewed during air quality audits will include, but are not limited to, air emissions monitoring reports, water truck operation logs, maintenance records of construction machinery and equipment, dust suppression activity records, environmental permit files for concrete plants, and air quality-related grievance logs. Observations and deficiencies identified during audits should be recorded in formal audit reports, and all findings requiring improvement should be registered under Corrective Actions. Project management should review audit outcomes and corrective action records, follow up on progress, and ensure that additional measures are implemented where necessary to ensure full compliance with national regulations and applicable international standards regarding air quality management.

XI. REPORTING

Regular reporting will be conducted to ensure the effective implementation and continuous improvement of solid waste management activities throughout the construction phase of the Project. Reporting will be structured to address both internal monitoring and auditing outcomes, as well as external compliance obligations and stakeholder engagement requirements.

Based on monitoring results, necessary corrective and preventive actions will be identified, and the required updates will be incorporated into this Plan. The training program will also be revised accordingly to address any observed gaps. Regular audits and visual inspections will be conducted to verify that all activities are being undertaken in accordance with the provisions of this Plan.

Quarterly Environmental and Social Monitoring Report will cover at least, but not limited to, the following items. The report will be prepared by the SPV with input data provided by EPC to evaluate the Project performance and compliance of the related plans.

- KPIs and performance trends (*see Table IX.1*)
- Current situation Key Monitoring Activities (*see Table VIII.1*)
- Relevant training activities completed and attendance registers to be maintained;
- Legal Authorities Audit reports;
- Site Inspection logs

In addition, the following external reporting will be done:

- All environmental and social incidents will be appropriately documented, notified and reported in accordance with established procedures the terms and conditions by EPC to SPV,
- Incident notification and reporting to relevant Turkish regulatory bodies will be performed in line with applicable legislation in force and as stipulated in permits and licenses.
- The Lenders will be notified of incidents pursuant to the terms and conditions agreed upon in the Finance Agreements through SPV.

All personnel are encouraged to raise concerns, suggestions, or complaints related to this Plan through the established grievance mechanism by completing the grievance form. The communication channels available for submitting grievances are outlined in the Stakeholder Engagement Plan.

ANTALYA-ALANYA MOTORWAY PROJECT

Revision No: 3 **Date:** 08.09.2025

HAZARDOUS MATERIAL MANAGEMENT PLAN

REVISION STATUS		
Revision Date	**Rev. No**	**Explanation**
01.03.2025	00	This plan is prepared according to TS EN ISO/IEC 9001:2015, TS EN ISO/IEC ISO 14001:2015, TS EN ISO/IEC 45001:2018 and IFC Performance Standards
23.05.2025	01	Revision as per comments
16.06.2025	02	Revision as per revision made under ESDD submitted by the Lender consultant
08.09.2025	03	Revision as per revision made under ESDD submitted by the Lender consultant

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LIST OF ABBREVIATIONS

AAOİAŞ	Antalya-Alanya Otoyolu İnşaat Yatırım ve İşletme A.Ş.
ADR	Agreement concerning the International Carriage of Dangerous Goods by Road
CLO	Community Liaison Officer
E&S	Environmental and Social
EHS	Environmental, Health, and Safety
EPC	Engineering, Procurement and Construction (Limak İnşaat Şanayi ve Tic. A.Ş.)
ESHS	Environmental, Social, Health and Safety
ESIA	Environmental and Social Impact Assessment
ESMMP	Environmental and Social Management and Monitoring Plan
ESMS	Environmental and Social Management System
EU	European Union
HSE	Health, Safety and Environment
ICAO TI	Technical Instructions for the Safe Transport of Dangerous Goods by Air
IFC	International Finance Corporation
IMDG	International Maritime Dangerous Goods
KPIs	Key Performance Indicators
Limak	Limak İnşaat Şanayi ve Tic. A.Ş.
MSDS	Material Safety Data Sheets
PPE	Personal Protective Equipment
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
WCA	Waste Collection Areas
WHO	World Health Organization
FAO	Food and Agriculture Organization

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HAZARDOUS MATERIAL MANAGEMENT PLAN

I. INTRODUCTION

Ministry of Transport and Infrastructure (former Ministry of Transport, Maritime Affairs and Communications), through the General Directorate of Highways ("KGM" or "the Administration"), as the owner of the Antalya-Alanya Motorway Project, has initiated a tender process for a contract in accordance with the Law on Implementation of Some of the Investments and Services in the Framework of Build, Operate and Transfer Model (Law No: 3996). Following the tendering process, KGM has awarded Antalya-Alanya Otoyolu İnşaat Yatırım ve İşletme A.Ş. (AAOİAŞ or the Project Sponsor) with a Build, Operate and Transfer (BOT) contract for the implementation of the Project. Accordingly, AAOİAŞ will be referred as Project Sponsor[1] in the scope of this report. The main contractor for the Project has been designated as Limak and will henceforth be referred to as the Contractor (or EPC).

The Project is designed to connect the district Serik and Alanya via the Manavgat district of Antalya province will enhance the existing transportation network services with its surrounding provinces: Burdur, Muğla, Konya, Isparta, Karaman and Mersin. Various environmental, social, and technical studies have been conducted along the initial route of the Project tendered by the KGM. Based on these studies, the route was optimized, incorporating engineering practices and addressing environmental and social considerations, particularly issues of involuntary and economic resettlement, before being finalized. According to the most current design, the total length of the Motorway, which will be a dual carriageway of mostly 3 and partially 2 lanes (3x2 and 2x2) in each direction, is 117.8 kilometers including the main carriageway and the access roads[2].

This Hazardous Material Management Plan ("HMMP" or "Plan") has been prepared by Antalya-Alanya Highway Construction Investment and Operation Inc. ("AAOİAŞ" or "SPV") for the Antalya-Alanya Highway Project ("Project") in accordance with national legislation, the Equator Principles ("EP"), the International Finance Corporation ("IFC") Performance Standards ("PSs"), and the international standards referred to in the relevant legislation section . The Plan covers the construction phase of the Project.

I.1 Project Description

The Project begins at Serik Interchange (Km: 52+000) and then proceeds eastward, following the corridor at the foothills of the Taurus Mountains within the boundaries of Serik and Manavgat districts, ending at north of Konaklı neighborhood of Alanya District (Km: 136+000). From this point onwards, the route turns southward with a 2x2 lane connection road and connects to the D400 state road at the Alanya West Interchange.

As of April 2025, the current Project design includes a total of 117.8 kilometers of roadway, comprising 84 kilometers of main road (motorway) and 33.8 kilometers of access roads. Other structures to be built as part of the project are as follows:

- 16 viaducts,
- 22 bridges,
- 305 culverts,
- 25 interchanges,
- 56 overpasses,

[1] The BOT Contract uses the term "Appointed Company" to refer Project Sponsor

[2] It should be noted that the environmental and social baseline characterization, maps and scoping assessments provided in this report are based on the most current design

- 43 underpasses, and
- 5 tunnels.

The map illustrating the construction components and road route within the scope of the Project's construction activities is provided in Figure I-1 .

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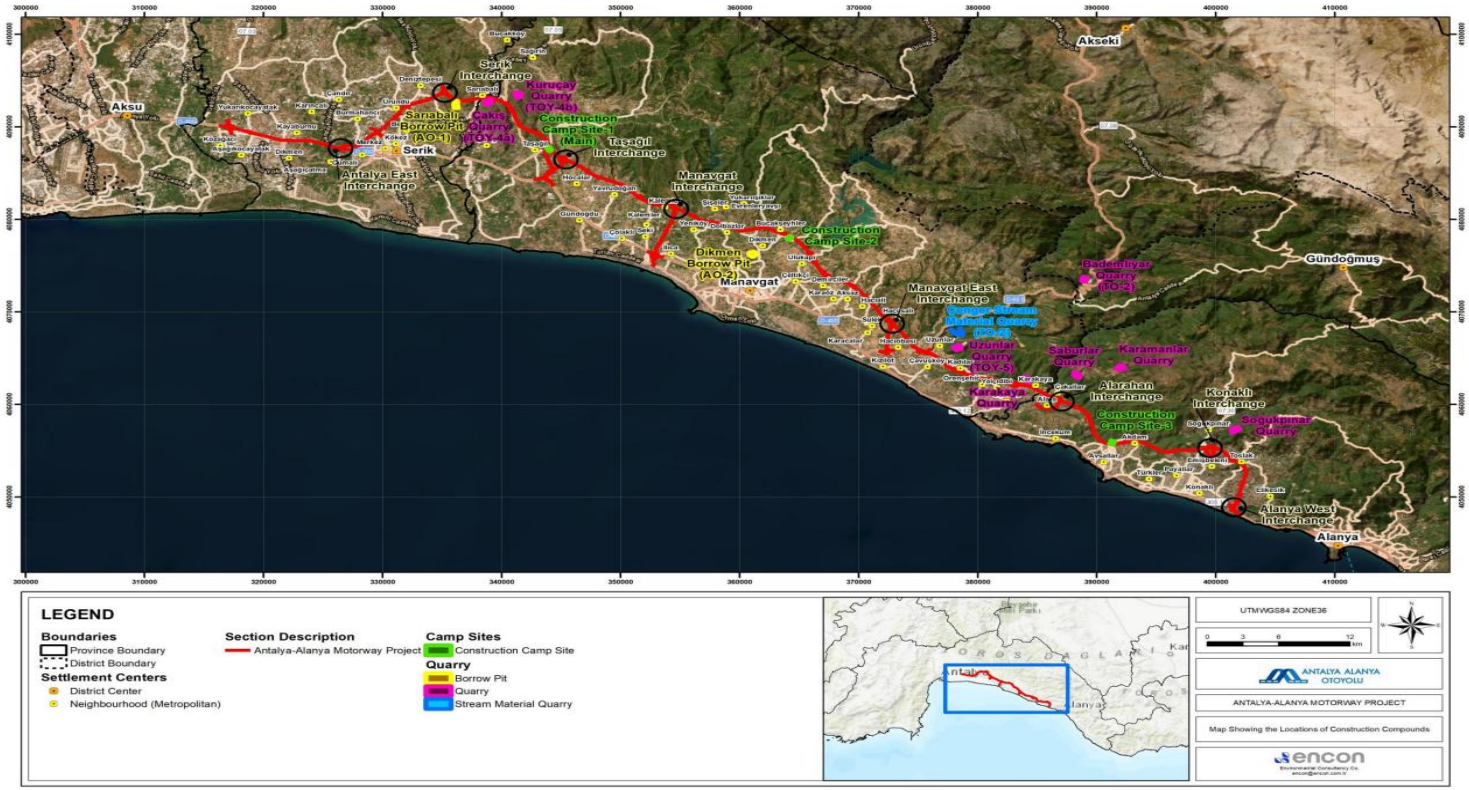

Figure I-1.Map Showing the Locations of Construction Compounds

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HAZARDOUS MATERIAL MANAGEMENT PLAN

II. PURPOSE AND SCOPE

This Plan has been prepared by Antalya-Alanya Otoyolu İnşaat Yatırım ve İşletme A.Ş. ("AAOİAŞ" or "SPV") for the Antalya-Alanya Motorway Project ("the Project").

This management plan is a living document developed with the best available information and will be reviewed and revised as necessary due to the nature of the construction and progress.

The purpose of this Plan is to define the principles and procedures for the management of hazardous materials in accordance with applicable national regulations and international standards. The Plan aims to minimize risks to human health, property, and the environment arising from the use, storage, transportation, and disposal of hazardous materials during the construction phase.

This Plan outlines actions that should be done to ensure that hazardous materials are handled in a safe, compliant, and environmentally responsible manner. It also provides guidance on spill prevention and response, storage and transportation protocol. Moreover, the comprehensive management of h azardous wastes is thoroughly detailed in the solid waste management plan .

The Plan should be implemented by all parties involved in the construction phase, including the Project Sponsor – AAOİAŞ , the Main Contractor (Limak), and all subcontractors. Roles and responsibilities regarding hazardous materials management should be clearly defined. The Plan should be reviewed and updated as necessary to reflect changes in project conditions, design, or legal requirements.

III. LEGISLATIVE FRAMEWORK AND REFERENCE STANDARDS

This Plan has been developed in alignment with both national legislation and internationally recognized environmental and social standards. The legal and institutional framework presented below defines the obligations and guidance applicable to the management of hazardous substances during the construction phase of the Project.

III.1 National Requirements

The following Turkish laws and regulations should be used as the legal basis for the management, storage, transportation, and disposal of hazardous materials during construction:

- Environmental Law (Law No. 2872),
- Occupational Health and Safety Law (Law No. 6331),
- Regulation on Environmental Impact Assessment,
- Regulation on Environmental Permits and Licenses,
- Regulation on Waste Management,
- Regulation on Waste Oil Management,
- Regulation on Waste Batteries and Accumulators,
- Regulation Regarding Transport of Hazardous Materials on Highways
- Regulation on the Control of Medical Wastes,
- Regulation on the Classification, Labeling and Packaging of Substances and Mixtures,
- Regulation on Safety Information Forms on Hazardous Substances and Mixtures
- Regulation on Occupational Health and Safety in Construction Works,
- Regulation on Personal Protective Equipment Use in Workplaces,
- Regulation on Emergency Measures in Workplaces,
- Regulation on Occupational Health and Safety Training,

- Regulation on Health and Safety Signs,
- Regulation on the Use of Work Equipment,
- Regulation on Fire Protection of Buildings,
- Regulation on Workers' Health and Safety in Working with Chemicals,
- Regulation on Preventing and Reducing the Effects of Major Industrial Accidents,
- Regulation on Health and Safety Measures of Working with Asbestos,
- Communiqué on Training Program of Asbestos Demolition,
- Regulation on Biocidal Products.

III.2 International Standards and Guidelines

The following international standards and procedures are applicable to the Project to ensure alignment with national legislation and recognize good industry practices.

AIIB is a multilateral development bank established to promote sustainable economic growth and improve infrastructure connectivity. According to the Articles of Agreement, AIIB aims to invest in infrastructure and productive sectors while fostering regional cooperation through partnerships with other development institutions. To ensure responsible operations, AIIB adheres to policies that address environmental and social impacts, outlined in its Environmental and Social Framework (ESF). The ESF, updated in June 2024, and reflects AIIB's commitment to international standards and sustainable development practices. The ESF includes the Environmental and Social Policy (ESP), which sets mandatory requirements for all projects.

Also, the following international standards and reference frameworks should be used to align Project practices with international lender requirements and good practice environmental and social management:

- IFC Performance Standards (2012), specifically:
  - Performance Standard 3: Resource Efficiency and Pollution Prevention
  - Performance Standard 4: Community Health, Safety, and Security
- IFC Environmental, Health and Safety (EHS) General Guidelines (2007)
- IFC EHS Guidelines for Toll Roads (2007)
- IFC Guidance Notes (2012)
- Equator Principles IV (2020)
- IFC Sector-Specific EHS Guidelines for Hazardous Materials Management
- Registration, Evaluation, Authorization, and Restriction of Chemicals (REACH)
- European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR)
- International Maritime Dangerous Goods (IMDG) Code
- ICAO Technical Instructions (for air transport)
- Regulations concerning the International Carriage of Dangerous Goods by Rail (RID).

These standards should guide the development of site-specific procedures, monitoring strategies, and corrective actions. In cases where national legislation and international standards diverge, stricter requirements should be adopted.

IV. LINKAGE WITH OTHER PROJECT PLANS AND PROCEDURES

This Plan is supported by other management plans and procedures developed under the Environmental and Social Management System (ESMS) of the Project. The following plans and procedures are

particularly relevant and should be implemented in coordination with the Hazardous Materials Management Plan:

- Solid Waste Management Plan,
- Water Quality, Wastewater and Storm Water Management Plan,
- Community Health and Safety Management Plan,
- Air Pollution and Emission Management Plan,
- Occupational Health and Safety Plan,
- Traffic Management Plan,
- Construction Site Management Plan,
- Environmental, Social, Management and Monitoring Plan (ESMMP),
- Labour and Working Conditions,
- Emergency Response Management Plan,
- Subcontractor Management Plan.
- Training and Communication Management Plan,
- Environmental Accident and Spill Response Management Plan,
- Blasting Management Plan,
- Emergency Preparedness and Response Management Plan.

The effective integration of these plans should be ensured to maintain compliance with national regulations and international standards, and to minimize cumulative environmental, health, and safety risks associated with hazardous material use during the construction phase.

V. ROLES AND RESPONSIBILITIES

Antalya Alanya Otoyol İnşaat Yatırım ve İşletme A.Ş. (SPV) as the Project Sponsor and Limak (EPC) as the main contractor of the Project will be responsible for the following:

General Manager (SPV):

- Follow-up the overall responsibility and accountability for the Project including delivery of the construction activities in line with applicable national and international standards.
- Ensure overall compliance with the HMMP and national regulations.
- Ensure that relevant activities are carried out in accordance with this management plan and related procedures and shall ensure the provision of all sources to carry out this Plan.
- Approve storage, handling, and disposal procedures for hazardous materials.
- Allocate resources for hazardous material management and emergency response.
- Ensures the availability of professional resources and materials, undertake to comply with the Regulation, the Contract and the ESMPs, and demands the respect of the same from the organization. He is also committed to apply for the necessary corrective actions, following the findings of the monitoring action.
- Ensure that relevant activities are carried out in accordance with this management plan and related procedures and shall ensure the provision of all sources to carry out this Plan.
- Ensure that all line managers and subcontractors understand and fulfil their responsibilities with hazardous material procedures during construction phases.

E&S Manager (SPV)

- Prepare, review, update, and implement HMMP, ESMP, and project-specific E&S plans per laws, policies, and standards.

- Coordinate with EPC, subcontractors, and internal teams; provide technical support for E&S plan implementation.
- Monitor compliance, site practices, and record-keeping of actions, incidents, and training.
- Ensure delivery and validation of E&S training.
- Investigate incidents, implement corrective actions, and oversee emergency and safety procedures.
- Prepare reports and maintain documentation for audits, compliance, and grievances.
- Support community engagement, grievance resolution, and coordination with authorities and permit processes.

H&S Manager (SPV)

- Prepare, review, and implement health, safety, community, and hazardous materials plans per company policies, regulations, standards, and lender requirements.
- Ensure EPC and subcontractors follow H&S, community safety, and hazardous materials handling procedures, including site boundaries and method statements.
- Provide technical support for safe implementation of hazardous material and safety plans; integrate controls into daily work.
- Monitor compliance, conduct inspections, audits, and hazard walkthroughs, including hazardous materials storage and use.
- Track safety and hazardous material performance, investigate incidents, identify root causes, and implement corrective actions.
- Support H&S and hazardous material training, maintain records, and report performance to management and stakeholders.
- Engage with regulatory authorities and ensure timely resolution of public health, safety, and hazardous material-related complaints.

Deputy E&S Manager (SPV)

- Lead Environmental, Social, and Hazardous Materials management and ensure compliance.
- Review subcontractors' ESHS and hazardous material documents.
- Monitor performance, incidents, and corrective actions.
- Ensure EPC and subcontractors follow E&S and hazardous material procedures.
- Support training, record-keeping, and reporting.
- Oversee community engagement and grievance management.
- Coordinate environmental, social, and hazardous material monitoring.

Social Chief (SPV)

- Ensure EPC and subcontractors follow the HMMP.
- Review reports and ensure compliance with regulations and standards.
- Train staff in engagement, grievance handling, and hazardous materials management.
- Coordinate with E&S Deputy Manager and construction teams on community and hazardous materials issues.

HSE Specialist (SPV)

- Support H&S and HMMP; ensure safe site activities.
- Conduct inspections, hazard assessments, audits, and follow up corrective actions.
- Monitor compliance and integrate H&S and hazardous material measures into work procedures.
- Maintain documentation of permits, incidents, training, and corrective actions.

- Participate in investigations and implement lessons learned.
- Support and review H&S and hazardous material training for site personnel.
- Ensure proper site demarcation, signage, and barriers.
- Assist in resolving safety and hazardous material-related complaints.

Project Director (EPC)

- Define and oversee EPC execution strategy, project management plans (HSE, E&S, QA/QC), and hazardous materials management.
- Lead teams and coordinate EPC functions, ensuring compliance with plans, standards, regulations, and hazardous material procedures.
- Approve and monitor site inspections, safety reviews, and training, including hazardous materials handling.
- Track KPIs, timelines, budgets, and implement corrective actions for non-compliance, including hazardous material issues.
- Serve as EPC representative to SPV, clients, stakeholders, and authorities; address safety, environmental, social, and hazardous material concerns.
- Oversee risk management, quality systems, and mitigation strategies covering technical, HSE, social, and hazardous material aspects.
- Supervise subcontractors and ensure proper execution of construction phases and hazardous materials management.

E&S Manager (EPC)

- Prepare, review, and implement E&S and Hazardous Materials Management Plans per policies, standards, and lender requirements.
- Coordinate with SPV, contractors, and construction teams to ensure compliance and effective site practices.
- Monitor and enforce contractor/subcontractor compliance with E&S and hazardous material requirements.
- Ensure site boundaries, traffic, utility protection, and community safety measures are maintained.
- Oversee E&S training, onboarding, toolbox talks, and awareness programs for all personnel.
- Supervise E&S staff, monitor performance, lead investigations, and implement corrective actions.
- Manage grievance resolution, emergency preparedness, and integration of social inclusion principles.
- Report E&S and hazardous material performance to Project Director and promote continuous improvement.

H&S Manager (EPC)

- Develop, implement, and update the H&S and Hazardous Materials Management Plans.
- Ensure EPC and subcontractors fully comply with safety and hazardous material requirements.
- Manage risk assessments, site safety controls, traffic, utilities, and community protection.
- Lead inspections, incident investigations, and corrective actions, including hazardous material events.

- Oversee training, toolbox talks, and emergency drills on health, safety, and hazardous materials.
- Report performance and risks to the Project Director and foster a proactive safety culture.

Biodiversity Specialist (EPC)

- Ensure integration of biodiversity safeguards into the HMMP, preventing contamination of soil, water, and ecosystems.
- Oversee ecological mitigation measures (e.g., buffer zones, habitat restoration) that also serve as protective barriers against hazardous material impacts.
- Train site teams on biodiversity–hazardous material interactions, raising awareness of risks to sensitive habitats and species.
- Monitor biodiversity indicators and report non-compliances related to hazardous material impacts to the E&S Manager.
- Coordinate with contractors and subcontractors to include biodiversity and hazardous material controls in work plans and method statements.

Warehouse Supervisor (EPC)

- Keep accurate records of all hazardous materials upon receipt and during distribution.
- Ensure safe and secure storage in designated areas with proper labeling and containment.
- Conduct regular inventory checks to monitor stock levels and avoid shortages or excess.
- Prevent risks by identifying and reporting damaged, expired, or leaking hazardous materials, arranging for safe disposal in compliance with regulations.
- Maintain complete documentation of inventory, inspections, and disposal activities for auditing and compliance purposes.
- Coordinate with the E&S Manager and HSE team during inspections, audits, and incident investigations related to hazardous materials.
- Support training and awareness on safe handling, storage, and emergency procedures involving hazardous substances.

Transport Coordinator / Logistics Team (EPC)

- Ensure all hazardous materials are transported via licensed carriers and in compliance with ADR, IMDG, ICAO, and RID regulations
- Maintain proper documentation for transportation.
- Provide spill containment kits and secondary containment during transfers.
- Confirm containers are approved, labeled, and leak-proof before transport.

Maintenance Team / Equipment Operators (EPC)

- Regularly inspect machinery and equipment to prevent leaks or contamination.
- Manage collection and temporary storage of oil and oily residues according to approved procedures.

Ensure used oil is sent to authorized recycling or disposal facilities without mixing with other chemicals.

Emergency Response Team (EPC)

- Conduct drills and respond to chemical spills, fires, or other hazardous incidents.
- Maintain and operate firefighting equipment near hazardous material storage.

- Coordinate with Safety Officer and Project Manager during emergencies.
- Ensure fire exits and evacuation routes are always clear.

Site Doctor (EPC)

- Provide first aid, medical care, and emergency response for incidents, including hazardous material exposure.
- Monitor workers' health, detect occupational illnesses/injuries, and recommend preventive measures.
- Maintain confidential health records, including hazardous material–related cases.
- Ensure medical equipment, first aid kits, and emergency protocols are ready and aligned with HMMP.
- Support training and awareness on health risks, hygiene, sanitation, and hazardous material safety.
- Coordinate with H&S teams, external hospitals, and authorities for emergencies and compliance.

Paramedic (EPC)

- Provide emergency medical care for all site incidents, including hazardous material exposures.
- Assist the Site Doctor with health monitoring, records, and follow-up treatments.
- Maintain and monitor first aid kits, emergency supplies, and decontamination equipment.
- Respond to accidents or hazardous material incidents and report details accurately.
- Participate in drills, health awareness, and hygiene programs related to hazardous materials.
- Report health risks and exposure trends to the Site Doctor and H&S Manager.

Environmental Engineer (SPV and EPC)

- Implement and monitor the Environmental & Social Management Plan (ESMP) and Hazardous Materials Management Plan (HMMP) on-site, including subcontractor activities.
- Conduct routine inspections and audits to ensure safe handling, storage, and disposal of hazardous materials and general environmental compliance.
- Maintain environmental records, support reporting, and assist in incident investigations, including hazardous material incidents.
- Provide training, toolbox talks, and awareness programs on environmental and hazardous material management.
- Coordinate with H&S, Social teams, contractors, and regulators to integrate environmental and hazardous material requirements into site activities.
- Support obtaining, renewing, and complying with all environmental permits.

Community Liaison Officer (CLO) (SPV and EPC)

- Communicate project activities and potential hazardous material risks to local communities.
- Organize community meetings, focus groups, and engagement forums to inform and receive feedback.
- Manage grievances and complaints, including those related to hazardous material incidents, through the Grievance Mechanism (GM).
- Assess impacts on vulnerable or marginalized groups and propose tailored mitigation or engagement approaches.

- Support monitoring, reporting, and documentation of community concerns and contractor compliance with environmental and hazardous material measures.
- Maintain confidentiality and ensure proper handling of sensitive community information.

All Personnel (including Contractor/Subcontractor Personnel)

- Follow the Hazardous Materials Management Plan (HMMP) and related procedures during all site activities.
- Report any non-compliance or hazardous material incidents to the CLO and E&S Manager.
- Participate in relevant HMMP and safety training programs.
- Ensure safe handling, storage, and use of hazardous materials in daily work.
- Take responsibility for implementing HMMP requirements and maintaining a safe working environment.

VI. HAZARDOUS MATERIAL MANAGEMENT APPROACH

The management of hazardous materials is critical to ensuring environmental protection, worker safety, and regulatory compliance throughout the project lifecycle. Structured approach reduces risks to human health and the environment, ensures regulatory compliance, and supports the project's overall environmental and social management objectives. This approach establishes procedures for the identification, handling, storage, transport, and disposal of all hazardous substances used or generated on-site.

- All hazardous materials are cataloged according to type, quantity, and associated risks. Materials are classified in line with local regulations and internationally recognized standards (e.g., GHS – Globally Harmonized System of Classification and Labeling of Chemicals).
- Hazardous substances are stored in designated, secure areas with appropriate containment systems to prevent leaks or spills. Storage facilities are equipped with fire suppression, secondary containment, and clear labeling.
- Staff handling hazardous materials receive specialized training on safe procedures, personal protective equipment (PPE) use, and emergency response.
- Movement of hazardous materials follows strict protocols to prevent accidents and environmental release, including secure packaging, labeling, and transport documentation.
- Spill response kits, fire-fighting equipment, and emergency action plans are maintained and regularly tested. Clear reporting and notification procedures are in place.
- Hazardous waste is segregated, treated, or disposed of according to national regulations and international best practices, minimizing environmental impact. Where feasible, recycling and recovery options are implemented.
- Regular inspections, audits, and monitoring ensure adherence to management procedures, legal requirements, and performance standards. Records are maintained for traceability and reporting purposes.

During the construction works, both temporary and permanent facilities will be established. These include construction campsites, concrete and mechanical plants, quarries, borrow pits, service roads, and other supporting infrastructure. Hazardous materials such as fuel and oil will be stored in designated depots within the three project campsites (Temporary Taşağıl, Manavgat, and Alanya). Temporary construction camps with facilities, borrow pits / quarries

.

During the construction phase of the Project, the main types of hazardous materials are the following:

- Chemical solutions used in construction and maintenance activities;
- Empty or partially full chemical containers;
- Flammable materials;
- Contaminated soil and absorbent materials;
- Contaminated materials such as used personal protective equipment (PPE), workwear, and other construction-related materials.

At the project's camping sites, hazardous materials such as lubricants and chemicals are carefully managed to protect workers, residents, and the surrounding environment. All materials are stored in designated, secure areas with secondary containment to prevent leaks or spills, and access is restricted to trained personnel only. Refueling and transfer operations are conducted in controlled zones equipped with spill response kits and fire-fighting equipment. Staff are provided with personal protective equipment (PPE) and trained in safe handling, emergency response, and proper disposal of hazardous material. Regular inspections, monitoring, and record-keeping ensure compliance with regulatory requirements and minimize the risk of contamination or accidents in the camp areas.

HAZARDOUS MATERIAL MANAGEMENT PLAN

Within the scope of the project, hazardous chemicals and substances will be stored in chemical storage areas in accordance with the storage conditions specified in their Safety Data Sheets (SDSs). There will be at least one hazardous material storage area in every construction site. These storage areas will be properly ventilated in accordance with the SDSs, protected from moisture, humidity, and sunlight, equipped with the necessary fire extinguishing systems, and fitted with spill kits for use in the event of a spill. Chemicals will be stored separately according to their types, and their placement will be determined based on their properties such as flammability, combustibility, corrosiveness, acidity, etc.

The hazardous storage areas will have their own spillage control bund. The areas will be protected against wind and rain, securely fenced and access to this site will be provided only for authorized people. These areas will also be labelled as hazardous storage areas. There should be a secure section to keep personal protection equipment, spill kits (e.g. absorbents), emergency equipment (for firefighting), eyewash and emergency shower and the SDSs for storage hazardous chemicals.

All fuel depots and tank farms will be equipped with secondary containment (e.g., bunds) to prevent soil and water contamination. Storage and handling areas will be clearly marked, fenced, and access controlled. Fuel and oil stockpiling in open areas will not be permitted. Under the EPA SPCC Regulation, flood (secondary) containment capacity of at least 110% of the volume of the facility's largest storage tank must be provided (see Figure VI-1).

Figure VI-1 . Fuel depots and tanks

The transportation of hazardous material will be undertaken using licensed transportation companies, in accordance with national regulations. Hazardous material will be transported in leak-proof, securely closed, and clearly labeled containers to prevent spillage, leakage, or human exposure. All transport activities will ensure the protection of personnel and environmental integrity throughout the process. Final disposal of hazardous waste will be carried out at licensed treatment and disposal facilities, based on the classification and properties of the waste. Moreover, the comprehensive management of hazardous waste is thoroughly detailed in the Solid Waste Management Plan.

Waste oils will be transported to the licensed processing and disposal/recover facilities. Waste Oil Declaration Form in Appendix of Regulation on Management of Waste Oils will be filled and sent to the Provincial Directorate of Environment, Urbanization and Climate Change by the end of February of the following year.

HAZARDOUS MATERIAL MANAGEMENT PLAN

Explosives and blasting materials will not be stored on-site under any circumstances. Moreover, campsites will include facilities such as cafeteria, infirmary, showers and toilets, wastewater treatment plants/septic tanks, water supply facilities. The implementation of this project will be entirely pesticide-free.

Inventory and stock control will be carried out regularly by the Warehouse Supervisor. As part of the HMMP, the Supervisor will ensure that all hazardous materials are properly recorded upon receipt, stored in designated and secure areas, and distributed in line with safety procedures. The Supervisor will also be responsible for monitoring stock levels, preventing overstock or shortages, and ensuring that expired or damaged materials are immediately reported and safely disposed of in accordance with applicable regulations. Regular inspections and documentation will support compliance with environmental, health, and safety standards throughout the construction period

To support proper classification and management of hazardous materials, Table VI.1 outlines the key hazardous characteristics used to define substances and materials under national and international standards. This table should be used as a complementary reference when assessing whether a substance presents a risk to human health or the environment, particularly when it is not immediately clear whether a material meets the criteria of hazardous material. The hazardous characteristics of substances and materials are summarized in Table VI.1 .

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HAZARDOUS MATERIAL MANAGEMENT PLAN

Table VI-1 Hazardous Characteristics of Substances and Materials

Characteristic	Definition
Explosive	Substances and preparations that can explode in the presence of a flame or are more sensitive to shock and friction than dinitrobenzene.
Oxidizing	Substances and preparations that, in contact with other materials, especially flammable ones, cause strongly exothermic reactions.
Highly Flammable	Substances and preparations that (i) in liquid phase have a flash point below 21°C or spontaneously ignite in air, (ii) in solid phase ignite easily and continue burning, (iii) in gas phase are flammable under normal pressure, or (iv) produce flammable gases upon contact with water or moist air.
Flammable	Liquid substances and preparations with a flash point equal to or greater than 21°C and equal to or less than 55°C.
Irritant	Non-corrosive substances and preparations that may cause inflammation upon immediate, prolonged, or repeated contact with skin or mucous membranes.
Harmful	Substances and preparations that may pose limited but significant risks when inhaled, ingested, or absorbed through the skin.
Toxic	Substances and preparations that may cause serious, acute or chronic health risks, or death when inhaled, ingested, or absorbed through the skin (including highly toxic substances).
Carcinogenic	Substances and preparations that may cause or increase the risk of cancer when inhaled, ingested, or absorbed through the skin.
Corrosive	Substances and preparations that can destroy living tissue upon contact.
Infectious	Substances containing microorganisms or their toxins known to cause disease in humans or other organisms, or with a reasonable assumption of such risks.
Reproductive Toxic	Substances and preparations that may cause or increase non-hereditary adverse effects in offspring or impair reproductive functions and capabilities.
Mutagenic	Substances and preparations that may cause or increase the frequency of heritable genetic disorders when inhaled, ingested, or absorbed through the skin.
Reactive with Water	Substances and preparations that release toxic or highly toxic gases upon contact with water, air, or acids.
Sensitizing	Substances and preparations that may cause hypersensitivity when inhaled or absorbed through the skin, so that repeated exposure leads to harmful effects.
Eco toxic	Substances and preparations that pose actual or potential immediate or delayed risks to one or more environmental components.
Dangerous to the Environment	Substances and preparations that, upon disposal, may exhibit one or more hazardous characteristics by any pathway (e.g., via leachate or breakdown products).

VII. MITIGATION MEASURES FOR IMPACTS OF HAZARDOUS MATERIALS

The following mitigation measures will be implemented under the H MMP to ensure proper handling, storage, transportation, and disposal of hazardous material during the construction phase of the Project.

General Principles

- All necessary measures will be taken to prevent the release of hazardous materials and minimize environmental impact.
- Hazardous substances will not be disposed of on-site (e.g., incineration, burial) and will not enter surface water, groundwater, or areas where they could cause harm.
- Oil and oily residues will be collected and managed according to approved procedures. Where appropriate, used oil may be sent to authorized facilities for recycling or reuse, ensuring it is not mixed with degreasers, solvents, antifreeze, or brake fluid.
- Construction machinery and equipment will be regularly inspected and maintained to prevent spills or contamination.
- Material Safety Data Sheets (MSDS) for all hazardous substances will be available in storage and working areas.
- Full compliance with national regulations will be ensured.
- Hazardous materials in solid or liquid form will be stored in appropriate containers with clear labeling of type, source, quantity, and storage date.
- Hazardous materials will be transferred only to licensed facilities authorized for handling, recovery, recycling, or disposal.
- Proper labeling of hazardous products will be maintained, including content descriptions, quantity, and storage dates.
- Personnel handling hazardous materials will wear appropriate Personal Protective Equipment (PPE).
- Corrosive liquids will be stored separately from flammable substances.
- Information posters on hazardous materials will be displayed in accessible areas.
- Regular inspections will be conducted to ensure compliance with hazardous material management procedures.
- Medical materials from on-site medical facilities will be temporarily stored in sealed, labeled containers and disposed of according to regulations.
- Materials potentially containing hazardous substances (e.g., detergents, petroleum products, asphalt, concrete compounds) will be handled and stored to prevent environmental release.
- A hazardous materials minimization program will be implemented, including substitution with safer alternatives where feasible.
- Engineering controls and technological improvements will be applied to mitigate chemical risks.
- Site-specific and individual risk assessments will be conducted for each hazardous chemical prior to use.
- Collective protective measures (e.g., ventilation, process modifications) will be prioritized, with personal protection used where necessary.
- All control measures will be regularly monitored for effectiveness.
- Working alone with hazardous chemicals is strictly prohibited.
- Eating, drinking, and smoking are not allowed in hazardous material handling or storage areas.
- All personnel must receive hazardous chemical handling training before starting work.

Classification and Labeling of Hazardous Materials

- Hazardous chemicals will be classified based on their physical, toxicological, and environmental risks. This information will be available in Material Safety Data Sheets (MSDS) and on chemical labels.
- Classification aims to identify the risks of chemicals during handling and usage. Once classified, hazardous substances will be properly labeled to inform workers, the public, and the environment.
- Project suppliers will be required to comply with REACH (Registration, Evaluation, Authorization, and Restriction of Chemicals) regulations for hazardous material supply.
- Labels will include the chemical's common and trade names, potential physical and health hazards, the manufacturer's name, and relevant pictograms and warning signs.
- Labels must be applied to all primary and secondary containers to ensure proper identification.
- MSDS will be obtained before hazardous materials arrive on-site.
- Hazardous material storage risks will be assessed beforehand to prevent irreversible damage.
- MSDS will be provided to relevant personnel, including environmental specialists, safety officers, and emergency response teams.
- All hazardous substances will be labeled as "hazardous" and stored accordingly.
- MSDS will be regularly updated and revised as needed.
- Chemical storage risks will be identified in advance to prevent accidents.

Transportation of Hazardous Chemicals

- Hazardous chemicals transported via road, sea, air, or rail will comply with the ADR (European Agreement concerning the International Carriage of Dangerous Goods by Road), the IMDG Code (International Maritime Dangerous Goods Code), ICAO Technical Instructions (for air transport), and RID (Regulations concerning the International Carriage of Dangerous Goods by Rail).
- Hazardous material transportation will be conducted by licensed transport companies and comply with legal requirements.
- Spill prevention kits and secondary containment systems will be available at all hazardous material transfer points.
- Proper documentation for transportation will be completed by trained personnel.
- Hazardous substances will be transported in approved, labeled containers.
- Drip trays and spill containment kits will be used to prevent leaks during material transfers.

Storage of Hazardous Materials

- Chemicals will be classified and segregated to prevent hazardous reactions.
- The priority order for hazardous material storage will be as follows: infectious materials, radioactive materials, explosive materials, compressed, liquefied and dissolved gases and pressurized small gas containers, self-igniting materials, materials that emit flammable gas upon contact with water, organic peroxides, oxidizing materials, flammable solids, flammable liquids, flammable liquids, flammable toxic materials, non-flammable toxic materials, flammable corrosive (corrosive) materials, non-flammable corrosive (corrosive) materials, flammable liquids that do not fall under Class 3A or 3B, flammable solids, non-flammable liquids, and non-flammable solids.
- Flammable, oxidizing, and toxic materials will be stored separately.
- Storage areas will be fire-resistant, ventilated, and clearly marked.

- Secondary containment systems will be used to prevent spills.
- Regular safety inspections will be conducted on storage areas.
- Chemical inventory records will be maintained.
- Proper fire prevention measures (e.g., fire extinguishers, emergency exits) will be in place.

Fire Safety and Emergency Response

- Fire safety measures will include the identification of hazardous materials storage areas, the designation of safe fuel transfer locations, and the strict control of ignition sources along with smoking restrictions.
- Fire extinguishers will be strategically placed near hazardous material storage areas.
- Emergency response drills will be conducted regularly.
- Fire exits will remain unobstructed at all times.
- All personnel will be trained in hazardous material fire response procedures.
- Only authorized personnel will handle hazardous substances.

VIII. TRAINING

Upon hiring, all staff will receive structured training addressing the risks associated with hazardous material handling, storage, transportation, and disposal, as well as the corresponding mitigation strategies applicable to their responsibilities within the Project. This training will include guidance on appropriate use of personal protective equipment (PPE), spill prevention techniques, labeling and segregation requirements, and proper disposal procedures.

As part of the hazardous materials management requirements, targeted training will also be provided as outlined below:

- All personnel involved in the handling, storage, use, and transportation of chemical substances will be trained by qualified professionals and will be required to understand the potential hazards associated with these activities. Only trained and experienced personnel selected by authorized experts will be permitted to carry out these tasks.
- Individuals will not be authorized to undertake responsibilities involving chemical substances unless they have completed the required chemical handling training program in accordance with this standard.
- Chemical handling training will be provided at least once to all employees throughout the Project duration, with refresher training delivered as necessary. This training will also be mandatory for contractor and all subcontractor personnel employed on the Project.
- The training and awareness sessions will include information obtained from risk assessments; identification and recognition of hazardous chemical substances present or potentially arising in the workplace, associated health and safety risks, occupational illnesses, occupational exposure limit values, and applicable legal requirements; precautionary measures and safe practices to prevent endangering oneself or others; information on Material Safety Data Sheets (MSDS) provided by the supplier in the language understood by workers; and labeling and lockout/tag out requirements for areas, containers, piping systems, and similar installations containing hazardous chemical substances in accordance with relevant regulations.

The overall training framework will be developed by the E&S and/or H&S Manager and disseminated to all relevant Project stakeholders for implementation. Training records will be maintained, and continuous monitoring of staff competency will be ensured to verify effective understanding and application of safe hazardous management practices.

IX. MONITORING

A structured internal monitoring program will be implemented to assess the effectiveness of hazardous materials management and associated mitigation measures outlined in this Plan during the construction phase of the Project. The scope and frequency of monitoring activities will be periodically reviewed and revised where necessary, based on site-specific conditions, trends, stakeholder concerns, or updates in applicable environmental and health and safety regulations.

Monitoring activities will be coordinated by the E&S Manager, in close collaboration with the H&S Manager and General Manager. Key responsibilities will include verifying the implementation of hazardous materials storage and handling protocols, reviewing documentation on chemical inventories, and ensuring the consistent application of safety measures near sensitive receptors such as work camps, storage yards, and worker accommodation units.

Regular inspections will be conducted by E&S Specialist at designated locations across all worksites to evaluate compliance with national hazardous waste regulations and Project-specific management procedures. This will include review and control of the following:

- The list of hazardous materials and chemicals supplied, stored, and used on-site, including information on their type, quantity, and volume.
- Hazardous material management and disposal agreements with licensed companies to ensure legal compliance and traceability.
- Hazardous compartments within Storage Areas to confirm compliance with storage and containment requirements.
- Site practices related to hazardous management—including general housekeeping rules, source separation practices, container integrity, and containment infrastructure.

In addition, a daily general site overview will be conducted by the E&S Specialist to observe construction progress, site organization, and general environmental conditions. Monthly coordination meetings will also be held with project management teams to report on the key findings from monitoring activities and to provide feedback on overall environmental performance.

The performance of contractors and subcontractors in implementing hazardous materials management requirements will be reviewed through environmental audits, site supervision reports, and field observations. Any identified non-conformities will trigger timely corrective and preventive action plans. Monitoring will also include follow-up assessments to confirm the effectiveness of implemented measures and ensure recurrence is prevented.

In addition to internal monitoring, inspections may also be carried out by relevant public institutions, including the Ministry of Environment, Urbanization and Climate Change, the Ministry of Health, and the Ministry of Labor and Social Security, in accordance with Turkish legislation. The frequency and scope of these inspections will be determined by the competent authorities and may include on-site assessments, documentation review, and verification of compliance with hazardous material management standards.

Monitoring efforts will be guided by the framework provided in Table IX.1, which outlines the parameters to be monitored, the corresponding monitoring locations, frequency of inspections, and responsible parties. These monitoring activities will be essential for evaluating the effectiveness of hazardous materials management and ensuring full compliance with national regulations and Project-specific requirements.

Table IX-1 Key Monitoring Activities

Parameter	Monitoring Station / Location	Monitoring Method	Monitoring Frequency	Responsible Parties
The list of hazardous materials and chemicals supplied, stored, and used on-site, including information on their type, quantity, and volume	Camp sites, road construction sites, quarries	Site audit, document review	Monthly	SPV E&S Engineer EPC E&S Engineer
Soil contamination risk from hazardous substances (e.g., fuel	Project area and sensitive receiving environments (e.g., soil, surface water)	Visual inspection for signs of leakage or spills; inspection of storage and handling practices; SDS and training record review	Daily	AAOİAŞ / Subcontractors
General site practices related to hazardous materials management	Entire construction corridor	Field observations on container integrity, spill kits, PPE use, and storage conformity	Weekly	AAOİAŞ, Independent Environmental Experts
Environmental enforcement actions and non-compliance records	Project area	Review of regulatory audit reports, notifications, and enforcement communications	Monthly	AAOİAŞ, Independent Environmental Experts

In the event that non-compliance is identified through internal oversight or external audits, AAOİAŞ will ensure that all corrective and preventive measures are promptly implemented in coordination with the Main Contractor (Limak) and all relevant subcontractors.

All hazardous materials-related findings, including non-compliance incidents, inspection results, or grievances received, will be documented in accordance with national environmental legislation and Project procedures. In the case of significant violations—such as mismanagement of hazardous material or failure to follow approved storage practices—AAOİAŞ will ensure timely reporting to the competent authorities and initiate all necessary technical, procedural, and contractual measures to ensure legal and environmental compliance.

X. KEY PERFORMANCE INDICATORS

The following Key Performance Indicators (KPIs) will be monitored, verified, and evaluated.

Table X-1 Key Performance Indicators – Construction Phase KPIs

Monitoring Parameter / Performance Indicator	Target	Frequency	Responsible Party
Percentage of inspections completed compared to those planned	100%	Monthly	AAOİAŞ Subcontractors
Percentage of hazardous materials management training sessions completed as planned	100%	Monthly	AAOİAŞ / Subcontractors

Monitoring Parameter / Performance Indicator	Target	Frequency	Responsible Party
Non-conformities related to hazardous materials management	Less than five	Monthly	AAOİAŞ / Subcontractors
Complaints related to hazardous materials management	Less than five	Monthly	AAOİAŞ / Subcontractors
Number of legal penalties issued by authorities in relation to environmental requirement	0	Monthly	AAOİAŞ / Subcontractors
Number of training on hazardous material management for all employees	At least 1 times in a year	Yearly	AAOİAŞ / Subcontractors

XI. AUDIT AND REVIEW

The implementation of this Plan should be regularly monitored and reviewed in accordance with the ESMMP. All incidents and non-conformities related to hazardous materials management should be documented and reported as outlined in this Plan. Contractors and subcontractors should be subject to audits conducted by the Project Sponsor within the scope and schedule defined in the Supply Chain and Subcontractor Management Plan. These audits and the associated records should be managed in compliance with the Project's environmental, health, and safety procedures. Records to be reviewed during hazardous materials audits will include, but are not limited to, chemical inventory logs, MSDS, waste transfer and disposal documentation, training attendance records related to hazardous substances, inspection and maintenance checklists, non-conformity and incident reports, storage area inspection records, and relevant environmental permits. Observations and deficiencies identified during audits should be recorded in formal audit reports, and all findings requiring improvement should be registered under Corrective Actions. Project management should review audit outcomes and corrective action records, follow up on progress, and ensure that additional measures are implemented where necessary to ensure full compliance with national regulations and applicable international standards regarding hazardous materials management.

XII. REPORTING

Regular reporting will be conducted to ensure the effective implementation and continuous improvement of hazardous material management activities throughout the construction phase of the Project. Reporting will be structured to address both internal monitoring and auditing outcomes, as well as external compliance obligations and stakeholder engagement requirements.

Based on monitoring results, necessary corrective and preventive actions will be identified, and the required updates will be incorporated into this Plan. The training program will also be revised accordingly to address any observed gaps. Regular audits and visual inspections will be conducted to verify that all activities are being undertaken in accordance with the provisions of this Plan.

Quarterly Environmental and Social Monitoring Report will cover at least, but not limited to, the following items. The report will be prepared by the SPV with input data provided by EPC to evaluate the Project performance and compliance of the related plans.

- Incident reporting;
- Emergency response reporting;
- Records of annual emergency response training exercises;
- KPIs and performance trends (see Table XI.1) ;
- Current situation Key Monitoring Activities (see Table XI.2)
- Relevant training activities completed and attendance registers to be maintained;
- Legal Authorities Audit reports;
- Site Inspection logs

In addition, the following external reporting will be done:

- All environmental and social incidents will be appropriately documented, notified and reported in accordance with established procedures the terms and conditions by EPC to SPV,
- Incident notification and reporting to relevant Turkish regulatory bodies will be performed in line with applicable legislation in force and as stipulated in permits and licenses.
- The Lenders will be notified of incidents pursuant to the terms and conditions agreed upon in the Finance Agreements through SPV.

All personnel are encouraged to raise concerns, suggestions, or complaints related to this Plan through the established grievance mechanism by completing the grievance form. The communication channels available for submitting grievances are outlined in the Stakeholder Engagement Plan.

SOLID WASTE MANAGEMENT PLAN

REVISION STATUS		
Revision Date	**Rev. No**	**Explanation**
01.03.2025	00	This plan is prepared according to TS EN ISO/IEC 9001:2015, TS EN ISO/IEC ISO 14001:2015, TS EN ISO/IEC 45001:2018 and IFC Performance Standards
23.05.2025	01	Revision as per comments
16.06.2025	02	Revision as per revision made under ESDD submitted by the Lender consultant
08.09.2025	03	Revision as per revision made under ESDD submitted by the Lender consultant

SOLID WASTE MANAGEMENT PLAN

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LIST OF ABBREVIATIONS

AAOİAŞ	Antalya-Alanya Otoyolu İnşaat Yatırım ve İşletme A.Ş.
CLO	Community Liaison Officer
E&S	Environmental and Social
EHS	Environmental, Health, and Safety
EPC	Engineering, Procurement and Construction (Limak İnşaat Şanayi ve Tic. A.Ş.)
ESIA	Environmental and Social Impact Assessment
ESMMP	Environmental and Social Management and Monitoring Plan
ESMS	Environmental and Social Management System
IFC	International Finance Corporation
KPIs	Key Performance Indicators
Limak	Limak İnşaat Şanayi ve Tic. A.Ş.
MoTAT	Mobile Hazardous Waste Tracking System
MSDS	Material Safety Data Sheets
SPV	Special Purpose Vehicle (Antalya-Alanya Otoyolu İnşaat Yatırım ve İşletme A.Ş.)
WEEE	Electrical and Electronic Equipment
WHO	World Health Organization

I. INTRODUCTION

Ministry of Transport and Infrastructure (former Ministry of Transport, Maritime Affairs and Communications), through the General Directorate of Highways ("KGM" or "the Administration"), as the owner of the Antalya-Alanya Motorway Project, has initiated a tender process for a contract in accordance with the Law on Implementation of Some of the Investments and Services in the Framework of Build, Operate and Transfer Model (Law No: 3996). Following the tendering process, KGM has awarded Antalya-Alanya Otoyolu İnşaat Yatırım ve İşletme A.Ş. (AAOİAŞ or the Project Sponsor) with a Build, Operate and Transfer (BOT) contract for the implementation of the Project. Accordingly, AAOİAŞ will be referred as Project Sponsor[1] in the scope of this report. The main contractor for the Project has been designated as Limak and will henceforth be referred to as the Contractor (or EPC).

The Project is designed to connect the district Serik and Alanya via the Manavgat district of Antalya province will enhance the existing transportation network services with its surrounding provinces: Burdur, Muğla, Konya, Isparta, Karaman and Mersin. Various environmental, social, and technical studies have been conducted along the initial route of the Project tendered by the KGM. Based on these studies, the route was optimized, incorporating engineering practices and addressing environmental and social considerations, particularly issues of involuntary and economic resettlement, before being finalized. According to the most current design, the total length of the Motorway, which will be a dual carriageway of mostly 3 and partially 2 lanes (3x2 and 2x2) in each direction, is 117.8 kilometers including the main carriageway and the access roads[2].

This Solid Waste Management Plan ("SWMP" or "The Plan") has been prepared by Antalya-Alanya Highway Construction Investment and Operation Inc. ("AAOİAŞ" or "SPV") for the Antalya-Alanya Highway Project ("Project") in accordance with national legislation, the Equator Principles ("EP"), the International Finance Corporation ("IFC") Performance Standards ("PSs"), and the international standards referred to in the relevant legislation section. The Plan covers the construction phase of the Project.

I.1 Project Description

The Project begins at Serik Interchange (Km: 52+000) and then proceeds eastward, following the corridor at the foothills of the Taurus Mountains within the boundaries of Serik and Manavgat districts, ending at north of Konaklı neighborhood of Alanya District (Km: 136+000). From this point onwards, the route turns southward with a 2x2 lane connection road and connects to the D400 state road at the Alanya West Interchange.

As of April 2025, the current Project design includes a total of 117.8 kilometers of roadway, comprising 84 kilometers of main road (motorway) and 33.8 kilometers of access roads. Other structures to be built as part of the project are as follows:

- 16 viaducts,
- 22 bridges,
- 305 culverts,
- 25 interchanges,
- 56 overpasses,
- 43 underpasses, and
- 5 tunnels.

The map illustrating the construction components and road route within the scope of the Project's construction activities is provided in Figure I-1.

[1] The BOT Contract uses the term "Appointed Company" to refer Project Sponsor

[2] It should be noted that the environmental and social baseline characterization, maps and scoping assessments provided in this report are based on the most current design

Figure I-1.Map Showing the Locations of Construction Compounds

SOLID WASTE MANAGEMENT PLAN

II. PURPOSE AND SCOPE

This Plan has been prepared by Antalya-Alanya Otoyolu İnşaat Yatırım ve İşletme A.Ş. ("AAOİAŞ" or "SPV") for the Antalya-Alanya Motorway Project ("the Project").

The purpose of this Plan is to identify the main sources of solid waste generated during the construction phase and to outline the measures that should be implemented to prevent, minimize, reuse, and recycle waste in accordance with applicable national legislation and international standards. This Plan aims to support sustainable waste management practices and promote circular economy principles throughout construction activities.

This management plan is a living document developed with the best available information and will be reviewed and revised as necessary due to the nature of the construction and progress.

Waste types include but are not limited to domestic/residential waste from construction personnel, excavation waste from earthworks and site arrangements (e.g., base layers, shoulders, slope shaping), construction waste from material use and installation processes, and packaging waste generated from the consumption of goods and materials (e.g., construction materials, food, clothing).

This Plan should be implemented by the Project Sponsor, AAOİAŞ, the Main Contractor (Limak or EPC) all subcontractors involved in the construction phase. Roles and responsibilities for waste management, monitoring, and reporting should be clearly defined, and this Plan should be reviewed and updated in line with changes in project activities or legal requirements.

III. LEGISLATIVE FRAMEWORK AND REFERENCE STANDARDS

The Plan has been developed in alignment with applicable national legislation and international standards to ensure that solid waste generation, segregation, collection, storage, transportation, reuse, recycling, and final disposal during the construction phase of the Project are conducted in an environmentally sound manner. The references listed below should be used as the legal and procedural basis for implementing the waste management practices outlined in this Plan.

III.1 National Requirements

The following Turkish laws and regulations should be used as the primary legal framework for solid waste management:

- Environmental Law (Law No. 2872),
- Regulation on Waste Management,
- Regulation on Environmental Impact Assessment,
- Regulation on Environmental Permits and Licenses,
- Regulation on the Control of Excavation, Construction, and Demolition Wastes,
- Regulation on the Control of Packaging Waste,
- Regulation on the General Principles for Waste Pre-Treatment and Recovery Facilities,
- Regulation on the Management of Waste Oils,
- Regulation on the Management of Waste Electrical and Electronic Equipment,
- Regulation on the Control of Waste Batteries and Accumulators,
- Regulation on the Control of End-of-Life Tires,
- Regulation on the Control of End-of-Life Vehicles,
- Regulation on the Control of Vegetable Waste Oils,
- Regulation on the Control of Medical Wastes
- Regulation on Mining Wastes,

- Regulation on Landfilling of Waste
- Regulation on Waste Incineration
- Regulation on Zero Waste Management
- Regulation on Recycling Contribution Fee
- Communiqué on the Transport of Waste by Road
- Circular on the Preparation of Implementation Project for Landfills,
- Circular on Landfill of Mining Wastes and Technical Arrangement of Other Landfills,
- Water Pollution Control Regulation,
- Surface Water Quality Regulation,
- Regulation on the Control of Pollution Caused by Dangerous Substances in and around the Water Bodies,
- Regulation Concerning Protection of Groundwater against Pollution and Deterioration,
- Ordinance on Groundwater Resources,
- Regulation on Safety Data Sheet on Harmful Substances and Mixture
- Regulation on the Preparing and Distributing Safety Data Sheets Regarding Dangerous Materials and Preparations,
- Regulation on the Classification, Labelling and Packaging of Materials and Mixtures,

Regulation on Transportation of Hazardous Goods on Highways,

These regulations should be used as the legal basis for waste segregation, temporary storage, transport, recycling, recovery, and disposal activities at all construction sites and associated facilities.

III.2 International Standards and Guidelines

The following international standards and procedures are applicable to the Project to ensure alignment with national legislation and recognize good industry practices.

AIIB is a multilateral development bank established to promote sustainable economic growth and improve infrastructure connectivity. According to the Articles of Agreement, AIIB aims to invest in infrastructure and productive sectors while fostering regional cooperation through partnerships with other development institutions. To ensure responsible operations, AIIB adheres to policies that address environmental and social impacts, outlined in its Environmental and Social Framework (ESF). The ESF, updated in June 2024, and reflects AIIB's commitment to international standards and sustainable development practices.

Also, the following international standards and reference frameworks should be used to align Project practices with international lender requirements and good practice environmental and social management:

- IFC Performance Standards (2012), specifically:
  - Performance Standard 1: Assessment and Management of Environmental and Social Risks and Impacts
  - Performance Standard 3: Resource Efficiency and Pollution Prevention
  - Performance Standard 4: Community Health, Safety, and Security
- IFC Environmental, Health and Safety (EHS) General Guidelines (2007)
- IFC EHS Guidelines for Toll Roads (2007)
- IFC Guidance Notes (2012)
- Equator Principles IV (2020)
- European Union Requirements- Waste Frameworks Directives (2008)
- Equator Principles (EPs) IV,

- World Business Council for Sustainable Development (WBCSD), December 2011

These international references provide the broader sustainability framework and technical benchmarks to be integrated into solid waste management procedures, particularly in relation to source reduction, reuse and recycling targets, occupational health and safety, and environmental protection.

IV. LINKAGE WITH OTHER PROJECT PLANS AND PROCEDURES

This Plan is supported by other management plans and procedures developed under the Environmental and Social Management System (ESMS) of the Project. The following plans and procedures are particularly relevant and should be implemented in coordination with the Solid Waste Management Plan to ensure consistency in environmental and social performance and regulatory compliance throughout the construction phase:

- Environmental Accident and Spill Response Management Plan,
- Water, Wastewater, and Storm Water Management Plan,
- Soil Management and Erosion Control Plan,
- Hazardous Materials Management Plan,
- Excavated Material Management Plan,
- Construction Camp Site Management Plan,
- Occupational Health and Safety Management Plan,
- Community Health and Safety Management Plan,
- Environmental and Social Management and Monitoring Plan (ESMMP)

The effective integration of these plans should be ensured to maintain alignment with Turkish legislation, IFC Performance Standards, and other international best practices. Cross-plan coordination is essential for minimizing cumulative impacts, supporting resource efficiency, and enhancing overall environmental and social risk management during the construction phase.

V. ROLES AND RESPONSIBILITIES

Antalya Alanya Otoyol İnşaat Yatırım ve İşletme A.Ş. (SPV) as the Project Sponsor and Limak (EPC) as the main contractor of the Project will be responsible for the following:

General Manager (SPV):

- Hold the overall responsibility and accountability for the Project, ensuring construction activities comply with national regulations, international standards, and Project commitments.
- Ensure full compliance with the SWMP and related national legislation.
- Ensure that relevant activities are carried out in accordance with this management plan and related procedures and shall ensure the provision of all sources to carry out this Plan.
- Approve and oversee procedures for segregation, collection, storage, transport, recycling, and disposal of solid waste.
- Allocate sufficient resources (personnel, budget, equipment) for effective solid waste management and emergency response related to waste.
- Ensure monitoring, audits, and inspections are carried out, and corrective actions are implemented where gaps are identified.
- Ensure that all line managers and subcontractors understand and fulfil their responsibilities with hazardous material procedures during construction phases.

E&S Manager (SPV)

- Prepare, review, update, and implement the SWMP and other project-specific E&S plans in line with national regulations, international standards, and client requirements.
- Coordinate with EPC, subcontractors, and authorities on waste management.
- Monitor compliance with the SWMP through inspections, audits, and review of records (e.g., waste transfer notes, disposal certificates).
- Ensure waste facilities and contractors are compliant and licensed.
- Deliver and validate waste management and E&S trainings for staff and subcontractors, including induction sessions and refreshers.
- Coordinate with licensed waste contractors and ensure only approved facilities are used for transport, recycling, or disposal.
- Support community engagement, ensuring concerns related to waste (odors, dust, litter, etc.) are addressed through the grievance mechanism.
- Contribute to emergency response planning for accidental releases, hazardous waste mismanagement, or fires at waste storage areas.
- Maintain documentation for audits, compliance checks, and due diligence processes; provide input for sustainability and environmental performance reporting.
- Liaise with local authorities and ensure compliance with permitting, reporting, and regulatory inspections.
- Maintain waste records, Waste Transfer Notes, and MoTAT documentation for hazardous waste.
- Promote continuous improvement by reviewing SWMP implementation, integrating lessons learned, and recommending new waste minimization or recycling opportunities.

H&S Manager (SPV)

- Prepare and implement H&S, hazardous material and waste management plans per regulations and standards.
- Provide technical support and integrate hazardous material and waste controls into daily work.
- Monitor compliance, conduct inspections, and address non-conformities related to hazardous materials waste.

- Investigate incidents involving hazardous materials or waste, implement corrective actions, and report performance.
- Oversee training and maintain records on hazardous material and waste safety.
- Coordinate with authorities and resolve hazardous material– and waste-related complaints.

Deputy E&S Manager (SPV)

- Lead environmental, social, hazardous materials, and waste management, ensuring compliance.
- Review and approve subcontractors' ESHS and hazardous material/waste documents.
- Monitor performance, incidents, and corrective actions related to hazardous materials and waste.
- Ensure EPC and subcontractors follow E&S, hazardous material, and waste procedures.
- Support training, record-keeping, and reporting on hazardous materials and waste management.
- Oversee community engagement and grievance management concerning hazardous materials and waste.
- Coordinate environmental, social, hazardous material, and waste monitoring programs.

HSE Specialist (SPV)

- Support safe site activities and compliance with the SWMP.
- Conduct inspections, audits, and hazard assessments related to waste handling, storage, and disposal.
- Monitor EPC and subcontractor compliance with waste segregation, collection, and disposal procedures.
- Maintain records of waste management activities, incidents, and corrective actions.
- Participate in investigations of waste-related incidents and implement lessons learned.
- Support and review training on proper waste handling and site-level environmental practices.
- Ensure waste storage areas are properly demarcated, labeled, and secure.
- Assist in resolving complaints or issues related to solid waste management.

Project Director (EPC)

- Define and oversee EPC execution strategy and project management plans, ensuring integration of the SWMP.
- Lead teams and coordinate EPC functions, ensuring compliance with SWMP, HSE, E&S, and QA/QC standards.
- Approve and monitor site inspections, audits, and training related to solid waste handling, storage, and disposal.
- Track KPIs, timelines, and budgets; implement corrective actions for non-compliance with waste management procedures.
- Represent EPC to SPV, clients, and authorities; address solid waste, environmental, safety, and social concerns.
- Oversee risk management, quality systems, and mitigation strategies, including waste minimization and recycling.
- Supervise subcontractors to ensure proper execution of construction activities and compliance with SWMP requirements.

E&S Manager (EPC)

- Prepare, review, and implement E&S and Solid Waste Management Plans in line with policies, standards, and lender requirements.
- Coordinate with SPV, contractors, and construction teams to ensure compliance with SWMP and effective waste management practices on-site.
- Monitor and enforce contractor/subcontractor compliance with waste segregation, storage, transport, and disposal procedures.
- Ensure proper site boundaries, traffic, utility protection, and community safety measures related to waste management.
- Oversee SWMP-related training, onboarding, toolbox talks, and awareness programs for all personnel.
- Supervise E&S staff, monitor waste management performance, lead investigations, and implement corrective actions.
- Manage waste-related grievances, emergency preparedness, and integrate social inclusion principles into site-level practices.
- Report SWMP performance to Project Director and promote continuous improvement in waste management.

H&S Manager (EPC)

- Develop, implement, and update the H&S and Solid Waste Management Plans.
- Ensure EPC and subcontractors comply with safety and solid waste handling, storage, and disposal procedures.
- Manage risk assessments, site safety controls, traffic, utilities, and community protection related to waste management.
- Lead inspections, audits, incident investigations, and corrective actions for waste management issues.
- Oversee training, toolbox talks, and emergency drills on health, safety, and solid waste practices.
- Report on SWMP performance and risks to the Project Director and foster a proactive safety and waste management culture.

H&S Specialist (EPC)

- Support the implementation of the H&S and Solid Waste Management Plans.
- Monitor EPC and subcontractor compliance with waste handling, storage, and disposal procedures.
- Conduct inspections, audits, and hazard assessments related to waste management.
- Maintain accurate records of waste activities, incidents, and corrective actions.
- Support training, toolbox talks, and awareness programs on solid waste management
- Ensure secure, properly labeled waste storage and assist in resolving related issues.

Biodiversity Specialist (EPC)

- Ensure biodiversity safeguards are applied to prevent impacts from improper waste handling on soil, water, and ecosystems.
- Oversee ecological measures (e.g., buffer zones, habitat restoration) to mitigate effects of solid waste.
- Train site teams on biodiversity risks related to waste management.
- Monitor biodiversity indicators and report non-compliance linked to waste management to the

Environmental Engineer (SPV and EPC)

- Implement and monitor the ESMP and SWMP across EPC and subcontractor activities.
- Conduct site inspections and audits to ensure compliance with solid waste handling, storage, transport, and disposal procedures.
- Maintain environmental records, support reporting, and assist in waste-related incident investigations.
- Deliver training, toolbox talks, and awareness programs on environmental and waste management practices.
- Coordinate with H&S, Social teams, contractors, and regulators to embed waste management requirements into site activities.
- Support permitting processes and ensure compliance with environmental and waste-related regulations.

Waste Management Supervisor / Officer (EPC)

- Supervise daily implementation of waste segregation at source (e.g., food waste, packaging, office waste, hazardous waste).
- Manage labeling, color-coding, and proper containerization of all waste streams.
- Ensure temporary storage areas comply with safety and security standards (fencing, gates, signage, spill kits, fire extinguishers).
- Keep inventory logs of incoming and outgoing waste and update records.
- Verify that excavated materials are reused on-site whenever possible and that excess is transferred only to designated areas.
- Oversee secure handling of WEEE, batteries, oils, and end-of-life tires

Warehouse Supervisor (EPC)

- Monitor safe storage of hazardous and non-hazardous waste containers.
- Ensure corrosion-resistant and sealed containers are available and properly labeled.
- Remove or cover old/conflicting labels to avoid confusion.
- Coordinate with licensed transporters for collection of hazardous and medical waste.

Community Liaison Officer (CLO) (SPV and EPC)

- Communicate project activities and solid waste management practices to local communities.
- Organize meetings and engagement forums to share information and gather feedback.
- Manage grievances related to solid waste through the Grievance Mechanism (GM).
- Assess impacts on vulnerable groups and ensure inclusive engagement.
- Monitor and report community feedback on SWMP implementation and contractor compliance.
- Safeguard confidentiality and handle sensitive community information responsibly.

All Personnel (including Contractor/Subcontractor Personnel)

- Comply with the SWMP and related site procedures.
- Handle, store, and dispose of waste safely during daily activities.
- Report non-compliance or waste-related incidents to supervisors or the E&S Manager.
- Participate in SWMP and safety trainings as required.
- Immediately notify supervisors in case of accidental spills or improper disposal.
- Take personal responsibility for maintaining a safe and clean working environment.

VI. SOLID WASTE MANAGEMENT AND RECYCLING APPROACH

VI.1 Waste Management Strategy

Although the primary principle of solid waste management is to prevent waste generation at the source, mitigation measures should be implemented to minimize the adverse environmental and social impacts of the solid waste generated during the construction phase. These measures are designed in accordance with the waste management hierarchy prevention, minimization, reuse, recycling, recovery, and safe disposal and are essential to ensure full compliance with Turkish legislation and international standards.

Waste management should follow the principles of the waste hierarchy, as outlined below:

- **Avoidance/Prevention:** Measures should be taken to reduce the quantity of materials used and waste generated from the outset.
- **Reuse:** Materials such as surplus construction materials, excavation soil, timber, and metal should be reused on-site or externally, where technically feasible.
- **Recycling and Recovery:** Separate collection and recycling should be done for paper, cardboard, glass, metal, plastics, tires, electronic waste, batteries, and similar materials. These should be temporarily stored in labeled containers and sent to licensed recycling/recovery facilities.
- **Safe Disposal:** Disposal should only be applied where other management options are not viable. Disposal should be conducted in line with regulatory requirements and the best environmental practices.

The fundamental principle of solid waste management is to prevent waste generation at the source and, where prevention is not possible, to minimize, reuse, or recycle waste to the greatest extent practicable. All waste management activities will be carried out in compliance with relevant Turkish legislation and applicable international standards.

VI.2 Waste Categorization

Solid waste generated during the construction phase of the Project will originate from various activities, including construction operations, excavation works, material usage, accommodation facilities, and routine consumption of goods and supplies such as paper, plastic, metal, and glass containers. All solid waste streams will be classified and managed in accordance with their physical and chemical characteristics to enable effective separation, reuse, recycling, and disposal.

Further detail on the expected waste types, their regulatory codes, and associated management considerations is provided in Table VI-1. This table presents an indicative list of potentially generated waste during land preparation and construction activities, based on the classifications in the Waste Management Regulation (Annex-4). The list includes excavation waste, construction and demolition debris, packaging materials, vehicle and equipment maintenance waste (e.g., waste oil, filters), and municipal-type waste from camp areas. Each waste stream is categorized with its six-digit waste code and marked according to whether it is classified as hazardous (A) or potentially hazardous (M). These classifications are critical for determining appropriate handling, temporary storage, transportation, and final treatment or disposal methods, in alignment with the mitigation and monitoring strategies outlined in this Plan.

Table VI-1. Indicative List of the Potentially Generated Wastes Types During the Land Preparation and Construction Activities

Waste Code	Waste Code Definition	Remarks
01	Wastes Generated During the Exploration, Extraction, Operation and Physical or Chemical Processing of Ores	
01 01	Wastes generated due to mining excavations	

Waste Code	Waste Code Definition	Remarks
01 01 02	Wastes due to non-metallic ores	
01 04	Wastes from physical and chemical processing of non-metallic minerals	
01 04 07*	Wastes containing dangerous substances from the physical and chemical processing of non-metallic minerals	M
01 04 09	Waste sand and clays	
01 04 13	Wastes from stone chipping and cutting operations other than those mentioned in 01 04 07	
01 04 99	Wastes that not otherwise specified	
13	Oil Wastes and Liquid Fuel Wastes (Excluding Renewable Oils)	
13 01	Waste hydraulic oils	A
13 02	Waste engine, transmission and lubrication oils	A
13 03	Waste insulation and heat conduction oils	A
13 04	Bilge oils	A
13 05	Oil/water separator contents	A
13 07	Wastes of liquid fuels (fuel oil, diesel, gasoline, other fuels including mixtures)	A
15	Waste Packaging and Absorbents, Wiping Clothes, Filter Materials and Protective Clothing Not-Classified Under Other Waste Types	
15 01	Packaging (including packaging material collected by the municipality separately)	
15 01 01	Paper and cardboard packaging	
15 01 02	Plastic packaging	
15 01 03	Wood packaging	
15 01 04	Metallic packaging	
15 01 05	Composite packaging	
15 01 06	Mixed packaging	
15 01 07	Glass packaging	
15 01 09	Textile packaging	
15 01 10*	Packaging containing traces of hazardous materials or contaminated with hazardous materials	A
15 01 11*	Metallic packaging material containing hazardous porous solid structures (asbestos, for example), including empty pressurized containers	A
15 02	Absorbents, filter materials, wiping clothes and protective clothing	
15 02 02*	Absorbents, filter materials (oil filters if not classified in any other way), wiping clothes, protective clothing contaminated with hazardous materials	M
15 02 03	Absorbents, filter materials, wiping clothes and protective clothing excluding 15 02 02	
16	Wastes not Classified under any other Type of Waste in the List	
16 01	Wastes generated due to vehicle maintenance (excluding 13, 14, 16 06 and 16 08), end-of-life vehicles and the dismantling of end-of-life vehicles (including construction machinery) in various transportation categories	
16 01 03	End-of-life tires	
16 01 04*	End-of-life vehicles	A
16 01 06	End-of-life vehicles that do not contain liquids or hazardous substances	

Waste Code	Waste Code Definition	Remarks
16 01 07*	Oil filters	A
16 02	Electrical and electronic equipment wastes	A
16 04	Explosive wastes	A
16 06	Batteries and accumulators	A
16 10	Aqueous liquid wastes to be sent to off-site treatment	
16 10 01*	Aqueous liquid wastes containing dangerous substances	M
16 10 02	Aqueous liquid wastes other than those mentioned in 16 10 01	
16 10 03*	Aqueous concentrated substances containing hazardous substances	M
16 10 04	Aqueous concentrates other than 16 10 03	
17	Construction and Demolition Wastes (Including Excavations Conducted at Contaminated Sites)	
17 01	Concrete, brick, tile and ceramic	
17 01 01	Concrete	
17 01 02	Bricks	
17 01 03	Tiles and ceramic	
17 01 06*	Mixtures or separated groups of concrete, brick, tile and ceramic containing hazardous substances.	M
17 01 07	Mixtures or separated groups of concrete, brick, tile and ceramic, excluding 17 01 06	
17 02	Wood, glass and plastic	
17 02 01	Wood	
17 02 02	Glass	
17 02 03	Plastic	
17 02 04*	Wood, glass and plastic containing or contaminated with hazardous substances.	A
17 03	Mixtures containing bitumen, coal tar and products containing tar	
17 03 01*	Mixtures with bitumen, containing coal tar	M
17 03 02	Mixtures containing bitumen, excluding 17 03 01	
17 03 03*	Coal tar and products containing tar	A
17 04	Metals (including their alloys)	
17 04 01	Copper, bronze and brass	
17 04 02	Aluminium	
17 04 03	Lead	
17 04 04	Zinc	
17 04 05	Iron and steel	
17 04 06	Tin	
17 05	Soil (including excavations conducted in contaminated sites), stones and dredging mud	
17 05 03*	Soil and stones containing hazardous substances	M

Waste Code	Waste Code Definition	Remarks
17 05 04	Soil and stones excluding 17 05 03	
17 06 01*	Insulation materials containing asbestos	A
17 06 05*	Construction materials containing asbestos	A
17 09	Other construction and demolition waste	
17 09 01*	Construction and demolition waste containing mercury	M
17 09 02*	Construction and demolition waste containing PCB (example: filling paste containing PCB, resin-based base coating material containing PCB, coated enamelling units containing PCB, capacitors containing PCB)	M
17 09 03*	Other construction and demolition waste containing hazardous substances (including mixed waste)	M
17 09 04	Mixed construction and demolition waste, excluding 17 09 01, 17 09 02 and 17 09 03	
18	Healthcare Waste	
18 01 03*	Wastes whose collection and disposal is subject to special requirements in order to prevent infection*	A
19	Materials from waste and water treatment	
19 08 05	Sludges from treatment of urban waste water	
19 13 08	Concentrated liquids and aqueous liquid wastes due to groundwater rehabilitation, excluding 19 13 07	
20	Municipal Waste including Separately Collected Fractions (Household Waste and Similar Commercial, Industrial and Institutional Waste)	
20 01	Separately collected fractions (excluding 15 01)	
20 01 01	Paper and cardboard	
20 01 02	Glass	
20 01 08	Biodegradable kitchen and canteen wastes	
20 01 10	Clothing	
20 01 11	Textile products	
20 01 13*	Solvents	A
20 01 14*	Acids	A
20 01 15*	Alkalines	A
20 01 17*	Photo chemicals	A
20 01 19*	Pesticides	A
20 01 21*	Fluorescent lamps and other mercury-containing wastes	A
20 01 37*	Wood containing hazardous substances	M
20 01 38	Wood excluding 20 01 37	
20 01 39	Plastics	
20 01 40	Metals	
20 02	Garden and park wastes (including cemetery wastes)	
20 02 01	Biodegradable wastes	
20 02 02	Soil and stones	

Waste Code	Waste Code Definition	Remarks
20 02 03	Other non-biodegradable wastes	
20 03	Other municipal wastes	
20 03 01	Mixed municipal waste	
20 03 04	Septic tank sludge	

Source: Waste Management Regulation, Appendix-4

(*): Indicates that the waste is either potentially hazardous or hazardous waste.

(A): Indicates that the waste is a hazardous waste, there is no need for any further analysis.

(M): Indicates that the waste is potentially hazardous waste. In order to determine whether the waste is hazardous or not, an analysis is carried as stipulated in Article 11 of this Regulation.

Wastes ending with 99: Wastes ending with the six-digit waste code 99 define wastes that are not classified as hazardous or non-hazardous waste and are not otherwise defined in the list. "Waste Code Determination Hierarchy" and the provisions of Article 12 of this Regulation shall be applied in the use of this waste code.

Municipal Solid Wastes

According to the TurkStat data (2022), the average daily amount of municipal solid waste per capita in Türkiye is 1.03 kg, while this amount is 1.37 kg in Antalya. Most of the municipal solid waste generation due to the Project will be in the campsites. The amount of domestic solid waste to be produced in the campsites is estimated by multiplying the average daily municipal solid waste production per capita of Antalya province by the number of personnel employed due to the Project. The information on maximum number of personnel to be employed and estimated amount of municipal waste to be generated is summarized in Table VI-2. Assuming 20% (Ministry of Environment, Urbanization and Climate Change, 2020) of the municipal solid wastes (by weight) is formed of packaging wastes, estimated amount of packaging wastes within the total municipal wastes to be produced is also provided in the last column of the table. For the handling of the municipal solid wastes, municipalities' landfills and disposal sites, and licensed waste transportation trucks will be utilized. The facilities that are suitable and close to the campsites will be prioritized, if possible, for fuel and time efficiency.

Table VI-2. Estimated Solid Municipal Waste Generation of the Campsites

Number of Personnel* (cap)	Daily Municipal Waste Generation (kg/day/cap)	Daily Packaging Waste Generation (kg/day/cap)
3,300	1.37	0.27

** Maximum Project related employee number including subcontractors; provided by the Project Sponsor.*

The amount of municipal solid waste to be produced per day at the campsites is:

1.37 kg/day/cap * 3,300 cap = 4.52 ton/day

When compared to the total municipal solid waste generation of the Antalya province, which is 1,340,770 tons per year (Turkstat, 2022), the Project's contribution to solid waste generation of the province is less than one per two thousand. Additionally, it should be noted that the campsites will be present for a maximum of 3 years during the construction period of the Project. Since the waste load contribution of the Project on the existing waste management infrastructure capacity is limited in both time and impact, the overall impact of the Project is determined as negligible.

Treatment Sludge:

The total wastewater flow from all camp sites (Camp Site-1, Camp Site-2 and Camp Site-3) are approximately 0.725 m³/day. As a result of the treatment process, a small amount of sludge is generated.

The sludge production rate corresponds to approximately 0.7 kg of dry solids generated per cubic meter of influent wastewater treated.

Based on this sludge yield, the daily dry sludge production is estimated as follows:

0.725 m_3/day x 0.7 kg/m_3 = 0.5075 kg/day

Therefore, approximately 0.51 kg of dry sludge is expected to be produced daily from all camp sites combined.

The generated sludge will be collected and removed regularly by licensed waste transport vehicles, ensuring proper handling and disposal in accordance with applicable environmental regulations and standards.

Construction and Demolition Wastes

Fences, barriers, buildings, walls, former engineering structures, etc. corresponding to the Motorway route will be dismantled and removed prior to construction resulting in generation of construction and demolition wastes. Those wastes will be handled with the use of appropriate construction and demolition waste areas. The generated demolition waste, mainly consisting of rubble and other construction debris, will be transported by trucks with a capacity of approximately 40 tons each. Based on the estimated waste volume per household, it is expected that about 2 truckloads will be required to remove the demolition waste generated from one residential unit.

Preliminary estimates indicate that a total of 304 houses, 37 business structures, and 831 greenhouses will be affected by the Project. Considering an average building height of 3 m for houses and business structures, with wall thickness yielding a structural volume of 300 m^3 each, and a debris density of 2 ton/m^3, the total waste generated from houses is estimated to be approximately 182,400 ton. The business structures are expected to produce an additional 22,200 ton of waste under the same assumptions. The greenhouses, constructed with lighter materials and typically 2 m in height, are expected to generate approximately 83,100 ton of waste, with a rubble density of 0.5 ton/m^3. Overall, a total of approximately 287,700 ton of construction and demolition waste is expected to be generated by the Project. All waste will be efficiently managed, temporarily stored at designated sites, and subsequently disposed of or recycled in compliance with applicable legislation and best practices. Additionally, affected households and business owners will be permitted to salvage any materials or components of value from the demolition site following the completion of demolition activities, prior to the removal and disposal of debris.

Topsoil from sensitive areas (wetlands, slopes, agricultural lands) will be carefully removed, stored separately, and later used for site rehabilitation. Storage areas will be on gentle slopes (<5%) with protective measures against erosion, contamination, or quality loss. If stored long-term, the soil surface will be covered with fast-growing plants. Excavated waste will not be disposed into streams, in line with the 2006/27 Stream Beds and Floods Circular. The contractor will secure adequate storage capacity to avoid pressure on local disposal sites.

Construction of the Project and related structures such as the cuttings, earthworks, etc. will generate significant volumes of material from earthmoving and site clearance. The cut and fill balances along the Project route indicate that total amount of surplus material to be disposed will be around 10,8 million m3. 22 surplus material dumpsites are planned to be used for the Project which are listed below (see Table VI-3).

Table VI-3. The List of Dumpsites and Capacities

Location		Description of the Site	Capacity Information (m^3)	Planned Capacity Usage (m^3)
Km 52+544	Antalya, Serik	D-2	736,660.28	470,850.34
Km 59+580	Antalya, Serik	D-3	2,111,705.36	56,553.44
Km 61+500	Antalya, Manavgat	D-6	4,378,853.62	156,734.25
Km 64+160	Antalya, Manavgat	D-7	3,327,945.41	615,670.09
Km 71+800	Antalya, Manavgat	D-10	7,516,026.00	184.77
Km 74+360	Antalya, Manavgat	D-11	1,037,880.08	149,039.49
Km 76+240	Antalya, Manavgat	D-14	371,940.90	160,175.41
Km 78+790	Antalya, Manavgat	D-15	1,261,077.59	223,457.91
Km 86+340	Antalya, Manavgat	D-16	4,869,058.60	1,050,435.77
Km 87+800	Antalya, Manavgat	D-17	2,504,385.12	262,361.54
Km 95+410	Antalya, Manavgat	D-18	1,124,258.46	73,868.29
Km 95+410	Antalya, Manavgat	D-19	1,522,633.16	162,563.18
Km 98+290	Antalya, Manavgat	D-20	711,115.13	41,87.43
Km 100+000	Antalya, Manavgat	D-21	1,648,102.37	2,174.86
Km 107+850	Antalya, Manavgat	D-22	1,222,720.44	301,963.83
Km 110+820	Antalya, Manavgat	D-23	20,093,692.94	584,686.39
Km 113+050	Antalya, Manavgat	D-24	2,552,495.14	205,287.40
Km 123+000	Antalya, Alanya	D-26	5,638,396.17	871,743.65
Km 124+250	Antalya, Alanya	D-27	1,926,864.50	1,297,126.46
Km 127+000	Antalya, Alanya	D-28	3,763,723.90	383,579.61
Km 130+400	Antalya, Alanya	D-29	1,991,642.98	1,625,062.08
Km 132+720	Antalya, Alanya	D-30	3,307,202.05	2,132,211.56

During the demolition phase, various types of hazardous waste, including asbestos-containing materials, may be generated. These wastes pose significant risks to human health and the environment if not properly managed. To address these risks, detailed procedures for the safe handling, transportation, temporary storage, and final disposal of hazardous materials are outlined in the Demolition Management Plan. The plan ensures that all activities comply with applicable safety standards, environmental regulations, and best practice guidelines, thereby minimizing potential hazards and environmental impacts associated with demolition activities.

Hazardous and Special Wastes

Hazardous waste shares the properties of hazardous material (e.g. ignitability, corrosivity, reactivity, or toxicity), or other physical, chemical, or biological characteristics that may pose a potential risk to human health or the environment if improperly managed. Wastes may also be defined as “hazardous” by local regulations or international conventions, based on the origin of the waste and its inclusion on hazardous waste lists, or based on its characteristics (IFC, April 2007). Waste Management Regulation specifies the hazardousness properties (explosive, oxidizing, flammable, irritating, toxic, and carcinogenic, etc.)

of wastes and lists the types of wastes that are to be handled directly as hazardous or after tests to be done if their hazardousness properties and concentrations are confirmed. Additionally, specific regulations are in force for the management of special wastes such as waste tires, medical wastes, waste vegetable oils, waste batteries and accumulators.

During the land preparation and construction phases of the Project, the following hazardous and special wastes are anticipated to be generated due to the associated activities:

- Chemical solutions used in construction and maintenance activities;
- Empty or partially full chemical containers;
- Flammable materials;
- Contaminated soil and absorbent materials;
- Contaminated materials such as used personal protective equipment (PPE), workwear, and other construction-related materials.

The hazardous storage areas will have their own spillage control bund. The areas will be protected against wind and rain, securely fenced and access to this site will be provided only for authorized people. These areas will also be labelled as hazardous storage areas. There should be a secure section to keep personal protection equipment, spill kits (e.g. absorbents), emergency equipment (for firefighting), eyewash and emergency shower and the SDSs for storage hazardous chemicals.

The total quantity of hazardous waste generated on-site though the project is estimated to be approximately 750 tons. These wastes will be carefully managed and stored in designated areas to ensure safe handling, prevent environmental contamination, and comply with all applicable regulations and safety standards throughout the construction of the Project.

Assuming that the average oil capacity of the construction machinery is 20 liters and motor oils of these machineries will be changed 4 times a year, total amount of waste oil to be produced can be estimated as given in Table VI-4.

Table VI-4: Estimated Engine Oil Waste Amounts

Machinery	Piece	Total Engine Oil Capacity (L)	Annual Engine Oil Waste (L)
Excavator	51	1,020	4,080
Grader	5	100	400
Bulldozer	14	280	1,120
Loader	20	400	1,600
Roller	10	200	800
Rock Driller	24	480	1,920
Transmixer	50	1,000	4,000
Compactor	24	480	1,920
Paver	12	240	960
Truck	147	2,940	11,760
Other (Mobile crane, injector, shotcretor, asphalt distributor, pump etc.)	115	2,300	9,200
Total	Total	Total	Total

VI.3 Waste Segregation at Source and Collection within Campsites

Project waste is collected separately at the point of generation. The EPC Contractor and its subcontractors will arrange appropriate containers and bins throughout the Camp, inside the Project construction facilities, and in the working area. Project wastes will be collected according to the types listed in Table VI-6. Suitable waste containers will be provided for each type of waste and clearly labelled according to the content of the containers. EPC will ensure that waste is effectively contained and is protected against wind, rain and vermin. There will be separate storage containers for recyclables (plastics, glass, ferrous metals, metals, and papers/cupboards etc.).

A label will appear on bins and containers stating the type of waste: inert, hazardous waste and non-hazardous waste. Wastes will be collected and transported to the Temporary Storage Area on a daily or more frequent basis, depending on the rate of production and capacity of the waste containers and bins. EPC will define the designated location of the Temporary Waste Storage Area on each Campsite.

There are some situations that are prohibited in the Temporary Storage Area. These are;

- Burning all kinds of waste at construction sites, unless otherwise specified in the contract or instructed by EPC.
- Mixing hazardous waste with non-hazardous waste;
- Throwing hazardous waste out of waste collection containers;
- Discharging hazardous wastes into sewer systems or underground and/or surface waters,
- To treat hazardous materials outside of licensed waste treatment facilities.

VI.4 Temporary Waste Storage Area

During the construction phase, if the waste generating amount reaches 1,000 kilograms or more of hazardous waste per month, a temporary storage permit from the provincial directorate for the areas/containers will be obtained. If any changes are made to the Temporary Waste Storage Areas (TWSAs), the temporary storage permit will be renewed. Excluding medical waste, hazardous waste may be temporarily stored in the temporary storage area for a maximum of 6 months, while non-hazardous waste may be stored for a maximum of 1 year.

TWSAs will have sufficient areas for handling waste containers. The areas will be concrete lined, equipped with separate drainage with spillage control channels and sumps. These areas will also be labelled as hazardous waste storage areas. There should be a security section to keep personal protection equipment, spill kits (e.g. absorbents), emergency equipment (for firefighting), eyewash and emergency shower. Waste segregation will be maintained at all times, separate storage areas/containers will be provided to ensure continued segregation of wastes. For the storage of waste at campsites, the Contractor will construct TWSA of which sketches are given in Figure VI-1 and Figure VI-2 .

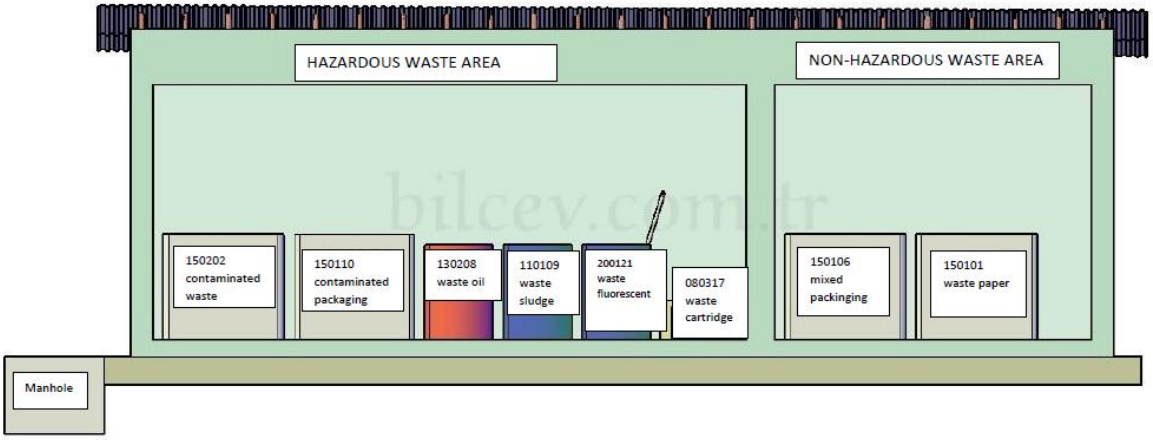

Figure VI-1: Sketch of Temporary Waste Storage Area

Figure VI-2: Sketch of Temporary Waste Storage Area for Hazardous Wastes

AAOİAŞ will ensure that, EPC will create Temporary Waste Storage Areas (TWSA) where the wastes are generated (e.g. close to construction activities). The designated areas for the temporary storage and management of both hazardous and non-hazardous wastes, including all necessary measures to ensure safe handling, segregation, and prevention of environmental contamination, are detailed and provided in the following tables (see Table VI-5**Error! Reference source not found.**).

Table VI-5. Waste Management Areas

Location	Province	District	Nearest Neighbourhood	Description of the Site / Plant
Km 64+400	Antalya	Manavgat	Taşağıl	Construction Camp Site-1 (Main)
Km 87+500	Antalya	Manavgat	Bucakşeyhler	Construction Camp Site-2
Km 124+300	Antalya	Alanya	İncekum	Construction Camp Site-3

VI.5 Technical Specifications for Storage

Containers, bins and storage areas will be labelled to show the type of waste as per the defined waste category. Appropriate containers and bins will be provided within the facilities and at the construction site to collect waste according to the types listed in Table VI-6.

Table VI-6. Storage by Type of Waste

Waste	Dangerous	Storage
Contaminated wastes, like chemical containers, oil or chemical cleaning fabrics, used spill kits, paint containers, lamps, batteries, oily cut metal parts	Yes	Container
Domestic wastes from camps and offices	No	Bin, Container
Empty Gas Cylinders	Yes	Container
Used Batteries	Yes	Container
Food Waste	No	Bin, Container
Glass (not polluted vessels, no lamps)	No	Container
Lamps	Yes	Bin, Container
Medical Wastes	Yes	Bin, Locked
Packages, plastic, paper or wood	No	Container, Store Separately
Scrap concrete, sludge sedimentation, runoff water from batching plant	No	Process in the batching plant facilities before collecting
Scrap concrete, sludge sedimentation, untreated runoff water from batching plant	Yes	Tank
Scrap Metal	No	Container, Laid on paved ground, protect from rain
Scrap Paper	No	Container
Scrap Wood	No	Container, Laid on paved ground, protect from rain
Scrap Wood	Yes	Container
Printer Cartridges	No	Bin, Container
Vegetable Waste Oil	No	Tank
Waste oil and grease	Yes	Tank
Worn out equipment (e.g. not contaminated, damaged or no longer used in machineries or equipment)	No	Container, Laid on paved ground
Worn out equipment (e.g. contaminated, damaged or no longer used in machineries or equipment)	Yes	Container, machineries and equipment
Used Tyres	No	Container, Laid on paved ground
Contaminated Soil	Yes	Container, Laid on paved ground in the

Waste	Dangerous	Storage
		Waste Storage Area, protect from rain
Sludge of Wastewater Treatment Plant	Will be analysed and decided accordingly	Will be taken from the wastewater treatment plan with vacuum truck and directly sent to relevant waste disposal area.

VI.6 Examples of containers

Description	Picture
Bins	
Containers	
Tanks for used oil	
Container for used batteries	
Bins for medical wastes including needles and sharp medical waste	

Description	Picture
Container for used gas cylinders	 Requirements: Store separately depending on the gas type. Protect water from spillage. Protect from water. Protect from unwanted access. Protect from ignition sources (heat, sparks, earthing, ATEX electrical equipment for flammable)
Equipment for dangerous liquids	 Vessels containing dangerous liquids should always be stored on containment basins, to avoid spills and leakages.

VI.7 Waste Transportation

The transportation of waste will be carried out according to its type, characteristics and composition, without preventing its further recovery. Environmental pollution and harmful effects on human health caused by the transportation of waste will be tried to be prevented as much as possible. In the case of environmental pollution resulting from the transportation of waste, the waste transporter will ensure the implementation of cleaning activities. Also, waste transportation from construction sites to recycling, treatment and waste management facilities will be according to the frequency of removal. Frequency of removal guarantees; there will be no overflow from the containers; that there will be no unpleasant odors and emissions harmful to human health; that insects, rodents, dogs or other animals that are harmful or dangerous to human health will not reproduce and that the containers and surfaces on which they are located will be cleaned regularly. Waste hauling trucks will be covered / closed properly.

Non-recyclable domestic waste that cannot be reused or recovered will be collected separately and transported to licensed landfill sites in accordance with project standards. There are four landfills in Antalya province which are given in the Table VI-7**Error! Reference source not found.**. Generated solid wastes are collected by the waste trucks of district municipalities, transferred to one of the six solid waste transfer stations, and disposed of at these landfills, which are designed in accordance with the requirements of the Regulation on the Landfill of Wastes. In this context, landfills have proper impermeability layers and the leachate collected at the landfills is treated by means of physical, chemical, and anaerobic processes.

Table VI-7. Landfills and Transfer Stations in Antalya Province for non hazardous wastes

Landfills
Patara Solid Waste Landfill
Manavgat Solid Waste Energy Recovery and Landfill Facility
Alanya Integrated Solid Waste Recycle and Disposal Facility
Kızıllı Integrated Solid Waste Recycle and Landfill Facility
Transfer Stations
Elmalı Transfer Station
Kumluca Transfer Station
Serik Transfer Station
Kemer Transfer Station
Korkuteli Transfer Station
Manavgat Transfer Station

The closest and appropriate landfills, Manavgat Solid Waste Recovery and Landfill Facility and Alanya Integrated Solid Waste Recycle and Disposal Facility, will be used for the management of Project-sourced wastes. Required agreements will be made with the municipalities and the facilities for the transfer, recovery, disposal and landfill services.

On-site and off-site transportation of waste will be conducted so as to prevent or minimize spills, releases, and exposures to employees and the public. All waste containers designated for off-site shipment will be secured and labelled with the contents and associated hazards, be properly loaded on the transport vehicles before leaving the site.

Agreements will be signed with licensed firms for transport of segregated recyclable and packaging wastes, and licensed disposal facilities will be used for transfer and disposal of hazardous wastes. Where waste is transferred for recovery or disposal, the responsibility of the original waste producer and/or waste holder will remain in force until recovery or disposal of waste is completed. Hazardous wastes will be transported off site when the storage on site reaches maximum storage capacity levels.

VI.8 Third Party Waste Management Services

EPC Contractor will evaluate the availability of local services for recycling and re-use and successfully execute available local recycling and re-use solutions for waste created on the project site. For the treatment of hazardous and non-hazardous waste streams, EPC Contractor will choose a waste management service provider with appropriate licenses and relevant authorizations.

The EPC Contractor will conduct a recorded prior audit of the treatment, storage, and recycling facilities before using third-party waste management services to ensure compliance with the current environmental and social requirements. SPV will receive a copy of the audit report.

EPC Contractor will locate and engage the services of a registered waste management firm to collect and recycle recyclable materials. Recyclable wastes will be collected on a regular basis, at least every two months, from their temporary storage places. Municipal wastes at camps will be collected daily and disposed to licensed disposal facilities.

VI.9 Waste Disposal Management

If waste materials are still generated after the implementation of feasible waste prevention, reduction, reuse, recovery and recycling measures, waste materials will be treated and disposed of and all measures will be taken to avoid potential impacts to human health and the environment.

VI.9.1 Management of Non-Hazardous Waste

Required agreements will be made with the municipalities and the facilities for the transfer, recovery, disposal and landfill services for non-hazardous waste. Municipal landfill that is to be used by EPC will be subject to a documented audit which demonstrates that the quantity and type of wastes brought by the EPC Contractor does not raise an incremental risk for the environment and community which cannot be handled by the present management of the municipal landfill. If the project develops its own landfill, then the following specifications apply. Steps to be followed for the management of non-hazardous wastes:

- Non contaminated inert waste will be removed and can be disposed of in landfill with unused backfill material. Inert waste will be disposed to the dumpsites listed in Table VI-3 with the approval of the relevant institutions.

- Non-hazardous wastes will be sent to municipality landfill, according to the following criteria: (Wastes at camps will be collected daily and disposed to lice the garbage trucks. The protocol related to the garbage trucks should be made with the municipality.)

VI.9.2 Hazardous Waste Management

All the hazardous waste generated from the site will be handled and stored as per *Hazardous Material Management Plan, and the Spill Response Management Plan* and managed through a specialized hazardous waste subcontractor.

Hazardous waste will be securely packed and labelled prior to removal from site to ensure the waste can be transported safely to the approved disposal site without risk to those handling the waste or to the environment. Before leaving the site, all waste containers intended for off-site shipment will be locked. Before transporting the hazardous waste, the waste carrier will obtain a transport certificate for the vehicle that will transport the waste, and the driver of the vehicle will keep this certificate with his/her while transporting the hazardous waste. Spills, releases, and exposures to employees and the general public will be avoided or minimized during on-site and off-site waste transportation. The waste transport will comply with IFC Environmental, Health, and Safety Guidelines. The potential licensed companies have been listed Annex- A.

Contaminated soil generated during construction activities will be managed in accordance with Turkish legislation. In line with the Regulation on Control of Soil Pollution and Sites Contaminated by Point Sources (. 27605, dated 08.06.2010), soils contaminated with hazardous substances are classified as hazardous waste. Such waste must be temporarily stored in suitable conditions to prevent further contamination and subsequently delivered to licensed hazardous waste treatment or disposal facilities authorized by the Ministry of Environment, Urbanization and Climate Change. Documentation, transportation, and final disposal of contaminated soils will be carried out through the MoTAT system (National Waste Transport Form) to ensure traceability and compliance with Turkish regulations.

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VII. MITIGATION MEASURES FOR SOLID WASTE-RELATED RISKS AND IMPACTS

Construction and associated camp operations will generate both hazardous and non-hazardous waste streams, primarily resulting from material used during construction works, earthworks, packaging materials, and the daily activities of on-site personnel. Effective implementation of the Solid Waste Management Plan and associated procedures should be done to minimize the quantity of waste requiring off-site disposal and to ensure environmentally sound management of all waste streams.

Mitigation measures for solid waste management include the following:

- Cooperation should be ensured with licensed local service providers (private licensed waste transportation/recycling/recovery firms), and written agreements or protocols should be established regarding the regular and sound management/disposal of Project-generated wastes.
- The amount of waste to be sent to off-site management should be minimized through the implementation of the Solid Waste Management Plan based on the waste management hierarchy.
- Sites should not be located in dense forest areas with primary ecological functions.
- Proper temporary waste storage areas should be constructed.
- No waste will be burned, illegally dumped or buried on site
- Training should be provided to Project personnel regarding the proper implementation of waste management procedures in line with the requirements of national legislation and good site practices.
- All waste containers should be labeled with waste type, source, volume, and date. Containers should be corrosion-resistant, sealed, and suitable for waste characteristics. Old or conflicting labels must be removed or covered to avoid confusion.
- All waste (hazardous and non-hazardous) should be transported using licensed vehicles and delivered to authorized facilities. Transfer should be documented using Waste Transfer Notes (for non-hazardous waste) and the Mobile Hazardous Waste Tracking System (MoTAT) System (for hazardous waste).
- Annual waste declarations should be submitted by the end of March each year using the Ministry's Environmental Information System. Records of all waste movements and quantities should be retained and submitted in accordance with legal requirements.
- Temporary waste storage areas (for hazardous and non-hazardous areas) should be designed with secure fencing, lockable gates, and appropriate signage, lighting, and pest deterrents. Fire safety equipment and spill containment kits should be provided, and segregated storage zones should be established for incompatible waste types. Inventory logs and emergency response plans should be clearly documented and implemented.
- Agreements will be established with the municipalities and relevant facilities for the transfer, recovery, and disposal of non-hazardous wastes.
- Regular inspections will be conducted to ensure waste segregation, containment integrity, and overall compliance with safety and environmental requirements.
- Transportation frequency will be planned to prevent container overflow, unpleasant odors, vermin/insect attraction, and emissions harmful to human health. Containers and their surrounding areas will be regularly cleaned.
- The closest and most suitable facilities will be primarily used for the Project.
- Inert waste (e.g., uncontaminated soil or excavation material) should be disposed of in dumpsites with institutional approval.

The following are specific measures to be applied for different types of waste:

- The measures taken for solid waste management should ensure the reduction of environmental pollution and the efficient use of natural resources such as energy and raw materials by minimizing the negative effects of solid waste on the environment. Solid waste generated at

construction sites and camps (e.g., packaging, food waste, office waste) should be separated at source and sent to licensed disposal or recycling facilities. Waste types must be matched with suitable treatment and disposal options as per local legislation and site-specific waste categorization.

- Excavated materials should primarily be reused on-site. Remaining excess materials should be managed in accordance with project-specific reuse or disposal plans. Excess material, will be around 10,8 million m^3, should be repurposed where possible, including for landscape restoration or structural fill. Excavated materials should be disposed of at designated storage sites only. The amount of excavated materials to be sent to disposal should be minimized by reusing them as fill material in the construction of road bases, shoulders, side slope arrangements, etc., to the extent the quality and quantity of materials allow.
- Hazardous waste generated from construction and maintenance activities—including chemical containers, contaminated soil, solvents, oils, filters, and fluorescent tubes—should be identified, labeled, stored in compliant containers and temporary storage area, and transferred to licensed facilities in accordance with applicable regulations, such as the Waste Management Regulation (Official Gazette: 02.04.2015 – No. 29314). Management measures should include clear labeling and the use of color-coded containers for each hazardous waste type, provision of spill containment kits and fire prevention systems, establishment of secure fenced storage areas with impermeable flooring, availability of Material Safety Data Sheets (MSDS) on site, regular training of workers on hazardous waste handling, and maintaining hazardous waste liability insurance to ensure safe and compliant management practices.
- Medical waste from clinics and first aid units should be stored in red biohazard bags or color-coded rigid containers labeled with “Biohazard – Medical Waste” symbols. Bags should be double-layered if necessary and stored at ≤+4°C until transfer to authorized medical waste disposal facilities. Collection must occur within 48 hours (or one week if proper storage conditions are ensured). Waste collection and transfer must follow the Regulation on Medical Waste Control.
- Waste Electrical and Electronic Equipment (WEEE) should be stored separately and transferred to authorized recovery facilities. Waste should not be handed over to informal or unlicensed collectors. Compliance with the Regulation on the Management of Waste Electrical and Electronic Equipment (Official Gazette: 22.05.2012 – No. 28296) is mandatory.
- Waste oils generated from equipment maintenance should be collected in leak-proof containers and sent to licensed waste oil recovery/refining facilities in accordance with the Regulation on the Management of Waste Oils (Official Gazette: 21.12.2019 – No. 30985). MSDS must be available on site.
- Waste batteries should be collected in designated boxes and delivered to collection points established by municipalities or licensed distributors in line with the Regulation on the Control of Waste Batteries and Accumulators (Official Gazette: 31.08.2004 – No. 25569).
- End-of-life tires should be collected separately and delivered to authorized recycling facilities in accordance with the Regulation on the Control of End-of-Life Tires (Official Gazette: 25.11.2006 – No. 26357).
- Waste oils from catering activities should be collected in sealed, impermeable containers and stored in closed temporary storage areas before being transferred to licensed recovery or interim storage facilities.
- Sludge from wastewater treatment and concrete batching plants should be analyzed for hazardous characteristics and managed accordingly. Inert wastes (e.g., stone, processed aggregates) should be reused wherever possible and stored to prevent contamination.

The AAOİAŞ will be deemed to be the “owner” of the solid waste that will be created and will be responsible for its management in accordance with the provisions of the Environment Law and its relevant regulations.

The solid waste management measures will be implemented throughout the construction phase. The on-site specification, implementation, and supervision of these measures will follow by the responsible parties, as indicated the related part of this Play. The Project will also be required to comply with national legal requirements relating to solid waste management.

VIII. TRAINING

Upon hiring, all staff will receive structured training addressing sources of waste management hierarchy, measures of waste generation reduction,, environmental and health risks associated with improper waste handling and storage, and the corresponding mitigation strategies applicable to their responsibilities within the Project (e.g., waste segregation at source, proper use of labeled containers, safe storage practices). In addition, personnel assigned to waste management activities will be provided with specialized training to ensure the accurate, safe, and compliant execution of their duties in accordance with the Solid Waste Management Plan and relevant legal requirements.

IX. MONITORING

A structured internal monitoring program will be implemented to assess the effectiveness of solid waste management mitigation measures outlined in this Plan during the construction phase of the Project. The scope and frequency of monitoring activities will be periodically reviewed and revised where necessary, based on site-specific conditions, waste generation trends, stakeholder concerns, or changes in applicable environmental regulations.

Monitoring activities will be coordinated by the E&S Manager, in close collaboration with the Management teams. Key responsibilities will include reviewing the type and quantity of waste generated and disposed (e.g., municipal, packaging, waste oil), verifying the implementation of waste segregation at source, inspecting the condition and use of temporary waste storage areas, and ensuring the consistent application of solid waste management measures, including compliance with general housekeeping and containment practices.

Regular inspections will be conducted across all campsites to evaluate compliance with national solid waste regulations and Project-specific waste management requirements. This will include the review of waste records, control of agreements with licensed waste contractors, inspections of labeled containers and containment structures, and verification of source separation and waste handling practices.

The performance of contractors and subcontractors in implementing solid waste management requirements will be reviewed through environmental audits, site supervision reports, and field observations. Any identified non-conformities will trigger timely corrective and preventive action plans. Monitoring will also include follow-up assessments to confirm the effectiveness of implemented measures and to ensure recurrence is prevented.

In addition to internal monitoring, inspections may be carried out by relevant public institutions, including the Ministry of Environment, Urbanization and Climate Change, in accordance with Turkish legislation. The frequency and scope of these inspections will be determined by the authorities and may include review of monitoring data, on-site waste handling practices, and documentation of compliance.

Monitoring efforts will be guided by the framework provided in Table IX-1, which outlines the parameters to be monitored, the corresponding monitoring locations, frequency of inspections, and responsible parties. These monitoring activities will be essential for evaluating the effectiveness of solid waste mitigation measures and ensuring full compliance with national regulations and Project standards.

Table IX-1 Key Monitoring Activities

Parameter	Monitoring Station / Location	Monitoring Method	Monitoring Frequency	Responsible Parties
Type and amount of wastes produced/disposed of (e.g., municipal, packaging, waste oil)	Camp sites, road construction sites, quarries	Site audit, document review	Monthly	AAOİAŞ, EPC EnvironmentalExperts
Validity and completeness of waste management/disposal agreements with licensed companies	Camp sites, road construction sites, quarries	document review	Before every waste transfer	AAOİAŞ, EPC EnvironmentalExperts
Review and implementation consistency of Waste Management Plans	Camp sites, road construction sites, quarries	Site audit, document review	Yearly	AAOİAŞ, EPCEnvironmental Experts
Inspection and condition of Temporary Waste Storage Areas	Camp sites, road construction sites, quarries	Site audit, document review	Monthly	AAOİAŞ, EPC Environmental Experts
Site practices on waste management (e.g., source separation, labeling, containers, containment, housekeeping)	All active construction and camp areas	Visual inspection	Daily	AAOİAŞ, EPCEnvironmental Experts

In cases of non-compliance identified through internal oversight or external audits, AAOİAŞ will ensure that corrective and preventive measures are promptly implemented in coordination with the Contractor (Limak) and relevant subcontractors.

All solid waste-related findings, including violations of handling protocols, non-compliance, incidents, or complaints received from surrounding communities, will be documented in accordance with national environmental regulations and Project plans. In the event of serious violations—such as illegal disposal or mismanagement of hazardous waste—AAOİAŞ will ensure that the issue is reported to the competent authorities and that appropriate technical, procedural, and contractual actions are taken.

X. KEY PERFORMANCE INDICATORS

The following Key Performance Indicators (KPIs) will be monitored, verified, and evaluated.

Table X-1 Key Performance Indicators – Construction Phase KPIs

Monitoring Parameter / Performance Indicator	Target	Frequency	Responsible Party
Number of trainings conducted under the Waste Management Plan	All relevant personnel trained regularly	first acceptance of the Site and at least yearly	AAOİAŞ E&S Engineer EPC E&S Engineer
Number of non-conformities and spill/accident records	Less than five	Monthly	AAOİAŞ,
Number of complaints received related to waste management	Less than five	Quarterly	AAOİAŞ,
Compliance with Solid Waste Management Plan (recording waste types, quantities, classification, storage area management, license verification)	Full compliance with waste classification and licensed firm engagement	Quarterly	AAOİAŞ,

Monitoring Parameter / Performance Indicator	Target	Frequency	Responsible Party
Percentage of key environmental monitoring activities completed under the program	100%	Quarterly	AAOİAŞ,
Trend of hazardous and non-hazardous waste generation	Reduce hazardous waste per working hour by 2%	Semi-year	AAOİAŞ,
Percentage of reused, recycled, or recovered waste	70%	Monthly	AAOİAŞ,
Percentage of environmental audits completed and corrective actions closed	100%	Monthly	AAOİAŞ,
Obtaining a waste storage permit	100%	Quarterly	AAOİAŞ, EPC
Obtaining waste management plan approval	100%	Yearly	AAOİAŞ, EPC

XI. AUDIT AND REVIEW

The implementation of this Plan should be regularly monitored and reviewed in accordance with the ESMMP. All incidents and non-conformities should be documented and reported as outlined in the Plan. Contractors and subcontractors should be subject to audits conducted by the Project Sponsor within the scope and schedule defined in the Contractor and Subcontractor Management Plan. These audits and the associated records should be managed in compliance with the Project's established plans and procedures. Relevant records that will be reviewed during solid waste management audits may include the external grievance and suggestion tracking database related to waste management issues, the internal grievance and suggestion tracking database concerning solid waste handling and site practices, solid waste management training records, waste inventory logs, contractor waste transfer documentation, and non-conformity records related to solid waste segregation, storage, or disposal. Observations and deficiencies identified during audits should be recorded in formal audit reports, and all findings requiring improvement should be registered under Corrective Actions. Project management should review audit outcomes and corrective action records, follow up on progress, and ensure that additional measures are implemented where necessary.

XII. REPORTING

Regular reporting will be conducted to ensure the effective implementation and continuous improvement of solid waste management activities throughout the construction phase of the Project. Reporting will be structured to address both internal monitoring and auditing outcomes, as well as external compliance obligations and stakeholder engagement requirements.

Based on monitoring results, necessary corrective and preventive actions will be identified, and the required updates will be incorporated into this Plan. The training program will also be revised accordingly to address any observed gaps. Regular audits and visual inspections will be conducted to verify that all activities are being undertaken in accordance with the provisions of this Plan.

Quarterly Environmental and Social Monitoring Report will cover at least, but not limited to, the following items. The report will be prepared by the SPV with input data provided by EPC to evaluate the Project performance and compliance of the related plans.

- Incident reporting;
- Emergency response reporting;
- Records of annual emergency response training exercises;
- KPIs and performance trends (see Table XII-1) ;
- Current situation Key Monitoring Activities (see Table XII-2)
- Relevant training activities completed and attendance registers to be maintained;

- Legal Authorities Audit reports;
- Site Inspection logs

In addition, the following external reporting will be done:

- All environmental and social incidents will be appropriately documented, notified and reported in accordance with established procedures the terms and conditions by EPC to SPV,
- Incident notification and reporting to relevant Turkish regulatory bodies will be performed in line with applicable legislation in force and as stipulated in permits and licenses.
- The Lenders will be notified of incidents pursuant to the terms and conditions agreed upon in the Finance Agreements through SPV.

All personnel are encouraged to raise concerns, suggestions, or complaints related to this Plan through the established grievance mechanism by completing the grievance form. The communication channels available for submitting grievances are outlined in the Stakeholder Engagement Plan.

ANNEX-A: Licensed Waste Management Facilities Located in Antalya

No	ID No	Name	Adres
1	289358100	ITC-KA ENERJİ ÜRETİM SAN. VE TİC. A.Ş. - ALANYA ŞUBESİ	TÜRKLER Mahallesi, KÖLEHASANLI CADDE, No: 45 -, ALANYA, ANTALYA, Türkiye
2	257927338	SIR PLASTİK SANAYİ VE TİCARET LİMİTED ŞİRKETİ	Yeşilkaraman Mahallesi, 16003 Sokak, No: 40, Aksu / ANTALYA
3	284796758	DURO PLASTİK SANAYİ VE TİCARET LİMİTED ŞİRKETİ	Yeşilkaraman Mahallesi, 16003 Sokak, No: 40 B, Aksu / ANTALYA
4	232445796	ADAM PLAST TARIM LİMİTED ŞİRKETİ	AOSB 1. Kısım Mahallesi, 10. Cadde, No:3 Döşemealtı/ANTALYA
5	1701881232	TEMİZ ÇEVRE ATIK VE ENERJİ SİSTEMLERİ SANAYİ VE TİCARET ANONİM ŞİRKETİ ANTALYA ŞUBESİ	EMİNCELER MAHALLESİ, EMİNCELER SOKAK, ASAT SİTESİ ASAT BLOK NO:176, SERİK, ANTALYA
6	252444034	TUNA GERİ DÖNÜŞÜM PLASTİK AMBALAJ ATIK NAKLİYE SANAYİ VE TİCARET LİMİTED ŞİRKETİ	Kömürcüler Mahallesi, 2900 Sokak, No:5-7 ve 2901 Sokak No:8-, Döşemealtı/ANTALYA
7	231586612	SER-MA SERA MALZEMELERİ TİCARET VE SANAYİ LTD.ŞTİ.	Şafak Mahallesi, 5005 Sokak, No: 49-, Kepez/ANTALYA
8	232752876	ORCAN GERİ DÖNÜŞÜM PLASTİK KAUÇUK ELEKTRİK SANAYİ VE TİCARET LİMİTED ŞİRKETİ	Kömürcüler Mah. 2861 Sokak No:4/1, Döşemealtı/ANTALYA
9	280853152	KALIRLAR PLASTİK NAK İNŞ.İML.GE.DÖ.SAN. VE TİC.LTD.ŞTİ.	Kömürcüler Mahallesi, 2876 Sok. No:1 ve 2878 Sok. No:8, Döşemealtı/ANTALYA
10	261393576	ERİNCİ PLASTİK SERA TARIM YAŞ MEYVE SEBZE GIDA İNŞAAT VE YAPI MALZEMELERİ TAŞIMACILIK TURİZM SANAYİ VE TİCARET LİMİTED ŞİRKETİ	Antalya Organize Sanayi Bölgesi 2.Kısım Mahallesi 24.Cadde No:17 Döşemealtı/ANTALYA

No	ID No	Name	Adres
11	226627500	ANTALYA AKYILDIZ HURDA PLASTİK İMALAT NAKLİYE TURİZM SANAYİ VE TİCARET LİMİTED ŞİRKETİ	Yeşil Antalya Sanayi Sitesi 3189 Sokak No:13-66 Kepez/ANTALYA
12	231388982	EKER TARIM ÜRÜNLERİ TURİZM İNŞAAT PAZARLAMA TİCARET VE SANAYİ LİMİTED ŞİRKETİ	Turunçova Mahallesi, Hal Cadde, No: 22 A-, Finike/ANTALYA
13	292658114	GÜLŞEN ZOR	Kürüş Mahallesi, Kürüş 6 Sokak, No: 11 -, Serik, ANTALYA
14	225372146	KIZILCA PLASTİK SANAYİ İNŞAAT TARIM TURİZM VE TİCARET ANONİM ŞİRKETİ FİNİKE ŞUBESİ	İskele Mahallesi, Ova Mevkii, 430 Sokak, No:17 A-1 Finike/ANTALYA
15	1005501686	ŞAKİ GERİ DÖNÜŞÜM TİCARET VE SANAYİ LİMİTED ŞİRKETİ	Gaziler Mahallesi 247 Sokak No: 3 A Kepez / ANTALYA
16	950651628	SENGIL SANAYİ TİCARET İNŞAAT VE TURİZM LTD. ŞTİ. ORGANİZE SANAYİ FABRİKA ŞUBESİ	Antalya Organize Sanayi Bölgesi, 3. Kısım Mahallesi, 29. Cadde, No:5 Döşemealtı/ANTALYA
17	231741648	SBC GERİ DÖNÜŞÜM SANAYİ VE TİCARET ANONİM ŞİRKETİ	Kömürcüler Mahallesi, 2878 Sokak, No:6. Döşemealtı/ANTALYA
18	810401682	OKTAYLAR MÜHENDİSLİK ALÜMİNYUM DÖKÜM SANAYİ VE TİCARET LİMİTED ŞİRKETİ	Kömürcüler Mahallesi, 2868 Sokak, No: 12 -, Döşemealtı/ANTALYA
19	1140461670	MÜDÜROĞLU GERİ DÖNÜŞÜM TAŞIMACILIK TURİZM TİCARET VE SANAYİ LİMİTED ŞİRKETİ	Altınova Orta Mah. Altınova Blv. 88 Kepez/ ANTALYA
20	226463452	HAMBURGER RECYCLING TURKEY ATIK YÖNETİMİ A.Ş.- ANTALYA ŞUBESİ	Altıayak Mahallesi 8408 Sokak No:22. Kepez/ANTALYA
21	232479018	NN METALÜRJİ ANONİM ŞİRKETİ	AOSB1.Kısım Mahallesi. Antalya Bulvarı. No:23. Döşemealtı/ANTALYA

No	ID No	Name	Adres
22	231926384	07 GERİ DÖNÜŞÜM NAKLİYAT İNŞAAT SANAYİ VE TİCARET LİMİTED ŞİRKETİ	Şafak Mahallesi, 5015 Sokak, No: 19-, Kepez/ANTALYA
23	230801576	YAMAN CAM SANAYİ VE TARIM ÜRÜNLERİ TİC. LTD. ŞTİ. ORGANİZE SANAYİ ŞUBESİ	AOSB 1.Kısım Mahallesi, 2. Cadde, No: 34 Döşemealtı / ANTALYA
24	228715522	KÖRÜCÜMEHMET CEMAL	Karşıyaka Mahallesi, Barbaros Cad., No: 10 B-1, Kumluca/ ANTALYA
25	233234232	ALTUNDAŞ PLASTİK GERİ DÖNÜŞÜM SİSTEMLERİ NAKLİYAT İNŞAAT VE İNŞAAT MALZEMELERİ TARIM EMLAK TURİZM SANAYİ İTHALAT İHRACAT VE TİCARET LİMİTED ŞİRKETİ	Antalya Organize Sanayi Bölgesi 3.Kısım Mahallesi 37.Cadde No:11 Döşemealtı/ANTALYA
26	280146090	PİRSAN ENERJİ SANAYİ VE TİCARET LİMİTED ŞİRKETİ	UZUNOLUK MAHALLESİ, MEHMET AKİF ERSOY BULVAR, NO: 137 -, KORKUTELİ / ANTALYA
27	305446990	TEMPO KLİPS PLASTİK SANAYİ VE TİCARET LİMİTED ŞİRKETİ	AOSB 3.Kısım Mahallesi, 25 CADDE, No: 32 Döşemealtı/ ANTALYA
28	304542716	FİKRET ÖZCAN	Altınova Sinan Mahallesi Hanımeli Sokak No: 240 Kepez/ANTALYA
29	304207152	BETAR PLASTİK SANAYİ TİCARET LİMİTED ŞİRKETİ	Kömürcüler Mahallesi, 2862 Sokak, No: 6-1, Döşemealtı/ANTALYA
30	232031382	ÇIĞLI-MER ME.HU.PL.T.G.D.S.İ.VE İ.M.T.T.S.İ.İ.VE TİC.LTD.ŞTİ	Kepez Mahallesi 5066 Sokak No:8 Kepez/ANTALYA
31	304010840	TOROS ATIK YÖNETİMİ GERİ DÖNÜŞÜM PLASTİK TİCARET ANONİM ŞİRKETİ	Kömürcüler Mah. 2901 Sokak SS Yeni Hurdacılar Koop. Sitesi No:6 Döşemealtı / ANTALYA
32	274926336	TORUNOĞLU PLASTİK SANAYİ VE TİCARET LİMİTED ŞİRKETİ	Gaziler Mahallesi, 252 SOKAK, No: 2 F Kepez/ANTALYA

No	ID No	Name	Adres
33	232481954	U2 OTELCİLİK TURİZM VE TİCARET LİMİTED ŞİRKETİ	Yeşilova Mahallesi, 1679 Sokak, No: 20 B-Muratpaşa/ANTALYA
34	299524854	ARİA ÇEVRE GERİ DÖNÜŞÜM OTELCİLİK TİCARET ANONİM ŞİRKETİ	Altıayak Mahallesi, Recep Gürbüz Caddesi, No:5 Kepez/ANTALYA
35	305628262	KAPET GERİ DÖNÜŞÜM TURİZM İNŞAAT SANAYİ TİCARET LİMİTED ŞİRKETİ	Zeytinlik Mahallesi, 7641 Sokak, No: 22 Kepez/ANTALYA
36	250072286	ERGÜL ÇIĞLI	Kepez Mahallesi, 5070 SOKAK, No: 9 Kepez/ANTALYA
37	294003716	YILDIZ GERİ DÖNÜŞÜM PLASTİK TİCARET SANAYİ LİMİTED ŞİRKETİ	Sanayi Mahallesi, 2060 Sokak, No: 12 -, Manavgat / ANTALYA
38	229750432	ECİRLİLER METAL HURDACILIK VE PLASTİK İNŞ. NAK. TUR. İTH. İHR. SAN. TİC. LTD. ŞTİ. KEPEZ ŞUBESİ	Kepez Mahallesi, 5062 Sokak, No:17, Kepez/ANTALYA
39	230262926	ALFYHAA PLASTİK AMBALAJ SANAYİ VE TİCARET LİMİTED ŞİRKETİ	Antalya Organize Sanayi Bölgesi, 2. Kısım, 25. Cadde, No:9 Döşemealtı/ANTALYA
40	228742218	KEMALETTİN ÇİTGEZ	ANTALYA,SANAYİ Mahallesi, 2071 SOKAK, No: 7-Z01, MANAVGAT,Türkiye
41	260936758	F2 GERİ DÖNÜŞÜM SANAYİ VE TİCARET LİMİTED ŞİRKETİ	Altınova Sinan Mahallesi, Hanımeli Sokak, No: 90/1 Kepez/ANTALYA
42	284790550	İSMAİL SARI	Menderes Mahallesi, Uzun Sokak, No: 5, Kepez / ANTALYA
43	224256270	ÇAĞLAYAN SERA PLASTİK YATIRIM MALZEMELERİ.SANAYİ VE TİCARET VE TİCARET LİMİTED ŞİRKETİ ORGANİZE SANAYİ ŞUBESİ	Antalya Organize Sanayi Bölgesi 1. Kısım Mahallesi, 1. Cadde No: 5 Döşemealtı/ANTALYA
44	285942392	MEHMET AĞYURT MM GERİ KAZANIM TİCARETİ	Ayanoğlu Mahallesi 1900 Sokak No:24 Kepez/ANTALYA

No	ID No	Name	Adres
45	223699506	SERTKAYA İNŞAAT TURİZM MAD.YAY.MAT.SAN.TİC.LTD.ŞTİ.	Bereket Mahallesi, Merkez Sokak, No:206 /1 Manavgat/ANTALYA
46	223342646	ANTALYA AKYILDIZ HURDA PLASTİK İML.SAN.TİC.LTD.ŞTİ. ORGANİZE SANAYİ ŞUBESİ	Antalya Organize Sanayi Bölgesi 3. Kısım Mah. 37. Cadde No:15 Döşemealtı/ANTALYA
47	227471946	EKODEN ENERJİ SANAYİ VE TİCARET LİMİTED ŞİRKETİ	Kömürcüler Mah. 2869 Sok. SSKuzeyAkdeniz Sit No:17 Döşemealtı-ANTALYA
48	260793568	ANTALYA ERDOĞANLAR GERİ DÖNÜŞÜM HURDACILIK OTOMOTİV İTHALAT VE İHRACAT LİMİTED ŞİRKETİ	Kömürcüler Mahallesi, 2872 Sokak, NO: 5-, Döşemealtı / ANTALYA
49	226522032	TURKUAZ ATIK YÖNETİMİ YAKIT VE ENERJİ ANONİM ŞİRKETİ MANAVGAT SALUR ŞUBESİ	Salur Mahallesi, Güğükısalar Sokak, No:5-, Yalamuklu, Manavgat / ANTALYA
50	231598828	SERAPSU PLASTİK İMALAT İNŞAAT EMLAK SANAYİ VE TİCARET LİMİTED ŞİRKETİ	Emişbeleni Mahallesi, Kesmekoyak Çıkmaz Sokak, No: 32 Alanya/ANTALYA
51	229235722	KEMALETTİN ÇİTGEZ BİRİNCİ ŞUBESİ	Sanayi Mahallesi, 2060 Sokak, No:4-Z01 Manavgat/ANTALYA
52	227005646	BÜLBÜL PLASTİK GERİDÖN.TEK.SAN.İNŞ.G.N.T.LTD.ŞTİ.	Organize Sanayi Bölgesi 1.Kısım Mah. 8.Cad. No:5. Döşemealtı/ANTALYA
53	267940110	MİSTALYA ARITMA TESİSLERİ MATBACILIK YAYINCILIK ENERJİ ÜRETİM REKLAM İNŞAAT TAŞIMACILIK OTO KİRALAMA SANAYİ VE TİCARET LİMİTED ŞİRKETİ - KORKUTELİ ŞUBESİ	İmecik Mahallesi, 30000 Sokak No:259, Korkuteli / ANTALYA
54	281565984	KÖPÜKCÜM GERİ DÖNÜŞÜM NAKLİYAT OTOMOTİV TİCARET LİMİTED ŞİRKETİ	Zeytinlik Mahallesi, Atatürk Cadde, NO:138 Kepez/ANTALYA
55	226383464	ÖZEN CAM GERİ DÖNÜŞÜM KAZANIM VE İNŞ.SAN. LTD. ŞTİ. MANAVGAT ŞUBESİ	Sanayi Mahallesi, 2063 Sokak, No: 20-, Manavgat / ANTALYA

No	ID No	Name	Adres
56	222924540	SÜREKO ATIK YÖNETİMİ NAKLİYE LOJİSTİK ELEKTRİK ÜRETİM ANONİM ŞİRKETİ KULA ŞUBESİ	SANDAL Mahallesi, Atatürk Cadde, No: 283 -, Kula, MANİSA

ENVIRONMENTAL ACCIDENT and SPILL RESPONSE MANAGEMENT PLAN

REVISION STATUS		
Revision Date	**Rev. No**	**Explanation**
01.03.2025	00	This plan is prepared according to TS EN ISO/IEC 9001:2015, TS EN ISO/IEC ISO 14001:2015, TS EN ISO/IEC 45001:2018 and IFC Performance Standards
23.05.2025	01	Revision as per comments
16.06.2025	02	Revision as per revision made under ESDD submitted by the Lender consultant
08.09.2025	03	Revision as per revision made under ESDD submitted by the Lender consultant

ENVIRONMENTAL ACCIDENT and SPILL RESPONSE MANAGEMENT PLAN

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LIST OF ABBREVIATIONS

AAOİAŞ	Antalya-Alanya Otoyolu İnşaat Yatırım ve İşletme A.Ş.
CLO	Community Liaison Officer
E&S	Environmental and Social
EHS	Environmental, Health, and Safety
EPC	Engineering, Procurement and Construction (Limak İnşaat Şanayi ve Tic. A.Ş.)
ER	Employee Relations
ERT	Emergency Response Team
ESHS	Environmental, Social, Health And Safety
ESIA	Environmental and Social Impact Assessment
ESMMP	Environmental and Social Management and Monitoring Plan
ESMS	Environmental and Social Management System
EU	European Union
IFC	International Finance Corporation
ISO	International Organization for Standardization
KPIs	Key Performance Indicators
Limak	Limak İnşaat Şanayi ve Tic. A.Ş.
MSDS	Material Safety Data Sheet
OHS	Occupational Health and Safety
PPE	Personal Protective Equipment
RCA	Root Cause Analysis
SEP	Stakeholder Engagement Plan
SPV	Special Purpose Vehicle (Antalya-Alanya Otoyolu İnşaat Yatırım ve İşletme A.Ş.)
SRP	Spill Response Personnel
WHO	World Health Organization

I. INTRODUCTION

Ministry of Transport and Infrastructure (former Ministry of Transport, Maritime Affairs and Communications), through the General Directorate of Highways ("KGM" or "the Administration"), as the owner of the Antalya-Alanya Motorway Project, has initiated a tender process for a contract in accordance with the Law on Implementation of Some of the Investments and Services in the Framework of Build, Operate and Transfer Model (Law No: 3996). Following the tendering process, KGM has awarded Antalya-Alanya Otoyolu İnşaat Yatırım ve İşletme A.Ş. (AAOİAŞ or the Project Sponsor) with a Build, Operate and Transfer (BOT) contract for the implementation of the Project. Accordingly, AAOİAŞ will be referred as Project Sponsor[1] in the scope of this report. The main contractor for the Project has been designated as Limak and will henceforth be referred to as the Contractor (or EPC).

The Project is designed to connect the district Serik and Alanya via the Manavgat district of Antalya province will enhance the existing transportation network services with its surrounding provinces: Burdur, Muğla, Konya, Isparta, Karaman and Mersin. Various environmental, social, and technical studies have been conducted along the initial route of the Project tendered by the KGM. Based on these studies, the route was optimized, incorporating engineering practices and addressing environmental and social considerations, particularly issues of involuntary and economic resettlement, before being finalized. According to the most current design, the total length of the Motorway, which will be a dual carriageway of mostly 3 and partially 2 lanes (3x2 and 2x2) in each direction, is 117.8 kilometers including the main carriageway and the access roads[2].

This Environmental Accident And Spill Response Management Plan ("SRMP" or "The Plan") has been prepared by Antalya-Alanya Highway Construction Investment and Operation Inc. ("AAOİAŞ" or "SPV") for the Antalya-Alanya Highway Project ("Project") in accordance with national legislation, the Equator Principles ("EP"), the International Finance Corporation ("IFC") Performance Standards ("PSs"), and the international standards referred to in the relevant legislation section. The Plan covers the construction phase of the Project.

I.1 Project Description

The Project begins at Serik Interchange (Km: 52+000) and then proceeds eastward, following the corridor at the foothills of the Taurus Mountains within the boundaries of Serik and Manavgat districts, ending at north of Konaklı neighborhood of Alanya District (Km: 136+000). From this point onwards, the route turns southward with a 2x2 lane connection road and connects to the D400 state road at the Alanya West Interchange.

As of April 2025, the current Project design includes a total of 117.8 kilometers of roadway, comprising 84 kilometers of main road (motorway) and 33.8 kilometers of access roads. Other structures to be built as part of the project are as follows:

- 16 viaducts,
- 22 bridges,
- 305 culverts,
- 25 interchanges,
- 56 overpasses,
- 43 underpasses, and
- 5 tunnels.

[1] The BOT Contract uses the term "Appointed Company" to refer Project Sponsor
[2] It should be noted that the environmental and social baseline characterization, maps and scoping assessments provided in this report are based on the most current design

The map illustrating the construction components and road route within the scope of the Project's construction activities is provided in Figure I-1.

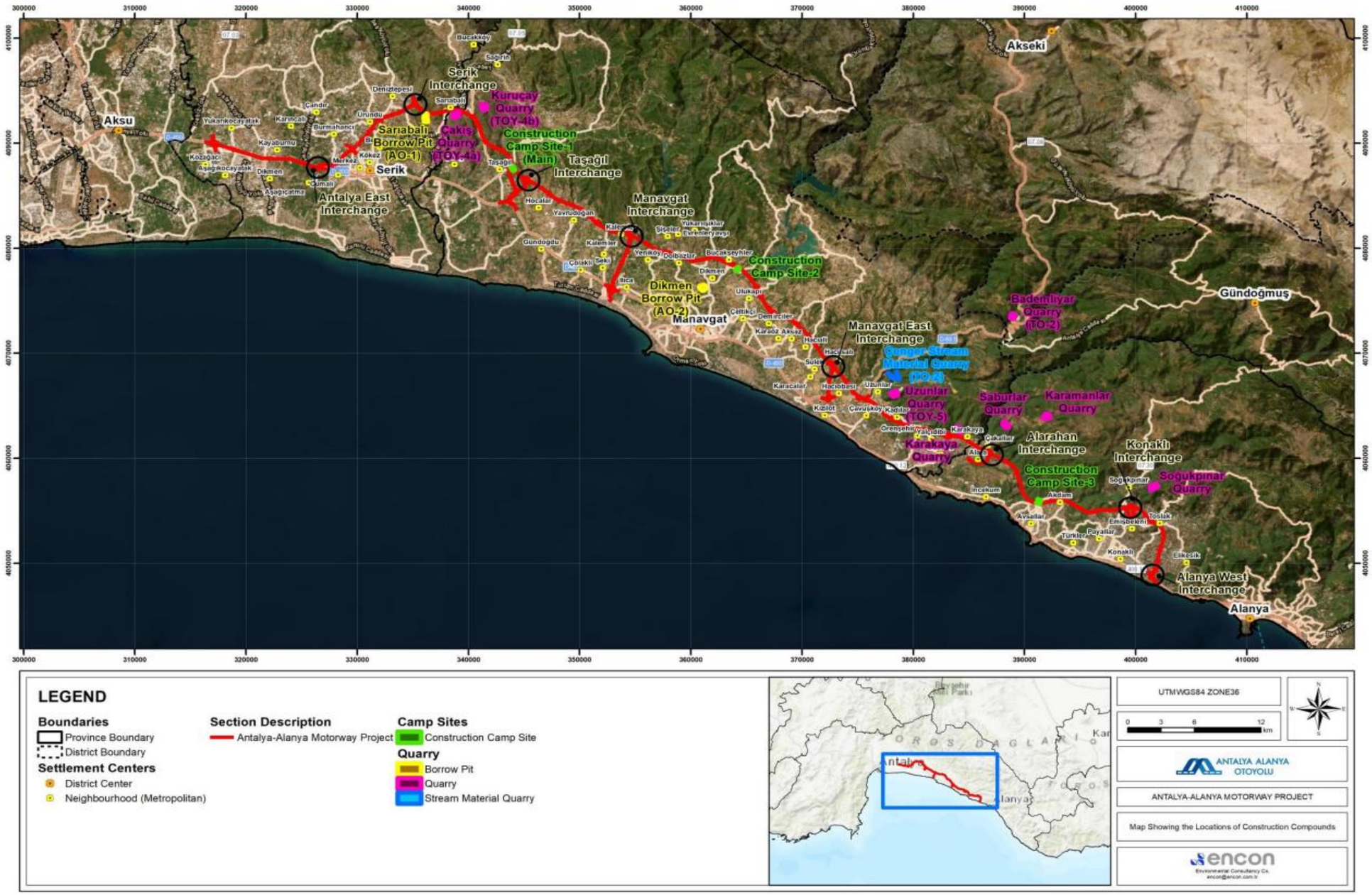

Figure I-1. Map Showing the Locations of Construction Compounds

II. PURPOSE AND SCOPE

This Environmental Accident and Spill Response Management Plan ("the Plan") has been prepared for the Antalya–Alanya Motorway Project ("the Project").

The purpose of this Plan is to define response strategies and mitigation measures for managing environmental accidents, spillages of hazardous and non-hazardous substances, and unexpected pollution events that may occur during the construction phase. This includes fuel, oil, chemicals, or process-related spills that could adversely impact human health or the environment.

This management plan is a living document developed with the best available information and will be reviewed and revised as necessary due to the nature of the construction and progress.

The Plan has been developed in alignment with applicable national environmental legislation and international standards, including those of international financial institutions. It provides a framework that should be followed to ensure spill preparedness, timely intervention, and proper containment and cleanup procedures.

This Plan should be implemented by all construction-phase parties, including the Project Sponsor (Antalya-Alanya Otoyolu İnşaat Yatırım ve İşletme A.Ş. – AAOİAŞ), the Main Contractor (Limak), and all subcontractors. Responsibilities related to implementation, training, monitoring, and reporting should be clearly defined and communicated across all relevant levels. In case of changes in project design, materials used, or construction methodology, this Plan should be reviewed and updated accordingly.

III. LEGISLATIVE FRAMEWORK AND REFERENCE STANDARDS

This Plan has been structured to align with applicable national legislation and relevant international standards and frameworks that govern environmental accident preparedness, hazardous material handling, and spill response during construction activities. Accordingly, the following legislative and institutional references should guide the implementation, compliance, and performance monitoring procedures throughout the construction phase of the Project.

III.1 National Requirements

The following Turkish laws and regulations provide the legal foundation for managing environmental accidents, hazardous material spills, and associated risks during the construction phase of the Project:

- Environmental Law (Law No. 2872),
- Regulation on Environmental Impact Assessment,
- Regulation on Environmental Permits and Licenses,
- Regulation on the Control of Soil Pollution and Sites Contaminated by Point Sources,
- Regulation on the Control of Pollution Caused by Hazardous Substances in Water and its Environment,
- Regulation on the Control of Water Pollution,
- Regulation on Test Methods for Determining the Physicochemical, Toxicological and Eco toxicological Properties of Substances and Mixtures,
- Regulation on Classification, Labelling and Packaging of Substances and Mixtures,
- Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals,
- Regulation on Persistent Organic Pollutants,

- Regulation on Prevention and Mitigation of Major Industrial Accidents,
- Waste Management Regulation,
- Regulation on Control of Packaging Waste,
- Regulation on the Control of Waste Electrical and Electronic Equipment,
- Regulation on General Principles of Waste Pre-Treatment and Recovery Facilities,
- Regulation on the Control of Waste Batteries and Accumulators,
- Waste Oil Management Regulation,
- Regulation on the Landfilling of Waste,
- Regulation on Incineration of Waste,
- Regulation on the Control of Waste Vegetable Oils,
- Regulation on the Control of Excavation Soil, Construction and Demolition Waste,
- Regulation on the Control of End-of-Life Vehicles,
- Regulation on the Control of End-of-Life Tires,
- Regulation on the Control of Polychlorinated Biphenyls and Polychlorinated Terphenyls,
- Regulation on the Control of Medical Waste,
- Zero Waste Regulation.

III.2 International Standards and Conventions

The following international standards and procedures are applicable to the Project to ensure alignment with national legislation and recognize good industry practices.

AIIB is a multilateral development bank established to promote sustainable economic growth and improve infrastructure connectivity. According to the Articles of Agreement, AIIB aims to invest in infrastructure and productive sectors while fostering regional cooperation through partnerships with other development institutions. To ensure responsible operations, AIIB adheres to policies that address environmental and social impacts, outlined in its Environmental and Social Framework (ESF). The ESF, updated in June 2024, and reflects AIIB's commitment to international standards and sustainable development practices.

Also, the following international standards and reference frameworks should be used to align Project practices with international lender requirements and good practice environmental and social management:

- IFC Performance Standards (2012), specifically:
  - Performance Standard 3: Resource Efficiency and Pollution Prevention
  - Performance Standard 4: Community Health, Safety, and Security
- IFC Environmental, Health and Safety (EHS) General Guidelines (2007)
- IFC EHS Guidelines for Toll Roads (2007)
- IFC Guidance Notes (2012)
- Equator Principles IV (2020)
- ISO 14001: Environmental Management Systems – Requirements with Guidance for Use
- ISO 45001: Occupational Health and Safety Management Systems
- EU Seveso III Directive (2012/18/EU) on the Control of Major Accident Hazards
- Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal
- Stockholm Convention on Persistent Organic Pollutants
- European Agreement Concerning the International Carriage of Dangerous Goods by Road

These references should be utilized to ensure that environmental accident and spill response procedures are implemented in a manner consistent with international expectations and that the Project remains aligned with both domestic regulatory obligations and global environmental performance standards.

IV. LINKAGE WITH OTHER PROJECT PLANS AND PROCEDURES

This Plan is supported by other management plans and procedures developed under the Environmental and Social Management System (ESMS) of the Project. The following plans and procedures are particularly relevant and should be implemented in coordination with the Environmental Accident and Spill Response Management Plan:

- Solid Waste Management Plan,
- Water, Wastewater, and Storm Water Management Plan,
- Hazardous Materials Management Plan,
- Occupational Health and Safety Management Plan,
- Construction Camp Site Management Plan,
- Community Health, Safety, and Security Management Plan,
- Traffic Management Plan,
- Environmental and Social Management and Monitoring Plan (ESMMP),
- Emergency Preparedness and Response Plan (EPRP),
- Excavated Material Management,
- Soil Management and Erosion Control Plan,
- Stakeholder Engagement Plan,
- Blasting Management Plan,
- Demolition Management Plan,
- Quarry Management Plan.

The effective integration of these plans should be ensured to maintain compliance with national regulations and international standards and to minimize the cumulative environmental and social impacts of construction activities.

V. ROLES AND RESPONSIBILITIES

Antalya Alanya Otoyol İnşaat Yatırım ve İşletme A.Ş. (SPV) as the Project Sponsor and Limak (EPC) as the main contractor of the Project will be responsible for the following:

General Manager (SPV):

- Hold overall responsibility and accountability for the project, ensuring construction activities comply with national and international spill management standards.
- Ensure full compliance with the SRMP and related regulations.
- Approve procedures for spill prevention, handling, containment, and cleanup.
- Allocate necessary resources, including trained personnel and equipment, for effective spill response.
- Ensure professional oversight, corrective actions, and monitoring are implemented following spill incidents.

- Ensure all line managers, contractors, and subcontractors understand and fulfil their responsibilities regarding spill management throughout construction activities.

E&S Manager (SPV)

- Prepare, review, update, and implement the SRMP and related E&S plans in accordance with laws, company policies, and international standards.
- Coordinate with EPC, subcontractors, and internal teams; provide technical guidance for spill prevention, containment, and response.
- Monitor compliance, site practices, and record-keeping related to spills, incidents, and corrective actions.
- Ensure delivery and validation of spill management training for all relevant personnel.
- Investigate spill incidents, implement corrective and preventive measures, and oversee emergency response procedures.
- Prepare reports and maintain documentation for audits, regulatory compliance, and incident follow-up.
- Support community engagement and grievance resolution related to spill events, and coordinate with authorities and permit processes.

H&S Manager (SPV)

- Prepare, review, and implement Health, Safety, Community, and Spill Management Plans in line with company policies, regulations, standards, and lender requirements.
- Ensure EPC and subcontractors comply with spill prevention, containment, and response procedures, including site boundaries and method statements.
- Provide technical guidance for safe spill handling and integrate spill controls into daily operations.
- Monitor compliance through inspections, audits, and hazard walkthroughs, focusing on spill risks and storage areas.
- Track spill and safety performance, investigate incidents, determine root causes, and implement corrective actions.
- Support spill management and H&S training, maintain records, and report performance to management and stakeholders.
- Engage with regulatory authorities and ensure timely resolution of spill-related public health and environmental concerns.

Deputy E&S Manager (SPV)

- Lead spill/hazardous material management, ensuring compliance with project requirements, standards, and regulations.
- Review and monitor subcontractors' ESHS and spill/hazardous material procedures.
- Oversee implementation of spill prevention, containment, and response measures by EPC and subcontractors.
- Track incidents, corrective actions, and reporting; ensure proper record-keeping and training.
- Support community engagement, grievance management, and monitoring programs related to spills and hazardous materials.

Social Chief (SPV)

- Ensure EPC and subcontractor adherence to spill response protocols and community protection measures.
- Review and validate reports to ensure compliance with regulatory requirements and spill management standards.
- Deliver training and guidance on community engagement, grievance resolution, and spill incident awareness.
- Liaise with the E&S Deputy Manager and construction teams to address community concerns arising from spill events and ensure effective mitigation.

HSE Specialist (SPV)

- Support implementation of health, safety, environmental, and spill response procedures to ensure safe site operations.
- Conduct routine site inspections, hazard assessments, and audits, with emphasis on spill risks and containment measures.
- Monitor contractor compliance and integrate spill response protocols into daily work procedures.
- Maintain accurate records of spill incidents, permits, inspections, and training activities.
- Participate in spill investigations and ensure lessons learned are applied to prevent recurrence.
- Support and review spill response training for all site personnel.
- Ensure proper placement and maintenance of spill control equipment, barriers, and containment areas.
- Assist in addressing and resolving spill-related complaints and environmental concerns.

Project Director (EPC)

- Define and oversee EPC execution strategy and project management plans (HSE, E&S, QA/QC) with integrated spill response measures.
- Lead teams and coordinate EPC functions, ensuring compliance with site procedures, standards, and regulations for spill prevention and response.
- Approve and monitor site inspections, safety reviews, and training programs, including spill response readiness.
- Track KPIs, timelines, budgets, and implement corrective actions for non-compliance, including spill incidents.
- Serve as EPC representative to SPV, clients, stakeholders, and authorities; address safety, environmental, social, and spill-related concerns.
- Oversee risk management, quality systems, and mitigation strategies covering technical, HSE, social, and spill response aspects.
- Supervise subcontractors and ensure proper execution of construction phases with adherence to spill prevention, control, and response measures.

E&S Manager (EPC)

- Prepare, review, and implement Environmental, Social, and Spill Response Management Plans in accordance with policies, standards, and lender requirements.
- Coordinate with SPV, contractors, and construction teams to ensure compliance with spill prevention, control, and response procedures.

- Monitor and enforce contractor/subcontractor adherence to environmental, safety, and spill management requirements.
- Maintain site boundaries, traffic management, utility protection, and community safety measures related to spill risks.
- Oversee E&S and spill response training, onboarding, toolbox talks, and awareness programs for all personnel.
- Supervise E&S staff, monitor performance, lead investigations, and implement corrective actions for spill incidents.
- Manage grievances, emergency preparedness, and ensure integration of social inclusion principles in spill response planning.
- Report environmental, social, and spill response performance to the Project Director and promote continuous improvement.

H&S Manager (EPC)

- Develop, implement, and update Health & Safety and Spill Response Management Plans.
- Ensure EPC and subcontractors comply with safety and spill prevention, control, and response procedures.
- Manage risk assessments, site safety controls, traffic, utilities, and community protection related to spill hazards.
- Lead inspections, audits, incident investigations, and corrective actions for spill events and safety issues.
- Oversee training, toolbox talks, and emergency drills focused on health, safety, and spill response.
- Report performance, risks, and lessons learned to the Project Director and promote a proactive safety and spill management culture.

Warehouse Supervisor (EPC)

- Maintain accurate records of all hazardous materials and track their location to prevent accidental releases.
- Ensure safe storage with proper labelling, containment, and secondary protection to minimize spill risks.
- Conduct regular inspections of tanks, drums, and containers for leaks, damage, or corrosion.
- Immediately report and manage damaged, expired, or leaking materials, coordinating safe containment and disposal.
- Keep spill response equipment (spill kits, absorbents, fire extinguishers) accessible in storage areas.
- Coordinate with the E&S Manager and HSE team during spill-related inspections, audits, and incident investigations.
- Support training and awareness programs for staff on spill prevention, response, and safe handling of hazardous substances.

Maintenance Team / Equipment Operators (EPC)

- Conduct regular inspections of machinery and equipment to identify and prevent leaks or accidental releases.
- Collect and temporarily store oil, lubricants, and other hazardous residues following approved containment procedures.

- Ensure used oil and residues are transported to authorized recycling or disposal facilities, avoiding contamination or mixing with other substances.
- Keep spill kits and containment materials accessible during maintenance activities.
- Immediately report any spills or leak incidents to the E&S Manager and HSE team for rapid response.
- Participate in spill prevention and response training to ensure safe handling of hazardous substances.

Emergency Response Coordinator (EPC)

- Respond to major spills beyond the capacity of on-site personnel.
- Contain, control, and clean up spills according to emergency response procedures.
- Follow pre-defined safety protocols to protect personnel, community, and environment.

Emergency Response Team (EPC)

- Confirm the use of appropriate PPE.
- Identify the source of the spill.
- Assess if the spill is ongoing.
- Contain the spill using materials from spill kits (booms, bunds, absorbents).
- Recover spilled substances, contaminated soil, and absorbents into suitable containers.
- Clean up the spill while preventing environmental spread.

Environmental Engineer (SPV and EPC)

- Oversee the implementation and monitoring of spill response procedures across all site operations, including subcontractor activities.
- Conduct regular inspections, audits, and risk assessments to ensure proper containment, handling, and environmentally compliant disposal of spilled materials.
- Maintain comprehensive records and support the investigation, reporting, and corrective action of spill incidents.
- Develop and deliver training, toolbox talks, and awareness programs on spill prevention, response protocols, and environmental protection measures.
- Coordinate with H&S, E&S, contractors, and regulatory authorities to integrate spill management into operational plans and emergency preparedness.
- Ensure compliance with all relevant environmental permits, standards, and regulatory requirements related to spill prevention and response.

Community Liaison Officer (CLO) (SPV and EPC)

- Communicate potential spill risks and mitigation measures to local communities.
- Organize meetings and engagement forums to inform and receive feedback on spill incidents.
- Manage grievances related to spills through the Grievance Mechanism (GM).
- Assess spill impacts on vulnerable groups and propose tailored mitigation measures.
- Support monitoring, reporting, and documentation of spill incidents and contractor compliance.
- Maintain confidentiality and ensure proper handling of sensitive spill-related information.

All Personnel/ Spill Observer (including Contractor/Subcontractor Personnel)

- Follow the Spill Response Management Plan and related procedures during all site activities.
- Report any spills or potential spill risks immediately to the CLO and E&S Manager.

- Participate in spill response and safety training programs.
- Ensure safe handling, storage, and use of materials to prevent spills.
- Take responsibility for implementing spill prevention and response measures to maintain a safe working environment.

VI. ENVIRONMENTAL ACCIDENT AND SPILL MANAGEMENT APPROACH

VI.1 Work Sites, Location and Hazardous Materials On-Site

Environmental accidents and unintentional spills during motorway construction projects may result in the release of hazardous and non-hazardous substances such as fuel, oil, lubricants, hydraulic fluids, bitumen, chemicals, and wastewater. If not properly managed, these substances may cause contamination of soil, surface water, and groundwater, posing serious risks to both environmental and human health.

Spills may occur during storage, equipment refueling, vehicle maintenance, chemical handling, or the transportation of hazardous materials. Risk factors include improper handling practices, equipment failure, inadequate storage infrastructure, and insufficient containment systems. Adverse weather events such as heavy rainfall or flooding may further increase the likelihood of containment failure, particularly at temporary waste storage sites and fuel storage areas.

Agricultural areas, pastures, and forests are particularly sensitive to such impacts, with a high overall risk due to the potential for pollutants to degrade soil quality, harm vegetation, and disrupt agricultural productivity. In contrast, scrublands and recreational areas are considered to present a moderate risk, while artificial surfaces—such as urban fabric, industrial zones, or active construction sites—where natural soil functions are already compromised, are associated with lower risk levels. Across all land types, potential contamination is expected to remain spatially limited and short-term reversible, provided that effective spill prevention and response measures are rigorously implemented.

The Project corridor traverses a diverse landscape composed of agricultural lands (63.33%), forests and semi-natural areas (29.05%), meadow-pasture areas (4.94%), settlement areas (1.79%), water bodies (0.77%), and natural and semi-natural areas (0.12%). Given the ecological and economic value of these land use types, accidental spills, leakages, or the improper handling of hazardous materials during construction pose significant risks of soil contamination.

Spill risks during the construction phase are particularly associated with the use of heavy construction equipment, mobile fuel tanks, chemical and waste storage areas, wastewater treatment plants and processing units such as asphalt and concrete batching plants. The improper handling of waste oils, chemical solvents, and other construction-related liquid wastes can lead to contamination incidents if preventive measures are not adequately implemented. Substances such as petroleum hydrocarbons, detergents, and acids may have persistent impacts on environmental media if not promptly contained and remediated.

Through the project, there will be three construction camp sites (Main Camp Site (Manavgat), Camp Site-2 (Manavgat) and Camp Site-3 (Alanya), temporary construction camp site in Taşağıl is in use. In addition to these areas, there will be usage land for mechanic and asphalt plant and concrete plant areas which are listed below (see Table VI-1**Error! Reference source not found.**). In these areas, activities such as refueling and oil changes will be intensive, so the spill risk is highest. Additionally, construction activities along the route, in quarries, and during transportation are also at risk of environmental accidents and spills. In these areas, in addition to spill kits located in risky areas, extra kits will be kept for delivery to nearby construction sites in case of an emergency.

Table VI-1. Information on Mechanic, Asphalt and Concrete Plant Areas

Location	Province	District	Nearest Neighbourhood	Description of the Site / Plant	Area (m²)
Km 55+450	Antalya	Serik	Sarıabalı	Concrete Plant-1	13,946
Km 59+400	Antalya	Manavgat	Taşağıl	Temporary Construction Camp Site	66,450
				Concrete Plant-2	
				Mechanical Plant-1	
				Asphalt Plant-1	
Km 64+400	Antalya	Manavgat	Taşağıl	Construction Camp Site-1 (Main)	-
Km 80+400	Antalya	Manavgat	Yeniköy	Concrete Plant-3	15,000
Km 87+500	Antalya	Manavgat	Bucakşeyhler	Construction Camp Site-2	42,371
Km 87+700	Antalya	Manavgat	Bucakşeyhler	Concrete Plant-4	
				Mechanical Plant-2	
				Asphalt Plant-2	
Km 89+700	Antalya	Manavgat	Ulukapı	Concrete Plant-4a	11,665
Km 99+200	Antalya	Manavgat	Sülek	Concrete Plant-5	11,977
Km 124+300	Antalya	Alanya	İncekum	Construction Camp Site-3	85,000
				Concrete Plant-6	
				Mechanical Plant-3	
				Asphalt Plant-3	

To prevent or minimize the environmental consequences of spills, proactive strategies should be implemented. These include proper handling, storage, and transportation of hazardous substances, the provision of appropriate containment infrastructure, and the development of robust emergency response and remediation procedures that are systematically applied throughout construction activities.

In case of a spill in any area, contaminated soil, water and used spill kits will be treated as hazardous waste. These wastes will be disposed of in hazardous waste containers in the area where the work is carried out and from there they will be transferred to the Temporary Hazardous Waste Storage Areas in Temporary Construction Camp Site, Main Camp Site, Camp Site-2 or Camp Site-3 which one is the closest, considering the spill products either hazardous or non-hazardous.

VI.2 Spill Classification

Spill incidents can be classified into three categories based on the estimated volume of the released substance and the spatial extent of the impact:

- **Minor Spills:** Minor spills are localized and can be addressed solely by worksite personnel using available on-site resources such as spill kits. These may include small leaks, drips, or splashes from malfunctioning hoses, fittings, or leaking vehicles and equipment. Environmental impacts are expected to be minimal, confined within the work area, and remediable within a few days or weeks. No lasting effects on terrestrial or aquatic ecosystems are anticipated. Minor spills are generally considered to involve volumes of less than 200 liters.

- **Medium Spills:** Medium spills involve larger volumes and require additional local manpower and resources. Such incidents are typically caused by failures in safety systems, structural breaches, or significant fuel losses. These spills may cause moderate, yet reversible, impacts on the environment and typically require 1–2 months for effective clean-up and remediation. The relevant authorities should be immediately notified. Indicatively, medium spills range from 200 to 5,000 liters. Remediation and monitoring will be overseen by the Environmental Engineer of the EPC under the supervision of the E&S Manager of EPC and E&S manager of the SPV, and in coordination with regulatory agencies.

- **Major Spills:** Major spills represent large-scale or crisis-level events that exceed the response capacity of local teams and require the involvement of specialized contractors and additional equipment. These events must be immediately reported to the relevant authorities. Clean-up and rehabilitation efforts may span up to one year, and significant, potentially long-term impacts on the environment may occur. Spills involving more than 5,000 liters fall within this category. Remediation and monitoring activities will be led by the environmental engineer of the EPC with supervision of E&S Manager of the EPC and carried out to the satisfaction of E&S Manager of SPV and the competent regulatory authorities.

VI.3 Preparedness, Prevention and On-site Resources

Storage area will be designed and equipped based on the chemical and physical properties of the products, and based on the types of containers stored, the number of people requiring access, and the quantities of the substance used. The size of areas allocated for storage will be calculated based on the volume of the hazardous material that will be on site during peak construction for the relevant activity. MSDSs must be available for all stored hazardous substances and the substances must be clearly labelled. Entrances, exits and access to emergency equipment are kept clear at all times. All storage areas for hazardous substances are equipped with secondary retentions to retain any spill or leakage from one of the containers stored. The secondary retention volume is defined as a minimum of 110% of the volume of the largest container stored on the site taking into consideration the volume occupied by the stored containers. Secondary containment bunds are to be maintained empty of rainwater. Tanks are to be equipped with level detectors and safety systems to prevent overfilling. Suitable absorbents (neutralising and non-combustible) are available in the storage area to clean up any spills and leaks.

Refuelling of project vehicles and plants are to be made on dedicated refuelling stations equipped with impervious platforms. Refuelling on worksite outside the dedicated refuelling stations is not authorized unless authorized otherwise by Project Management when no other options are feasible. If authorized, refuelling of machinery on worksite will be performed using a dedicated equipment to minimize risks of leakage and soil contamination.

Hazardous substances and waste must be clearly labelled on each container and the proper container for each substance must be used. Secondary containment will be provided together with collection and treatment of runoff from areas where hazardous materials are stored. For more details, refer to Hazardous Material and Solid Waste Management Plan.

Hydrocarbon/Oil spill kits will be present at each worksite during the implementation of the Project: Spill kits will be located at each worksite and in particular appropriate spill kits will be located at:

- Storage areas for hazardous substances,
- Nearby areas where hazardous substances are used,
- Mechanical workshops where the construction equipment is repaired and maintained,
- On trucks and tank trucks (in particular, as bridges can be present, on each transportation vehicle, the spill kit should include spill pads that can be used to avoid leakages into the water stream).

VI.4 Site Inspections and Monitoring

ESHS will conduct daily visual inspections of all hazardous material storage areas and containers to look for signs of deterioration, leaks, unsecured container lids, or excess accumulation of materials in the containment areas. All visible leaks and releases will be promptly cleaned up and disposed in accordance with this Plan. Additionally, equipment operators (crane operators-high up operators, fuel tanker drivers) will conduct routine inspections on equipment to check for leaks daily to minimize the potential for spills or leaks and ensure spill kits are complete and available.

VI.5 Spill Response Action Steps

All site personnel act as spill observers. They must first ensure safety, notify the Emergency Response Team, and provide key details such as the location, type of substance, and source of the spill. If necessary, they evacuate nearby personnel, use PPE, and remove ignition sources, stop the spill, and contain it. If the substance is unknown or there is a fire/explosion risk, evacuation is required. The Emergency Response Team or Coordinator confirms the use of correct PPE, identifies the spill source, and checks if the release is ongoing.

All personnel may assist in stopping or minimizing the spill if safe to do so, for example by closing valves or moving equipment. The spill observer must notify the Emergency Response Coordinator, who then informs the E&S Manager and ESHS Manager. The Emergency Response Coordinator evacuates the area if needed and diverts traffic and people away from the hazard. The Emergency Response Team contains the spill using spill kit materials such as bunds, booms, or absorbents.

The team collects spilled products, contaminated soil, and used absorbents in appropriate containers included in the spill kits. The Emergency Response Team cleans the area carefully, avoiding spread to soil, water, or air. The ESHS Team ensures that all contaminated products, materials, and soils are disposed of following hazardous waste procedures. The ESHS Team reports the spill to the ESHS Manager and Construction Manager. Any spill response equipment used must be replaced immediately by the ESHS Team. The ESHS Team monitors environmental and social impacts and checks the effectiveness of the clean-up.

If the spill affects areas outside the worksite, the ESHS Manager and Project Manager must report it to the local authorities..

VI.6 Reporting and Recordkeeping

In an event of spill, the following general notification procedures are to be followed:

- The person who observed a spill must notify the event to the Emergency Response Coordinator and/or ESHS Supervisor.
- The ESHS Manager should also be notified immediately orally, together with the E&S Manager.
- A Spill Report Form must be filled up by the Emergency Response Coordinator and notified to the ESHS Manager and Construction Manager within 12 hrs from the event.
- The ESHS Manager is responsible for the evaluation of the extent of the spill and of immediately contacting the local and National Authorities, if deemed necessary.
- Also, a notification to the Employer ESHS Manager should be issued within 24 hrs.

VI.7 Spill Containment, Clean-up and Rehabilitation

When a spill occurs, polluted soils must be removed and managed as hazardous waste. Runoff from areas where hazardous materials are stored or handled will be collected and treated through an oil-water separator before any discharge to the environment.

After every clean-up, the area will be assessed to check if further remediation is needed. This includes identifying affected environmental components, the extent of contamination, and possible migration paths. If required, a Monitoring Plan will be developed and implemented. All used spill kits must be replaced before construction resumes, and all equipment used must be decontaminated before storage. Wastes generated from spill response will be disposed of according to national regulations and the Hazardous Material and Solid Waste Management Plan.

Spills must be restricted immediately for hydrocarbon spills. Absorbents, pads, booms, and barriers should be used to minimize contamination of soil, water, and vegetation. Contaminated soil, water, and materials must be containerized, double-bagged, and stored in a designated hazardous waste area. If spills occur near drains or streams, drains must be closed and floating product pumped into drums. Contaminated vegetation may be cut or flushed with water. Effectiveness of the clean-up must be monitored. Water must not be used to disperse chemicals. Personnel must use PPE and compatible containers. Activities must be reported to the ESHS Manager.

For all spill types, contaminated soils must be removed, spills restricted with barriers, and watercourses protected with booms and absorbents. Snow and ice are to be treated as soil. Vegetation can be protected with pads and booms; if contaminated, it may be cut or flushed.

VII. MITIGATION MEASURES FOR SPILL AND ENVIRONMENTAL ACCIDENT RISKS

The following measures will be implemented throughout the Project sites to prevent or minimize the risks and impacts associated with spills and environmental accidents during the construction phase:

Hazardous Material Evaluation & Storage

- All hazardous materials will be evaluated by the E&S Manager of the EPC prior to being brought to site, including their type, quantity, transfer location, and hazardous characteristics, in order to implement appropriate preventive and control measures.
- Any spill or leakage event will be responded in accordance with the procedures described in the Emergency Preparedness and Response Plan
- Storage areas will be designed with impermeable flooring, secondary containment (e.g., bunds, drip trays), and secure enclosures. And it will be located at least 10 m. away from drainage lines and environmentally sensitive zones to prevent the spread of contamination during accidental releases.
- All tanks, containers, and drums will be regularly inspected for damage or leakage. Any corroded, worn, or damaged equipment will be promptly repaired or replaced.
- Incompatible hazardous substances will be stored separately, and material safety data sheet (SDS) requirements will be considered in designing storage arrangements.
- Storage facilities will be covered to protect materials from rain and snow and secured with fencing and locks to restrict unauthorized access.
- Storage structures will include sufficient open space to allow for visual inspection and monitoring of stored materials.
- Fire extinguishers will be available in also all hazardous and non-hazardous material storage areas.
- All chemicals and hazardous materials will be stored in designated hazardous materials storage areas that have lean to roof, concrete floor, secondary containment of at least 110% of the stored volume and proper drainage for spills/leak.
- For the storage of liquid wastes greater than 220 liters, secondary containment will be provided with an available volume of at least 110% of the largest storage container or 25% of the total storage capacity, whichever is greater.

Refueling & Maintenance Activities

- Refueling will be carried out only by trained operators using hoses with automatic shut-off nozzles. Fueling tankers will be equipped with spill kits and/or drip trays for use during refueling. Drip trays or absorbent materials will be placed under refueling points.
- All refueling, maintenance, or chemical handling activities will be carried out with spill prevention in mind and with contingency equipment immediately accessible.
- Spill kits, absorbents (pads, socks, booms), and fire extinguishers will be located at all spill-prone locations, including fuel tanks, maintenance areas, and material storage areas.
- A trained fuel operator will maintain hose contact with the equipment during refueling. Fueling will not begin without placing drip trays under the vehicle or machinery.

Spill Prevention & Response

- Maintenance activities that may result in spills will be conducted in designated areas which will be constructed in construction site areas equipped with containment systems and spill kits.
- During any maintenance activity with spill risk, spill kits will be positioned near the work zone and equipment will be placed within containment barriers or over drip trays.
- Spill response responsibilities will be assigned to designated personnel, including environmental engineers, and the Emergency Response Team (ERT) which is specified in Emergency Response Plan.
- The ERT contact information and emergency numbers will be clearly posted at work sites and storage areas.
- In case of any emergency (e.g., spill, fire), any staff member must immediately notify the ERT and provide the following: name, location, type of incident (e.g., chemical or fuel spill), and its severity.
- If a worker detects a spill, they must alert nearby personnel, inform environmental staff, and provide a brief description of the situation to facilitate a timely response.
- In case of spills:
    - Small spills will be cleaned immediately by the operator using absorbents, which will be disposed of as hazardous waste.
    - Large or hazardous spills will be managed by the Emergency Response Team (ERT), who will assess severity, contain, and clean up.
- The severity of a spill will be assessed based on chemical type, physical state, potential for spread, weather conditions, and area affected—not solely by surface area.
- For spills on soil, the source will be shut or isolated, and the substance contained using earthen bunds, booms, or absorbent materials. Contaminated soil will be excavated and disposed of at licensed hazardous waste facilities.
- For spills into surface water, floating barriers (booms) will be used to contain the release. Free product will be collected using pumps and absorbents. Any grease, solvent, or oil spills in maintenance areas will be cleaned using sorbents and placed in appropriate hazardous waste containers. No spills will be hosed into the environment.
- Spills of dangerous substances will be reported by E&S Manager of the EPC to the E&S Manager of the SPV and documented on site.
- Contaminated materials (e.g., soil, cloth, barrels) will be transported to licensed disposal facilities using authorized vehicles.
- Used absorbents will be placed in black-colored hazardous waste containers marked appropriately.
- Absorbent pads will be placed on spills and left for 5–10 minutes. If residues remain, a second pad will be applied. Each pad can absorb up to 17 times its weight.
- Absorbent socks (“sausages”) will be used as perimeter controls to contain spreading spills. These will also be disposed of as hazardous waste.
- All spill control materials (kits, extinguishers) will be kept near high-risk locations and clearly marked.
- Fire extinguishers will be placed strategically and regularly inspected.

Training, Inspection & Documentation

- All employees will be trained on spill prevention, response procedures, and their respective responsibilities.
- Regular inspections will be carried out on tanks, bunds, supports, and connections by environmental staff. All findings will be recorded.
- Internal haul roads will be inspected for structural integrity, and repairs will be conducted promptly to minimize vehicle-related spill risks.
- All spill events will be recorded, investigated, and followed up with corrective actions. Lessons learned will be incorporated into updated response plans.
- EPC's Environmental Engineer will coordinate all major spill responses in accordance with Turkish legislation and notify the EPC's E&S Manager and SPV's E&S Manager accordingly. The SPV E&S Manager will coordinate the documentation of corrective actions for these incidents and their submission to the Antalya Provincial Directorate of Environment, Urban Planning, and Climate Change, as required.

VIII. TRAINING

All personnel will receive structured training upon hiring as part of the Project's onboarding and orientation program. This training will cover the prevention and management of environmental accidents and hazardous material spills, including identification of potential spill sources, associated risks to human health and the environment, and appropriate response actions.

The training program will include the following core elements:

- General environmental awareness and potential impacts of spills;
- Applicable national legislation and international standards related to hazardous material handling and spill response;
- Where can this Plan and other relevant procedures (e.g., Hazardous Materials Management Plan, Solid Waste Management Plan) be accessed;
- Typical sources of spills on construction sites, such as equipment failure, leaks during fuel transfer, and improper storage of chemicals or lubricants;
- Precautionary measures for spill prevention;
- Use, location, and application of spill kits and absorbent materials in various work areas;
- Spill containment and control procedures;
- Proper use of personal protective equipment (PPE) during spill response;
- Procedures for clean-up, recovery, and appropriate disposal of contaminated materials;
- Replenishment of spill kits following use or routine inspection.

Training will be primarily delivered through practical demonstrations to ensure staff understands how to respond effectively in the event of a spill. Specialized training will be provided to designated personnel, including members of the ERT, with additional focus on spill response leadership, containment strategies, clean-up coordination, and documentation.

Subcontractors will be responsible for ensuring that their employees receive equivalent training, consistent with Project requirements and aligned with the overall ESMS.

All personnel will receive refresher training at regular intervals, and additional training will be provided to newly hired staff. The E&S Manager will prepare a detailed training schedule, which will be reviewed and approved by the Project Manager.

Spill response drills will be conducted at least once annually to test readiness and build confidence among construction teams and the ERT. Before the drills, ERT team will be trained in waste disposal intervention and management in accordance with national and international standards. Drill performance will be documented in accordance with the ESMS protocols. Drill records will be submitted to the Project Manager for approval and archived as per ESMS protocols.

Attendance and completion of all training sessions will be documented through the Training Participation Form. These records will be managed and retained by the ESHS team, and subject to periodic audits to verify compliance with training and preparedness requirements.

IX. MONITORING

A structured internal monitoring program will be implemented to assess the effectiveness of environmental accident and spill response measures outlined in this Plan during the construction phase of the Project. The scope and frequency of monitoring activities will be periodically reviewed and revised where necessary, based on site-specific risks, incident trends, stakeholder concerns, or changes in applicable environmental regulations.

Monitoring activities will be coordinated by the E&S Manager, in close collaboration with the H&S Manager. Key responsibilities will include verifying the proper storage and handling of hazardous materials, monitoring implementation of spill prevention measures, checking the availability and condition of spill response kits, and ensuring that spill containment practices are consistently applied across critical work areas such as fuel storage sites, maintenance zones, and material handling areas.

Regular inspections will be conducted at designated locations across all worksites to evaluate compliance with national environmental regulations and Project-specific spill prevention requirements. This will include visual inspections for potential leaks or spill risks, control of secondary containment systems, checks on the use of drip trays and absorbent materials, and review of maintenance and inspection logs for storage tanks and hazardous material containers.

The performance of contractors and subcontractors in implementing spill management and emergency response measures will be reviewed through environmental audits, site supervision reports, and field observations. Any identified non-conformities will trigger timely corrective and preventive action plans. Monitoring will also include follow-up assessments to confirm the effectiveness of implemented measures and to prevent recurrence.

In addition to internal monitoring, inspections may be carried out by relevant public institutions, including the Ministry of Environment, Urbanization and Climate Change, in accordance with Turkish legislation. The frequency and scope of these inspections will be determined by the authorities and may include review of monitoring data, inspection of hazardous material storage practices, and verification of response protocols and documentation.

Monitoring efforts will be guided by the framework provided in Table IX-1, which outlines the parameters to be monitored, the corresponding monitoring locations, frequency of inspections, and responsible parties. These monitoring activities will be essential for evaluating the effectiveness of spill prevention and response measures and ensuring full compliance with national regulations and Project standards.

Table IX-1. Key Monitoring Activities

Parameter	Monitoring Station / Location	Monitoring Method	Monitoring Frequency	Responsible Parties
Number of trainings conducted	Project site offices	Tracking the number of trained personnel	Quarterly	AAOİAŞ, EPC,
Reported spill/leak incidents or non-compliance records	Site-wide	Review of non-compliance, accident, and spill records	Daily	AAOİAŞ, EPC
Number of complaints related to environmental accidents	Project site offices	Logging and reviewing records as per the Stakeholder Engagement Procedure	Quarterly	AAOİAŞ, EPC,
Hazardous materials storage conditions	Storage and handling areas of hazardous substances	Maintaining records in accordance with the Spill Response Management Plan	Monthly	AAOİAŞ, EPC,
Spill kits number and conditions	All construction and maintenance areas and vehicles, chemical storage areas	Visual check and control list	Weekly	AAOİAŞ, EPC, Subcontractors
Number of spill/leakage	All construction site	Visual check and incident reports	Daily	AAOİAŞ,EPC,
Fire extinguisher check	Storage and handling areas of hazardous substances	Visual check and control list	Monthly	AAOİAŞ,EPC,
Spill response drills	Storage and handling areas of hazardous substances	Audit – Drill reports review	At least semi-annually	AAOİAŞ,EPC,
Spill prevention and response training	All employees	Audit – training records review	Monthly	AAOİAŞ,EPC,

In cases of non-compliance identified through internal oversight AAOİAŞ will ensure that corrective and preventive measures are promptly implemented in coordination with the Contractor (Limak) and relevant subcontractors.

All spill-related findings, including incident reports, non-compliance records, or complaints received from workers or community members, will be documented in accordance with national environmental regulations and Project plans. In the event of serious violations—such as significant releases of hazardous substances or repeated failure to implement mitigation measures—AAOİAŞ will ensure that the issue is reported to the competent authorities and that appropriate technical, procedural, and contractual actions are taken.

In cases of any medium and major spills will be reported immediately. All reporting will be conducted in accordance with the requirements of local and national authorities.

X. KEY PERFORMANCE INDICATORS

The following Key Performance Indicators (KPIs) will be monitored, verified, and evaluated.

Table X-1. Key Performance Indicators – Construction Phase KPIs

Monitoring Parameter / Performance Indicator	Target	Frequency	Responsible Party
Number of spill response trainings conducted	All personnel to receive training, 100%	Monthly	AAOİAŞ,EPC,
Number of non-compliances with applicable standards	Less than five	Monthly	AAOİAŞ, EPC,
Number of complaints related to spills	Less than five	Monthly	AAOİAŞ, EPC,
Compliance with Spill Response Management Plan procedures	Less than five deviations	Monthly	AAOİAŞ, EPC,
Contamination on soil and/or water	0 (zero)		AAOİAŞ, EPC
Number of spill drills	All personell to attendance drill,100%	Semi-annualy	AAOİAŞ, EPC

XI. AUDIT AND REVIEW

The implementation of this Plan should be regularly monitored and reviewed in accordance with the ESMMP. All environmental accident and spill-related incidents and non-conformities should be documented and reported as outlined in this Plan. Contractors and subcontractors should be subject to audits conducted by the SPV within the scope and schedule defined in the Contractor and Subcontractor Management Plan. These audits and the associated records should be managed in compliance with the Project's environmental management system and applicable regulatory requirements. Records to be reviewed during environmental audits will include, but are not limited to, incident and non-compliance records related to spills, spill response and investigation reports, training attendance logs for spill prevention and response, inspection and maintenance records of hazardous material storage areas, spill kit inventory checklists, and corrective action logs. Observations and deficiencies identified during audits should be recorded in formal audit reports, and all findings requiring improvement should be registered under corrective actions defined in Section VI. Project management will review audit outcomes and corrective action records, follow up on progress, and ensure that additional measures are implemented where necessary to ensure full compliance with national legislation, international standards, and Project-specific environmental requirements.

XII. REPORTING

Regular reporting will be conducted to ensure the effective implementation and continuous improvement of solid waste management activities throughout the construction phase of the Project. Reporting will be structured to address both internal monitoring and auditing outcomes, as well as external compliance obligations and stakeholder engagement requirements.

Based on monitoring results, necessary corrective and preventive actions will be identified, and the required updates will be incorporated into this Plan. The training program will also be revised accordingly to address any observed gaps. Regular audits and visual inspections will be conducted to verify that all activities are being undertaken in accordance with the provisions of this Plan.

Quarterly Environmental and Social Monitoring Report will cover at least, but not limited to, the following items. The report will be prepared by the SPV with input data provided by EPC to evaluate the Project performance and compliance of the related plans.

- Incident reporting;
- Emergency response reporting;
- Records of annual emergency response training exercises;
- KPIs and performance trends (see Table XII-1) ;
- Current situation Key Monitoring Activities (see Table XII-2)
- Relevant training activities completed and attendance registers to be maintained;
- Legal Authorities Audit reports;
- Site Inspection logs

In addition, the following external reporting will be done:

- All environmental and social incidents will be appropriately documented, notified and reported in accordance with established procedures the terms and conditions by EPC to SPV,
- Incident notification and reporting to relevant Turkish regulatory bodies will be performed in line with applicable legislation in force and as stipulated in permits and licenses.
- The Lenders will be notified of incidents pursuant to the terms and conditions agreed upon in the Finance Agreements through SPV.

All personnel are encouraged to raise concerns, suggestions, or complaints related to this Plan through the established grievance mechanism by completing the grievance form. The communication channels available for submitting grievances are outlined in the Stakeholder Engagement Plan.

WATER QUALITY, WASTEWATER AND STORM WATER MANAGEMENT PLAN

REVISION STATUS		
Revision Date	**Rev. No**	**Explanation**
01.03.2025	00	This plan is prepared according to TS EN ISO/IEC 9001:2015, TS EN ISO/IEC ISO 14001:2015, TS EN ISO/IEC 45001:2018 and IFC Performance Standards
23.05.2025	01	Revision as per comments
16.06.2025	02	Revision as per revision made under ESDD submitted by the Lender consultant
08.09.2025	03	Revision as per revision made under ESDD submitted by the Lender consultant

WATER QUALITY, WASTEWATER AND STORM WATER MANAGEMENT PLAN

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LIST OF ABBREVIATIONS

AAOİAŞ	Antalya-Alanya Otoyolu İnşaat Yatırım ve İşletme A.Ş.
BOD_5	Biological Oxygen Demand
CLO	Community Liaison Officer
COD	Chemical Oxygen Demand
DO	Dissolved Oxygen
E&S	Environmental and Social
EHS	Environmental, Health, and Safety
EPC	Engineering, Procurement and Construction (Limak İnşaat Şanayi ve Tic. A.Ş.)
ESIA	Environmental and Social Impact Assessment
ESMMP	Environmental and Social Management and Monitoring Plan
ESMS	Environmental and Social Management System
HSE	Health, Safety and Environment
KPIs	Key Performance Indicators
Limak	Limak İnşaat Şanayi ve Tic. A.Ş.
NH_4^+	Ammonium
NO_3^-	Nitrate
OHS	Occupational Health and Safety
o-PO_4^{3-}	Orthophosphate
SEP	Stakeholder Engagement Plan
SPV	Special Purpose Vehicle (Antalya-Alanya Otoyolu İnşaat Yatırım ve İşletme A.Ş.)
TKN	Total Kjeldahl Nitrogen
TN	Total Nitrogen
TP	Total Phosphorus

WATER QUALITY, WASTEWATER AND STORM WATER MANAGEMENT PLAN

I. INTRODUCTION

Ministry of Transport, and Infrastructure (former Ministry of Transport, Maritime Affairs and Communications), General Directorate of Highways ("KGM" or "the Administration"), as the owner of the Antalya-Alanya Motorway Project, has tendered for a contract in accordance with the Law on Implementation of Some of the Investments and Services in the Framework of Build, Operate and Transfer Model (Law No: 3996). Following the tendering process, KGM has awarded Antalya-Alanya Otoyolu İnşaat Yatırım ve İşletme A.Ş. (AAOİAŞ or the Project Sponsor) with a Build, Operate and Transfer (BOT) contract for the implementation of the Project. Accordingly, AAOİAŞ will be referred as Project Sponsor[1] in the scope of this report. The main contractor for the Project has been designated as Limak and will henceforth be referred to as the Contractor (or EPC).

The project is designed to connect the districts of Serik and Alanya via the Manavgat district of Antalya province. The Project will enhance the existing transportation network services with its surrounding provinces: Burdur, Muğla, Konya, Isparta, Karaman and Mersin. Various environmental, social, and technical studies have been conducted along the initial route of the Project tendered by the KGM. Based on these studies, the route was optimized, incorporating engineering practices and addressing environmental and social considerations, particularly issues of involuntary and economic resettlement, before being finalized. According to the most current design, the total length of the Motorway, which will be a dual carriageway of mostly 3 and partially 2 lanes (3x2 and 2x2) in each direction, is 117.8 kilometers including the main carriageway and the access roads[2].

This Water Quality, Watewater and Storm Water Plan ("Plan") has been prepared by Antalya-Alanya Highway Construction Investment and Operation Inc. ("AAOİAŞ" or "SPV") for the Antalya-Alanya Highway Project ("Project") in accordance with national legislation, the Equator Principles ("EP"), the International Finance Corporation ("IFC") Performance Standards ("PSs"), and the international standards that reference the relevant legislative sections. The Plan covers the construction phase of the Project.

I.1.Project Description

The Project starts at Serik Interchange (Km: 52+000) and then proceeds eastward, following the corridor at the foothills of the Taurus Mountains within the boundaries of Serik and Manavgat districts, ending at north of Konaklı neighborhood of Alanya District (Km: 136+000). From this point onwards, the route turns southward with a 2x2 lane connection road and connects to the D400 state road at the Alanya West Interchange. As of April 2025, the current Project design includes a total of 117.8 kilometers of road, comprising 84 kilometers of main road (motorway) and 33.8 kilometers of access roads.

The map showing the construction components and road route within the scope of the Project's construction activities is provided in *Figure I-1.*

[1] The BOT Contract uses the term "Appointed Company" to refer Project Sponsor

[2] It should be noted that the environmental and social baseline characterization, maps and scoping assessments provided in this report are based on the most current design

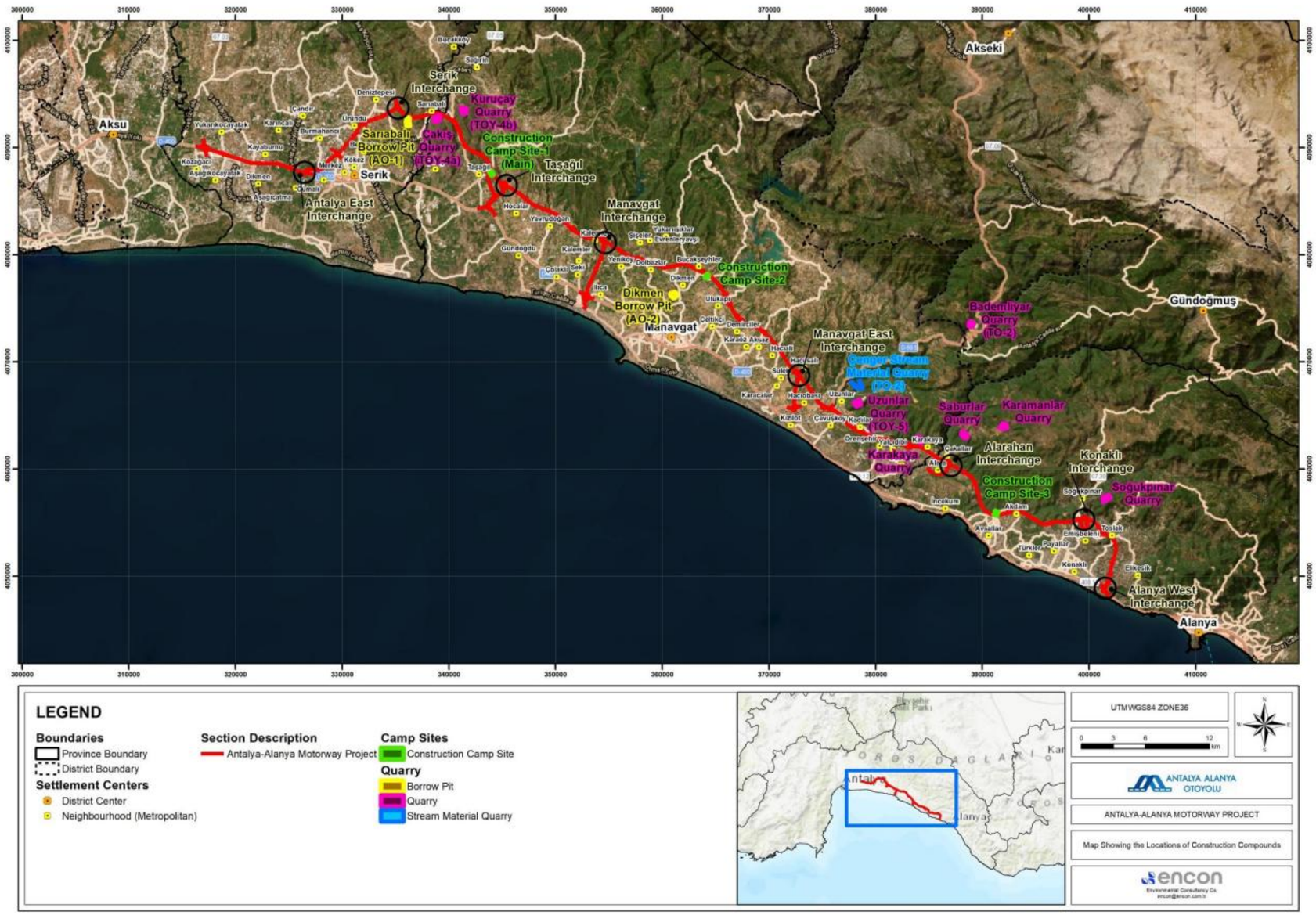


Figure I-1. Map Showing the Locations of Construction Compounds

Other structures to be built as part of the project are as follows:

- 16 viaducts,
- 22 bridges,
- 305 culverts,
- 25 interchanges,
- 56 overpasses,
- 43 underpasses, and
- 5 tunnels.

The activities to be carried out within the scope of the Project that are likely to have an impact on water resources are as follows:

- Excavation
- Soil stockpiling
- Quarry activities
- Plant and wheel washing
- Road construction
- Washing of finished road surfaces to remove accumulated soil

I.2. PURPOSE AND SCOPE

This Water Quality, Wastewater and Storm Water Management Plan ("the Plan") has been prepared for the Antalya-Alanya Motorway Project ("the Project").

The aim of this Plan is to establish effective procedures and control mechanisms for managing and monitoring water use, wastewater and storm water generated throughout the construction phase, including those arising from construction zones, maintenance areas, rest facilities, and toll booth operations. The Plan has been developed in line with relevant national legislation and international standards, including requirements set by international financial institutions.

This management plan is a living document developed with the best available information and will be reviewed and revised as necessary due to the nature of the construction and progress.

The ultimate responsibility for its implementation resides with AAOİAŞ, Limak and AAOAİŞ's sub-contractors & suppliers will be required to demonstrate compliance of their activities against this plan.

The Special Purpose Vehicle (SPV) (AAOİAŞ) will have the main role in monitoring of E&S performance of all project participants during implementation of works and services.

This Plan outlines procedures, responsibilities, and control measures that should be done to minimize adverse impacts on water resources, water consumption, safeguard water quality, and ensure environmentally sound wastewater and storm water handling. It serves as a guiding framework for identifying potential risks, implementing mitigation measures, and establishing monitoring protocols throughout construction activities.

The Plan should be adopted by all construction-phase stakeholders, including the Project Sponsor (Antalya-Alanya Otoyolu İnşaat Yatırım ve İşletme A.Ş. – AAOİAŞ), the Main Contractor (Limak), and all subcontractors. Each party should ensure compliance with the procedures defined in this Plan. Adequate training, infrastructure, source, equipment, and capacity should be provided to

ensure effective implementation. Regular reviews and updates should be conducted to reflect changes in design, construction approach, or applicable legislation.

During the construction phase of the Project, the following types of wastewater are expected to be generated:

- Black water (sewage) from flushable toilets and portable/chemical toilets;
- Grey water from sinks, showers, canteens and laundry facilities (at the worker camp);
- Other wastewater from equipment/vehicle washing, concrete washout, wastewater from concrete batch plants, Quarry and Material Extraction Activities deep excavation, blasting, blockage of permeable layers etc.; and
- 'Dirty' run-off water from impermeable surfaces (e.g. concrete paved areas).

This Plan covers the various aspects pertaining to the water consumption (uses, quantities, source and quality etc.) of water, the safe and environmentally acceptable handling, treatment and discharge of wastewater and management of ambient water quality during the Site construction and related humanitarian activities ("the Project Activities"). The following key objectives apply:

- Identify potential water sources
- Identify potential water users with the required quality and amount
- Identify potential sources of wastewater and any key risks to the environment;
- Identify and control key potential pollution risks;
- Cover both accidental and intended impacts on the aquatic environment;
- Identify and ensure that the relevant requirements of national and international standards are complied with during the project (i.e. IFC Performance Standards);
- Outline actions and measures necessary for the effective management of wastewater;
- Define measures to address potential pollution or contamination of the aquatic environment should this arise from the Project Activities or accidental incidents;
- Define the duties and responsibilities of the key personnel involved; and
- Ensure that the necessary equipment, training, capacity needs are known and provided to ensure efficient implementation of the plan.

II. LEGISLATIVE FRAMEWORK AND REFERENCE STANDARDS

The Plan has been structured to align with both national and international requirements, including legislation, guidelines, and sectoral standards that define permissible emission levels and water quality thresholds. Accordingly, the following sources of reference should be used to guide the implementation and compliance procedures:

II.1 National Requirements

The following Turkish laws and regulations should be used as the legal basis for managing water quality during construction:

- Environmental Law (Law No. 2872)
- Regulation on Control of Water Pollution,
- Regulation on Protection of Groundwater Against Pollution and Deterioration,
- Regulation on Surface Water Quality,
- Regulation on the Protection of Drinking Water Basins,
- Regulation on the Collection, Storage, and Discharge of Storm water Systems,
- Regulation on Urban Wastewater Treatment,

- Regulation on Wetland Conservation,
- Regulation on Drinking Water Intended for Human Consumption,
- Regulation on the Control of Pollution Caused by Hazardous Substances in Water and the Environment,
- Regulation on Waste Management,

- Regulation on Environmental Permit and License,
- Groundwater Law (Law No.167)
- Waste Water Treatment Plant Registration Certificate (Numbered 2015/06) and

II.2 International Standards and Conventions

To ensure responsible operations, AIIB adheres to policies addressing environmental and social impacts as outlined in its Environmental and Social Framework ("ESF") document. Updated in June 2024, the ESF reflects AIIB's commitment to international standards and sustainable development practices. The ESF includes the Environmental and Social Policy (ESP), which sets mandatory requirements for all projects, supported by Environmental and Social Standards ("ESSs"):

Moreover, the following standards, guidelines and directives should be used to align Project practices with international lender requirements and good practice environmental and social management:

- IFC Performance Standards (2012), specifically:
  - Performance Standard 3: Resource Efficiency and Pollution Prevention
  - Performance Standard 4: Community Health, Safety, and Security
- IFC Environmental, Health and Safety (EHS) General Guidelines (2007)
- IFC EHS Guidelines for Toll Roads (2007)
- IFC EHS Guidelines for Cement and Lime Manufacturing: Occupational Health and Safety (2007)
- IFC General EHS Guidelines: Wastewater and Ambient Water Quality
- IFC General EHS Guidelines: for Construction Materials Extraction Construction and Decommissioning
- Equator Principles IV (2020)
- EU Urban Wastewater Treatment Directive (2024/3019/EC)
- World Health Organization (WHO) Guidelines for Drinking-Water Quality (2022 and 2024)

These references should be used to guide the implementation, monitoring, and performance evaluation of water pollution and mitigation on-site throughout the construction phase.

II.3 Project Domestic Waste Water Standards

To determine the discharge limits for domestic wastewater, the limit values specified in national and applicable international standards are provided below (see Table II.1). It is stated in the IFC EHS General Guidelines, Wastewater and Ambient Water Quality document, "Compliance with national or local standards for sanitary wastewater discharges or, in their absence, the indicative guideline values applicable to sanitary wastewater discharges shown in Table 1.3.1". Accordingly, domestic wastewater discharge standards are determined as follows.

Table II.1 Project Discharge Standards for Domestic Wastewater

Parameter	Turkish Legal Requirement ([a])	IFC ([b])	Project Standards
Biochemical Oxygen Demand (BOD_5) (mg/L)	50	30	50
Chemical Oxygen Demand (COD) (mg/L)	160	125	160
Total Suspended Solids (TSS) (mg/L)	60	50	60
pH	6-9	6-9	6-9
Total Nitrogen (mg/L)	-	10	10
Total Phosphorus (mg/L)	-	2	2
Oil and Grease (mg/L)	-	10	10
Total Coliform Bacteria MPN([c])/100 ml	-	400	400

([a]) Water Pollution Control Regulation, Table 21.1 Domestic Wastewater Discharges (Class 1: BOD load 5-120 kg/day, Population: 84-2000)
([b]) Table 1.3.1-Indicative Values for Treated Sanitary Sewage Discharges, IFC Environmental, Health, and Safety General Guidelines, April 30, 2007.

III. Water Usage

III.1 Potential Water Sources

- The Project will supply water from groundwater and surface water resources. The water use of project activities would be planned to be limited and would be done only after getting relevant permissions from the authorities. Periodical potable water analysis will be conducted by independent parties according to relevant standards for human usage. In any case of noncompliance with parameters for potable water, appropriate water treatment facilities will be furnished to comply with relevant standards. Drinking water will be supplied as bottled water for all site areas. If water is to be procured through suppliers for usage purposes, the suppliers' water availability and capacity should be confirmed via official letters.

III.2 Potential water users with the required quality

- Considering that groundwater could be used as domestic water needs at campsite facilities the nearest groundwater resources were studied within the Project ESIA.

Table III.1 General Water Usage

Water User	Water consumption amount
Humanitarian	806.2 tons/day
Dust Suppression	26.4 m^3 /day

Table III.2 Water Consumption in Concrete Plants and Mechanical Plant Manufacturing

Motorway Km	Facilities Name	Area (m^2)	Maximum Hourly Capacity (m^3/h)	Water Consumption in Concrete Plants and Mechanical Plant Manufacturing (m^3)
55+450	Concrete Plant-1	13,946	140	66,667.05
59+400	Concrete Plant-2	66,450	140	81,020.94
	Mechanical Plant		550	73,601.07
	Asphalt Plant-1		240	-
80+400	Concrete Plant-3	15,000	140	56,391.94
87+700	Concrete Plant-4	42,371	140	42,943.78
	Mechanical Plant-2		550	64,216.74
	Asphalt Plant-2		240	-
89+700	Concrete Plant-4a	11,665	140	28,701.11
99+200	Concrete Plant-5	11,977	140	73,368.82
124+300	Concrete Plant-6	85,000	140	83,610.62
	Mechanical Plant-3		550	86,669.95
	Asphalt Plant-3		240	-
				-

IV. LINKAGE WITH OTHER PROJECT PLANS AND PROCEDURES

This Plan is supported by other management plans and procedures developed under the Environmental and Social Management System (ESMS) of the Project. The following plans and procedures are particularly relevant and should be implemented in coordination with the Water Quality, Wastewater and Storm water Management Plan:

- Solid Waste Management Plan
- Community Health and Safety Management Plan
- Hazardous Material Management Plan
- Construction Campsite Management Plan
- Environmental and Social Management and Monitoring Plan (ESMMP)
- Environmental Accident and Spill Response Management Plan

The effective integration of these plans should be ensured to maintain compliance with national regulations and international standards and to minimize the cumulative environmental and social impacts of construction activities.

V. ROLES AND RESPONSIBILITIES

Antalya Alanya Otoyol İnşaat Yatırım ve İşletme A.Ş. (SPV) as the Project Sponsor and Limak (EPC) as the main contractor of the Project will be responsible for the following:

General Manager (SPV):

-Define and implement the overall business strategy and direction of the SPV in alignment with stakeholder expectations.

- Ensure the provision of necessary resources and organizational support for the implementation of Water Quality, Wastewater and Stormwater Management Plan.

-Supervise and coordinate EPC contractors and subcontractors to ensure proper execution of construction phase.

-Support the E&S Manager in preparing, disseminating, and implementing this plan

E&S Manager (SPV):

-Review and ensure the preparation, revision, and implementation of the Plan in accordance with national laws, regulations, company policies, applicable international standards, and lender requirements.

-Ensure the development, revision, and execution of project-specific plan, including the Environmental and Social Management and Monitoring Plan (ESMMP), with a focus on water quality, wastewater, and stormwater.

-Monitor the environmental and social performance of EPC and subcontractors to ensure compliance with water-related requirements

H&S Manager (SPV):

- Ensure the conditions and obligations specified in health, safety, community, and water-related management plans are implemented and adhered to by EPC and subcontractors in accordance with company policies, regulatory obligations, international standards, and lender requirements.

-Ensure that all construction site activities impacting water resources are carried out safely by EPC and subcontractors.

Deputy E&S Manager (SPV):

-Lead the development, implementation, and continuous improvement of the Water Quality, Wastewater, and Stormwater Management Plan (WQWSMP).

-Review the ESHS documents of subcontractors and suppliers and ensure that they comply with the Project's water management requirements.

-Monitor performance through Key Performance Indicators (KPIs), reports, audits, and meetings related to water use, wastewater treatment, and stormwater management.

-Oversee incidents and non-compliances regarding water quality, wastewater, and stormwater, including investigations, corrective/preventive measures, and stakeholder communication.

-Support E&S Manager (SPV) in executive decision-making by providing timely reports and insights on water-related E&S performance, risks, and emerging trends.

-Lead community engagement strategies in collaboration with the Environmental Engineer and Social Chief to address concerns related to water supply, wastewater discharges, or stormwater impacts, and ensure effective grievance management and positive relations with project-affected communities.

-Ensure that EPC and subcontractors provide the necessary water-related training through the review of training records and relevant training documents.

Social Chief (SPV):

- Supervise and mentor CLOs, ensuring their work aligns with project priorities and the stakeholder engagement strategy, particularly regarding water use, wastewater management, and stormwater issues.

-Develop and implement work plans and schedules for the CLO team to ensure proactive communication with communities about water-related project impacts.

-Ensure that complaints regarding water quality, wastewater discharges, or stormwater management are recorded, processed, and resolved in a timely and transparent manner.

-Ensure accurate, timely, and complete reporting of CLO activities, stakeholder interactions, and grievance outcomes related to water issues, and inform the Deputy E&S Manager about the complaints. Coordinate the assessment and resolution of grievances with the EPC team.

-Coordinate with the Deputy E&S Manager, CLOs, Environmental Engineer, and construction teams to address community-related impacts on water resources and stormwater systems.

Project Director (EPC):

-Define and oversee the implementation of the overall EPC execution strategy in alignment with contract objectives and company standards.

-Lead interdisciplinary project teams, coordinating EPC functions to achieve key milestones.

-In case of non-compliance regarding to air quality, ensure appropriate corrective and preventive actions are taken in coordination with the E&S Manager and H&S Manager

E&S Manager (EPC):

- Coordinate with the SPV's E&S Manager to ensure alignment on water quality, wastewater, and stormwater management requirements, including compliance audits, reporting, and corrective action follow-ups.

-Implement water protection measures through site practices, method statements, and construction activity planning.

-Monitor compliance of EPC and subcontractors with The Plan requirements, including proper handling, treatment, and discharge of wastewater.

-Ensure all water consumption on-site (drinking, sanitation, dust suppression, concrete production) follows the approved permits, quality standards, and project-specific limitations.

-Supervise the operation and maintenance of temporary and permanent WWTP, ensuring treated effluent meets regulatory and project standards.

-Support water quality monitoring programs, including routine inspections, sampling, and measurement of key water parameters.

-Identify, report, and manage water-related incidents, spills, or non-compliances, and coordinate corrective and preventive actions with site teams and SPV.

-Provide guidance and training to site personnel on The Plan implementation, including safe wastewater handling, stormwater management, and pollution prevention measures.

-Ensure that documentation, records, and reporting for water quality, wastewater, and stormwater management are accurate, complete, and readily available for audits or inspections.

-Incorporate lessons learned, site observations, and regulatory updates into ongoing The Plan updates and improvements.

H&S Manager (EPC):

-Integrate water, wastewater, and stormwater management measures into site risk registers and method statements.

-Supervise Contractors/Subcontractors to implement water management measures and monitor compliance.

-Coordinate with SPV H&S Manager on water-related incidents and risks.

Line Manager:

- Oversee daily watering, dust suppression, and other measures to control runoff and sediment.

-Monitor the condition and maintenance of site equipment and vehicles to prevent leaks or spills.

-Ensure proper operation and maintenance of temporary treatment facilities, drains, and sediment controls.

Environmental Engineer (SPV and EPC):

- Conduct routine inspections of water handling systems, drainage networks, and temporary treatment facilities.
- Maintain accurate records of water use, wastewater discharge, stormwater management, and monitoring results.
- Support training, toolbox talks, and awareness sessions for site personnel on proper water management practices.
- Coordinate with EPC and SPV E&S Managers to report non-compliances, incidents, or environmental risks.
- Liaise with external laboratories, regulators, and consultants for water quality monitoring and reporting.
- Assist in the preparation of environmental performance reports, including corrective and preventive actions.
- Ensure that subcontractors implement water management measures and comply with The Plan obligations.
- Support continuous improvement of The Plan based on field observations, monitoring results, and lessons learned.

Community Liaison Officer (CLO)(SPV and EPC):

- Inform project-affected communities about construction activities, including potential impacts on water quality, wastewater, and stormwater management.

-Log, track, and follow up on community complaints or grievances related to water pollution, wastewater discharge, or stormwater issues, ensuring timely resolution via the Grievance Mechanism (GM).

-Support monitoring and documentation of WQWSMP implementation at site level, including subcontractor activities that may affect water resources or wastewater handling.

-Facilitate equitable community engagement and consultations, ensuring vulnerable or sensitive groups are informed about water-related impacts.

-Coordinate with E&S Manager and other project teams to integrate community feedback into WQWSMP updates and corrective actions.

VI. WATER QUALITY, WASTEWATER AND STORM WATER MANAGEMENT APPROACH

The Antalya Basin, within which the Project is located, is one of Türkiye's richest regions in terms of water resources, with a usable water potential of 12,283.44 hm³. A total of 155 surface water bodies have been identified in the Antalya Basin, including 109 rivers, 32 lakes, 11 transitional water bodies, and 3 coastal water bodies.[3] Accordingly, water quality risks related to Project activities will be managed with particular sensitivity, given the ecological importance and diversity of these resources.

Among the major rivers and streams in proximity to the Project corridor are Köprüçay Stream, Manavgat River, Alara (Ulugüney) Stream, and Karpuz Stream. These water bodies are already under pressure from point and diffuse sources such as domestic wastewater, tourism facilities, agriculture, fish farming, and sand and gravel extraction. Table V.1 below summarizes these pressure factors and their types based on regional water protection studies.

Table VI.1 Pressures and Impacts on Rivers/Streams on the Route

River name	Pressure Factor	Pressure Type
Köprüçay Stream	Domestic Wastewater Discharges Tourism Facilities Fish Farms	Point, Diffused
Manavgat River	Domestic Wastewater Discharges Agriculture Activities	Point, Diffused
Alara (Ulugüney) Stream	Pollutants from agricultural activities Water use for agricultural purposes	Diffused
Karpuz Stream	Sand and gravel purchase	Diffused

Given these existing pressures, it is critical that all project-related activities are planned and executed in a way that prevents further deterioration of these already sensitive and impacted water bodies. In this context, the following sections outline the overall approach of the Project to the management of water, wastewater and storm water during the construction phase, in line with applicable environmental standards and best practices.

Water-related impacts associated with motorway projects primarily involve the generation and management of wastewater, storm water runoff, and potential risks to both surface and groundwater quality. During the land preparation and construction activities, wastewater will be generated from construction sites and accommodation facilities for workers (campsite, kitchen, cafeteria, etc.).

Throughout the project construction phase, package WWTPs will be used for domestic wastewater management during construction phase of the Project. In addition, impermeable septic tanks also will be utilized at the campsites, if/when necessary. Although it is accepted that 1,100 people are planned to work in a campsite during the construction period of the project, each package WWTP will have a capacity equivalent to the maximum number of people, 1,250 people (including personnel of contractor and sub-contractors).

[3] *MoEUCC, April 2024, River Basin Management Plan Strategic Environmental Assessment Scoping Report*

The basic approach will be to reuse the wastewater generated by project activities in the activity cycle during construction. This approach will not require any water discharge to environmental media. Especially for the reuse of wastewater generated in concrete batching plants, three-compartment settling ponds will be constructed. In order to reuse the water used during vehicle washing operations, vehicle washing stations will be established and the necessary settlement pools and installations will be constructed for the reuse of water at these stations.

Treated wastewater will be analyzed to ensure compliance with relevant quality limit as defined in regulatory frameworks. The Project's approach to water management focuses on minimizing adverse environmental impacts and ensuring that all discharges meet established regulatory thresholds.

To prevent or minimize the environmental consequences of spills, proactive strategies should be implemented. These include proper handling, storage, and transportation of hazardous substances, the provision of appropriate containment infrastructure, and a roof for large-scale chemical storage areas and waste storage areas to prevent stormwater contamination. The robust emergency response and remediation procedures are systematically applied throughout construction activities.

Additionally, the completed motorway structure will increase impermeable surface area, leading to elevated surface runoff rates. This may result in erosion, localized flooding, and increased water flow in receiving bodies, especially during periods of heavy rainfall. Infrastructure components such as bridges, culverts, and diversion channels may alter natural water flows and cause localized increases in upstream water levels during flood events.

The construction of viaducts, bridges, and culverts may temporarily alter the hydrological regime, leading to effects such as scour, erosion, and sediment deposition in riverbeds and banks. Improper design and installation of temporary structures (e.g., culverts or roadways) may further exacerbate such impacts by disrupting natural stream flows. Measures will be taken to ensure that surface water management complies with national and international standards, mitigating both temporary and permanent risks.

Groundwater resources may also be at risk, particularly in areas with shallow overburden, where accidental discharges of hazardous substances could contaminate aquifers. Construction activities such as site clearance, earthworks, vehicle refueling, and wastewater discharge (both sanitary and industrial) pose potential threats to groundwater quality if not properly managed. Some excavation works may require groundwater dewatering, which could have implications for local aquifer levels. Additionally, earthworks in bedrock or shallow overburden areas may lead to blockage of fissure permeability by infiltrating fines or sediments.

The increase in impermeable surface area will raise runoff rates, and high storm water flows may cause erosion and flooding. During flood events, infrastructure elements like bridges and culverts may impede water flow, resulting in increased upstream water levels. Accordingly, mitigation measures will be developed and implemented to manage drainage and flooding risks throughout the construction phase.

VII. MITIGATION MEASURES FOR IMPACTS ON WATER QUALITY and CONSUMPTION

This Plan focuses exclusively on measures applicable to the construction phase. The following measures should be implemented to manage wastewater, control storm water, minimize sedimentation and pollution, and protect both surface and groundwater resources during construction activities.

General Implementations

- No direct discharge of wastewater or water containing waste to the environment is permitted unless legally allowed and allowed by Project Standards (See Section I) and in this case all wastewater discharges (all domestic) from all construction components must comply with all relevant legal requirements;
- During site planning and arrangement, the potential wastewater sources from camp/site and facilities, and quarries will be defined;
- All wastewater discharges must comply with relevant Turkish legal requirements (Water Pollution Control Regulation 2004, No. 25687) and Project Standards before disposal, and relevant permits and monitoring shall be in place
- The AAOİAŞ will have responsibility for the full chain of custody and will retain original invoices for any and all wastewater collection and disposal by third-party service providers;
- All appropriate permits need to be sought by AAOİAŞ from the local authorities; notifications filed, and discharges need to be made within the conditions of the permit; conditions;
- Precautionary measures must be taken to minimize possible impacts to surface water infrastructure. Any damage caused to surface water infrastructure such as supply systems, irrigation systems, flood defenses and drainage ditches must be rectified by the AAOİAŞ;
- All construction equipment, vehicles and plant will be cleaned away from surface waters and wash water captured for reuse or treatment off site (only authorized discharge to permitted standards of treated wastewater to be allowed as per local permit/license conditions);
- All facilities and structures will be regularly inspected and maintained to ensure proper and efficient operation at all times.

Domestic Wastewater

- Depending on the availability of wastewater treatment facilities, these sources can be connected to the local sewerage system where possible;
- Wastewater from all construction compounds and the associated buildings will either be discharged into the local/municipal sewage network or treated on site before discharge to a suitable receiving environment (as allowed for under permit conditions) or collected on site and transported by tanker for disposal at the local sewage treatment works;
- Where wastewater is to be produced and treated at camp sites, this will be treated via a suitable wastewater treatment plant system, to comply with the limit values for wastewater quality given in IFC General Environmental, Health and Safety Guidelines and/or the "Average Discharge Standards to Receiving Environment for Domestic Waste Water" given in "Regulation on Water Pollution Control (RWPC)" numbered 25687 and dated 31.12.2004, whichever standard is strictest will be followed;
- For onsite wastewater treatment plants/units, an approval will be obtained as per Wastewater Treatment/Deep Sea Discharge Project Approval Circular dated 04.03.2014 and numbered 2014/07;
- Additionally, a wastewater discharge permit according to the provisions of the "Environmental Permit and License Regulation" (Official Gazette: 10.09.2014-29115) will be secured before operation of the plant;
- Permit Register was established and permits will be tracking.
- Wastewater accumulated in the septic tank on site will be transported to packaged wastewater treatment plants using vacuum trucks.
- AAOAİŞ will retain a licensed and approved management service for the collection and transportation of wastewater generated and temporarily stored onsite in conservancy tanks, to be transported to a licensed treatment/disposal facility;

- All wastewater produced during construction activities will be temporarily stored on site in suitable, leakage-proof and spill-proof above-ground storage tanks or similar containers based on available technology (non-corrosive and suitable for storing wastewater) and periodically collected by licensed companies appointed by AAOAİŞ and trucked to appropriate and licensed wastewater treatment/disposal facility authorized according to national regulations;
- Portable chemical toilets will be provided during construction as necessary and will be maintained and serviced by an external contracted service provider on a regular basis;
- The AAOİAŞ will appoint local authorized transport companies to collect and transport all sewage and grey water to offsite facilities as well as any other wastewater under its responsibility.
- Rain water harvesting/recovery off of rooftops for example, for domestic use (e.g. for toilet flushing/washing, soil wetting, etc.) is permitted;
- AAOİAŞ will implement technically and financially feasible and cost-effective measures for improving efficiency in its consumption of water, with a focus on areas that are considered core business activities (where benchmarking data are available, a comparison to establish the relative level of efficiency will be made).

Waste Water Treatment Plant (WWTP) Maintenance

Maintenance intervals may be shortened based on the results of the previous maintenance and the characteristics and quantity of the wastewater.

General cleaning and maintenance

- Regarding general cleaning and maintenance: the environmental engineer on site will check daily for leaks, and the maintenance staff will check the pump, motor, etc. monthly. In addition, the company that installed the treatment system will check it annually.
- This interval may be shortened depending on the pollution and density of the incoming water.
- No chemicals that may damage the system equipment should be used during cleaning.
- If the pumps remain unused for a long time, the suction and discharge lines should be checked before operation, and the pump should be dismantled, cleaned, and then operated.
- The accumulation of dirt or residue inside the pump must be prevented; no residue or debris should be left inside the pump.
- For cleaning the manometer, Solvents and chemicals that could damage the acrylic material should not be used. It should be cleaned using only water and soap.

Routine Inspection and Maintenance

Whenever routine inspections are performed, the following steps should be followed:

- Electrical cable connections should be checked.
- Check for any abnormal noise or vibration.
- Check for any leakage in the pump and pipeline.
- Check for any corrosion on the pump or its components.

The following checks should be performed every three months in accordance with the instructions below:

- Connections should be inspected.
- O-rings and gaskets should be checked to ensure that there are no leaks.

Yearly Inspection and Maintenance

- Pump capacity is checked (as specified on the equipment nameplate).
- Pump pressure is checked (as specified on the equipment nameplate).
- Pump power is checked (as specified on the equipment nameplate).

If the system requirements have not changed and the discharge or wastewater pump performance does not meet the process needs, follow the instructions below. Same control and steps will be followed up for the aeration and disinfection pump etc.

1. Remove the pump from its installation location.
2. Inspect the pump.
3. Replace any worn-out parts.

In addition to general risks during operation, there are specific risks associated with the characteristics of this system.
The system may create conditions that adversely affect human health, particularly due to chemical (such as chlorine) and electrical hazards. To minimize these risks, attention should be paid to the following points:

- Considering the possibility of exposure to chemicals, appropriate protective clothing and equipment must be used during chemical refilling, equipment inspection, or any work involving the container.
- Individuals other than authorized personnel must not interfere with the facility, especially the dosing system, and must not be allowed to climb onto the tank under any circumstances.
- No intervention should be made inside the electrical panel without the knowledge and approval of the manufacturer.

Industrial Wastewater (Sourced from Concrete Batch Plants)

- To reuse of wastewater generated in concrete batching plants, three-compartment settling ponds that each compartment will be 1 m depth, 2 m width and 3 m length should be constructed The sedimentation amount in the sedimentation tanks will be monitored through daily inspections and cleaned according to the fill level... In order to reuse the water used during vehicle washing operations, vehicle washing stations will be established and the necessary pools and installations should be constructed for the reuse of water at these stations.
- No washing out of any plant used in concrete transport or concreting operations will be allowed on-site unless this wash-water is directed to a dirty water collection and treatment system or stored for approved reuse on site;
- No discharge of cement contaminated waters to the construction phase drainage system or directly to any natural watercourse will be allowed;
- Any water containing cement-based products that cannot be reused or recycled on site must be collected within a suitable wastewater collection system and then transported by tanker offsite for treatment and disposal at a reputable and licensed facility;

- Following completion of the concrete works, water contained within the washout sump of the concrete batch plant will need to be pumped to a tanker and removed from site to a licensed waste facility and the washout area will then be cleared and fully reinstated.

Mitigation Measures for Surface and Groundwater Quality

- In the selection of temporary storage sites for oil, fuel and chemicals, the location of the water resources will be taken into consideration. Handling of all hazardous materials will be supervised. Impervious bunds and other containment techniques will be used where hazardous materials are handled.
- Waste oils will be stored in tanks/containers located on impervious surfaces.
- Secondary containment will be provided (on concrete surfaces) for all the storage tanks/barrels containing chemicals including diesel fuels or hazardous liquid wastes. Absorbents will be kept available at storage sites, if necessary. The volume of containment structures allocated for the storage of fuel, oil or other chemicals will be sufficiently greater than the volume of contained liquid.
- Fueling of equipment and vehicles will not be conducted within excavated areas. Equipment and vehicles will get their fuels at designated areas.
- Hazardous materials will not be stored within excavated areas. Supervision will be used during the handling of all hazardous materials. Impervious bunds and other containment techniques will be used where hazardous materials are handled.
- All wastewater discharges from all components of the construction must comply with relevant legal requirements. Treated water will be reused for planting purposes where possible and feasible. When water quality criteria allow, storm water will be managed as a resource for meeting the Project's water needs whenever feasible.
- For facilities with a small number of workers where a treatment plant is not feasible, septic tanks will be used, and these tanks will be frequently emptied by vacuum trucks.
- The disposal of the wastewater collected by the vacuum trucks will be carried out at appropriate district municipal treatment facilities under a contractual agreement. The frequency of vacuum truck wastewater removal will be recorded.
- Quarry pond dredging activities will be designed and implemented in material quarries to minimize drawdown with consideration of potential impacts to surface and groundwater resource flow and availability.
- When water quality criteria allow, storm water also will be managed as a resource for meeting water needs of the Project whenever feasible.
- Before discharging according to relevant legal requirements, drainage from excavations will be collected and treated to remove contaminants. Perimeter drains will be constructed around all working areas to collect potentially contaminated run-off and direct it to a system of settlement tanks before discharge in accordance with required permits. Layout of the drainage networks designed in the project components are provided in *Appendix A. (*For illustration purposes, the water and sewerline layout of the Manavgat 2nd Camp Site has been included.)
- Direct discharge of contaminated run-off from work sites will not be allowed.
- In order to provide direct run-off to the collection system; channels, bunds and sandbag barriers will be used.
- In order to keep roads and other surfaces clear of dust, sweeping will be used rather than washing.
- In order to ensure a proper and efficient construction process, maintenance and inspection of all facilities and structures will be done regularly; especially heavy rainfall. Sediment deposits will be regularly removed and disposed of either by spreading on site (if uncontaminated) or at a suitably licensed facility.
- High sediment generating activities such as road paving will be avoided and exposed surfaces and stored materials covered if necessary to reduce erosion of sediments into surface waters.

- During construction, an Emergency Preparedness and Response Plan will be implemented for any spills and leakages.
- Exposure to areas of open ground will be kept minimum in size and duration.
- The regular cleaning, maintenance, and inspection of package wastewater treatment plants will be ensured.
- The pipeline from the wastewater source to the package wastewater treatment plant will be robust enough to withstand heavy vehicle loads. This will prevent blockages and/or leaks.

Mitigation Measures for Surface Water Bodies and Channels

- Whenever and wherever possible; construction of bridges, viaducts, retaining walls and other structures will be carried out during lean water season months.
- Fencing will be used at sensitive areas of rivers and drains for protection.
- Isolation techniques such as beaming or diversion during construction to limit the exposure of disturbed sediments to moving water will be used during in-stream works.
- In order to protect small drains within the construction areas, they will be covered with metal plates which can be passed over by construction machines.
- For Stream crossings the work will be carried out from the banks above the channel and avoiding direct intervention in the watercourse unless the existing bank reinforcement needs to be replaced. The works will be undertaken during periods of low flow. Duration of in-stream activities will also be restricted.
- Use of grass turf from adjacent areas to cover the soil surface, use of erosion control blankets or mats and other relevant soil erosion prevention measures will be implemented after the finalization of earthwork.

Mitigation Measures for Water Ingress into the Tunnels

- The expected volume of water ingress into the tunnels will be calculated prior to the layout of construction sites being defined.
- Tunnel water settlement ponds will be conservatively sized taking that calculation and best practice guidance on settlement pond sizing into account.
- Mitigation to avoid cement contamination of tunnel waters will be defined and detailed. The waters coming out of tunnels will be diverted to sedimentation ponds adequately sized for receiving the whole flow.
- After sedimentation ponds, in accordance with the measured parameters, the effluent will be discharged if the limits are met.

Mitigation on water usage amount

- During the land preparation and construction activities, wastewater will be generated from construction sites and accommodation facilities for workers (campsite, kitchen, cafeteria, etc.). The basic approach will be to reuse the wastewater generated by project activities in the activity cycle during construction. This approach will not require any water discharge to environmental media. Especially for the reuse of wastewater generated in concrete batching plants, three-compartment settling ponds will be constructed. In order to reuse the water used during vehicle washing operations, vehicle washing stations will be established and the necessary pools and installations will be constructed for the reuse of water at these stations. It is planned to reuse treated water to prevent dusting. Water used in concrete plants will be filtered in watertight sedimentation ponds and reused. These ponds will be frequently cleaned by the responsible person(s) according to the plan, thus preventing overflow.

- A separate vehicle washing station will be established, and the used water will be reused after passing through a sedimentation pond. The cleaning of the sediment that accumulates at the bottom of this pond will be scheduled.

The Project Sponsor (AAOİAŞ) is responsible for overseeing wastewater and storm water management in line with national regulations. The Environmental Department of the Contractor is responsible for on-site implementation, supervision, and inspection of mitigation measures. Compliance with all legal requirements related to water management should be ensured throughout the construction phase.

VIII. TRAINING

Upon hiring, all staff will receive structured training on potential environmental and social impacts relevant to their roles, including the sources, consequences, and associated risks (e.g., emissions, pollution, noise, vibration, waste, or safety hazards), as well as the corresponding mitigation measures applicable to their responsibilities (e.g., proper use of protective equipment, safe operation of machinery, implementation of control measures). In addition, personnel assigned to monitoring activities will be provided with specialized training to ensure accurate, effective, and compliant performance of their duties.

IX. MONITORING

A structured internal monitoring program will be implemented to assess the effectiveness of water quality mitigation measures outlined in this Plan during the construction phase of the Project. The scope and frequency of monitoring activities will be periodically reviewed and revised where necessary, based on site-specific conditions, water quality trends, stakeholder concerns, or changes in applicable environmental regulations.

Monitoring activities will be coordinated by the E&S Manager, in close collaboration with the E&S team and Construction Management teams. Key responsibilities will include verifying the implementation of water pollution prevention practices, monitoring wastewater discharge points, evaluating the maintenance status of wastewater treatment systems, and ensuring the consistent application of mitigation measures near sensitive water bodies such as streams, wetlands, and groundwater recharge zones.

Regular water quality monitoring will be conducted at designated locations across all worksites to evaluate compliance with national surface and groundwater quality standards and Project-specific discharge limits. This will include the measurement of key parameters such as pH, COD, BOD, TSS, oil and grease, and heavy metals, as well as visual inspections of discharge outlets and checks on containment systems for fuel and chemical storage.

The performance of contractors and subcontractors in implementing water quality management requirements will be reviewed through environmental audits, site supervision reports, and field observations. Any identified non-conformities will trigger timely corrective and preventive action plans. Monitoring will also include follow-up assessments to confirm the effectiveness of implemented measures and to ensure recurrence is prevented.

In addition to internal monitoring, inspections may be carried out by relevant public institutions, including the Ministry of Environment, Urbanization and Climate Change, in accordance with Turkish legislation. The frequency and scope of these inspections will be determined by the authorities and may

include review of monitoring data, on-site water pollution control practices, and documentation of compliance.

Monitoring efforts will be guided by the framework provided in Table VIII.1, which outlines the parameters to be monitored, the corresponding monitoring locations, frequency of measurements, and responsible parties. These monitoring activities will be essential for evaluating the effectiveness of water quality mitigation measures and ensuring full compliance with national regulations and Project standards.

Table IX.1 Key Monitoring Activities

Parameter	Monitoring Station / Location	Monitoring Method	Monitoring Frequency	Responsible Parties
suppliers' water availability and capacity	Project office	Document review	Monthly	AAOİAŞ,EPC
Discharge water analysis (BOD, COD, TSS, pH, Total Nitrogen, Total Phosphorus, Oil and Grease, Total Coliform Bacteria	Camp Sites(Km 64+500, Km 87+800, Km 124+300)	Water quality sampling, laboratory analyses	*In the period to be specified in the environmental permit	AAOİAŞ,EPC, Accredited Laboratories
Sources and amount of water supply;	Project Office; Camp Sites	Document review	Monthly	AAOİAŞ,EPC,
Water supply permit from surface and groundwater	Project Office	Document review	Monthly	AAOİAŞ,EPC
Environmental permits, wastewater disposal agreements, channel connection permits, treatment plant capacity, discharge volumes	Package domestic wastewater treatment plants	Document review	Quarterly	AAOİAŞ,EPC,
Water quality	Water supply point for humanitarian usage	Water quality sampling, laboratory analyses	Quarterly	AAOİAŞ,EPC, Community Health Laboratory
Wastewater management practices at concrete plants	Camp Sites; Concrete Plant locations	Site audit; document review	Quarterly	AAOİAŞ,EPC,
Waste water treatment plant maintenance and inspection records	Project Office	Document review	Quarterly	AAOİAŞ,EPC
Baseline monitoring surface and ground water quality measurement (Table 5, the Annex.5 of Regulation on Surface Water Quality, and IFC EHS Guideline Environmental Waste water and Ambient Water Quality)	ESIA baseline sampling points	Laboratory analyses	Annualy	AAOİAŞ, EPC
Kaymazboğazı Stream	Receiving water bodies for treated wastewater discharges	Laboratory analyses	Quarterly	AAOİAŞ, EPC
(WWTP) Maintenance	WWTPs (Camp Sites(Km 64+500, Km 87+800, Km 124+300))	as per the Plan relevant part	Daily, weekly, annually	AAOİAŞ, EPC

In cases of non-compliance identified through internal oversight or external audits, AAOİAŞ will ensure that corrective and preventive measures are promptly implemented in coordination with the Contractor (Limak) and relevant subcontractors.

All water quality-related findings, including exceedance of limit values, non-compliance incidents, or complaints received from surrounding communities, will be documented in accordance with national environmental regulations and Project procedures. In the event of serious violations—such as significant exceedance of discharge limits or pollution of natural water bodies—AAOİAŞ will ensure that the issue is reported to the competent authorities and that appropriate technical, procedural, and contractual actions are taken.

X. KEY PERFORMANCE INDICATORS

The following Key Performance Indicators (KPIs) will be monitored, verified, and evaluated.

Table X.1 Key Performance Indicators – Construction Phase KPIs

Monitoring Parameter / Performance Indicator	Target	Frequency	Responsible Party
Implementation of Wastewater Management Plan and performance monitoring	Proper management of wastewater in accordance with the plan	Monthly	AAOİAŞ EPC Environmental Engineer
Obtained of all obtained and valid permits for waste water discharge and water supply	Obtaining necessary permits for all treated discharges	Annually	AAOİAŞ, EPC Environmental Engineer
Fulfillment of wastewater discharge standards	Compliance with discharge standards	Monthly	AAOİAŞ, EPC Environmental EngineerAccredited Laboratories
Zero illegal discharges to receiving environment	Zero illegal wastewater discharge to receiving environment	Monthly	AAOİAŞ,EPC Environmental Engineer
Zero - medium spill/pollution incidents	Zero spill/pollution incidents	Monthly	AAOİAŞ,EPC Environmental Engineer
No water pollution detected in surface or groundwater through sampling and testing	Proper management of any identified water pollution	Monthly	AAOİAŞ,EPC Environmental EngineerAccredited Laboratories
Full compliance with relevant procedural and plan requirements	Prevention of pollution from plants and operations	Monthly	AAOİAŞ, EPC Environmental Engineer
All records maintained and kept up to date	Recordkeeping of off-site wastewater transfers	Quarterly	AAOİAŞ,EPC Environmental Engineer
Provision of general (and where necessary, specialized) training to relevant staff	Provision of relevant training to employees	Monthly	AAOİAŞ,EPC Environmental Engineer
Complaints related to water quality	Less than five	Monthly	AAOİAŞ, EPC Environmental Engineer

XI. AUDIT AND REVIEW

The implementation of this Plan should be regularly monitored and reviewed in accordance with the ESMMP. Incidents and non-conformities related to water supply, wastewater discharge, and rainwater will be documented and reported as specified in the plan. Contractors and subcontractors should be subject to audits conducted by the Project Sponsor within the scope and schedule defined in the Contractor and Subcontractor Management Plan. These audits and the associated records should be managed in compliance with the Project's established plans and procedures. Relevant records that should be reviewed during audits may include the external grievance and suggestion tracking database, internal grievance and suggestion tracking database, training records, non-conformity records, water sampling and analysis reports, wastewater discharge logs, storm water management inspection checklists, and environmental permit documentation related to water use and discharge. Observations and deficiencies identified during audits should be recorded in formal audit reports, and all findings requiring improvement should be registered under Corrective Actions. Project management should

review audit outcomes and corrective action records, follow up on progress, and ensure that additional measures are implemented where necessary.

XII. REPORTING

Regular reporting will be conducted to ensure the effective implementation and continuous improvement of solid waste management activities throughout the construction phase of the Project. Reporting will be structured to address both internal monitoring and auditing outcomes, as well as external compliance obligations and stakeholder engagement requirements.

Based on monitoring results, necessary corrective and preventive actions will be identified, and the required updates will be incorporated into this Plan. The training program will also be revised accordingly to address any observed gaps. Regular audits and visual inspections will be conducted to verify that all activities are being undertaken in accordance with the provisions of this Plan.

Quarterly Environmental and Social Monitoring Report will cover at least, but not limited to, the following items. The report will be prepared by the SPV with input data provided by EPC to evaluate the Project performance and compliance of the related plans.

- Incident reporting;
- Emergency response reporting;
- Records of annual emergency response training exercises;
- KPIs and performance trends (see Table XII.1) ;
- Current situation Key Monitoring Activities (see Table XII.2)
- Relevant training activities completed and attendance registers to be maintained;
- Legal Authorities Audit reports;
- Site Inspection logs

In addition, the following external reporting will be done:

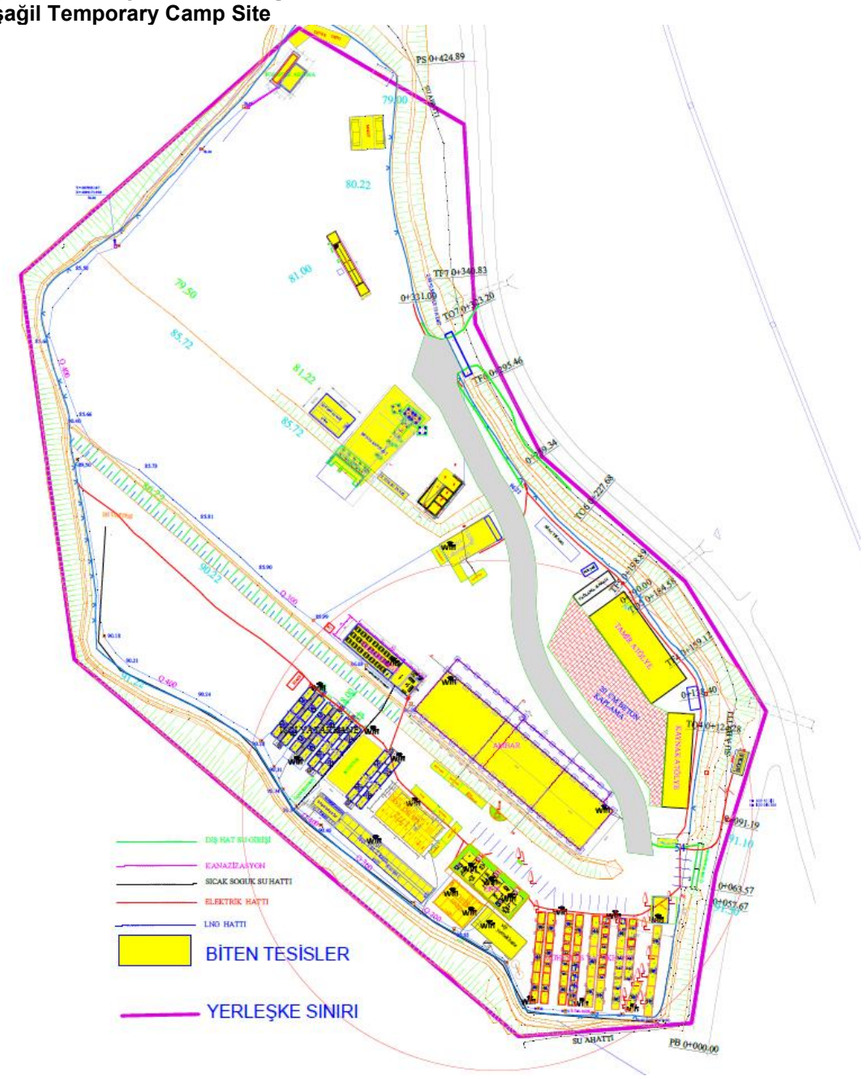
- All environmental and social incidents will be appropriately documented, notified and reported in accordance with established procedures the terms and conditions by EPC to SPV,
- Incident notification and reporting to relevant Turkish regulatory bodies will be performed in line with applicable legislation in force and as stipulated in permits and licenses.
- The Lenders will be notified of incidents pursuant to the terms and conditions agreed upon in the Finance Agreements through SPV.

All personnel are encouraged to raise concerns, suggestions, or complaints related to this Plan through the established grievance mechanism by completing the grievance form. The communication channels available for submitting grievances are outlined in the Stakeholder Engagement Plan.

XIII. APPENDICES

Appendix A: Layout of Drainage Network of Camp Sites (which are under usage)

Appendix-A: Layout of Drainage Network
Taşağil Temporary Camp Site



Manavgat Camp Site

ANTALYA-ALANYA MOTORWAY PROJECT

Revision No:3
.

Date: 08.09.2025

NOISE and VIBRATION MANAGEMENT PLAN

REVISION STATUS		
Revision Date	**Rev. No**	**Explanation**
01.03.2025	00	This plan is prepared according to TS EN ISO/IEC 9001:2015, TS EN ISO/IEC ISO 14001:2015, TS EN ISO/IEC 45001:2018 and IFC Performance Standards
23.05.2025	01	Revision as per comments
16.06.2025	02	Revision as per revision made under ESDD submitted by the Lender consultant
08.09.2025	03	Revision as per revision made under ESDD submitted by the Lender consultant

NOISE and VIBRATION MANAGEMENT PLAN

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LIST OF ABBREVIATIONS

AAOİAŞ	Antalya-Alanya Otoyolu İnşaat Yatırım ve İşletme A.Ş.
CLO	Community Liaison Officer
E&S	Environmental and Social
EHS	Environmental, Health and Safety
EPC	Engineering, Procurement and Construction (Limak İnşaat Şanayi ve Tic. A.Ş.)
ESIA	Environmental and Social Impact Assessment
ESMMP	Environmental and Social Management and Monitoring Plan
ESMS	Environmental and Social Management System
IFC	International Finance Corporation
KPIs	Key Performance Indicators
Limak	Limak İnşaat Şanayi ve Tic. A.Ş.
OHS	Occupational Health and Safety
RCA	Root Cause Analysis
SPV	Special Purpose Vehicle (Antalya-Alanya Otoyolu İnşaat Yatırım ve İşletme A.Ş.)
WHO	World Health Organization

I. INTRODUCTION

Ministry of Transport, and Infrastructure (former Ministry of Transport, Maritime Affairs and Communications), General Directorate of Highways ("KGM" or "the Administration"), as the owner of the Antalya-Alanya Motorway Project, has tendered for a contract in accordance with the Law on Implementation of Some of the Investments and Services in the Framework of Build, Operate and Transfer Model (Law No: 3996). Following the tendering process, KGM has awarded Antalya-Alanya Otoyolu İnşaat Yatırım ve İşletme A.Ş. (AAOİAŞ or the Project Sponsor) with a Build, Operate and Transfer (BOT) contract for the implementation of the Project. Accordingly, AAOİAŞ will be referred as Project Sponsor[1] in the scope of this report. The main contractor for the Project has been designated as Limak and will henceforth be referred to as the Contractor (or EPC).

The project is designed to connect the districts of Serik and Alanya via the Manavgat district of Antalya province.The Project will enhance the existing transportation network services with its surrounding provinces: Burdur, Muğla, Konya, Isparta, Karaman and Mersin. Various environmental, social, and technical studies have been conducted along the initial route of the Project tendered by the KGM. Based on these studies, the route was optimized, incorporating engineering practices and addressing environmental and social considerations, particularly issues of involuntary and economic resettlement, before being finalized. According to the most current design, the total length of the Motorway, which will be a dual carriageway of mostly 3 and partially 2 lanes (3x2 and 2x2) in each direction, is 117.8 kilometers including the main carriageway and the access roads[2].

This Noise and Vibration Management Plan ("NVMP" or "Plan") has been prepared by Antalya-Alanya Highway Construction Investment and Operation Inc. ("AAOİAŞ" or "SPV") for the Antalya-Alanya Highway Project ("Project") in accordance with national legislation, the Equator Principles ("EP"), the International Finance Corporation ("IFC") Performance Standards ("PSs"), and Global International Industry Practices ("GIIP"), as well as the expectations of international financial institutions. The Plan covers the construction phase of the Project.

I.1 Project Description

The Project starts at Serik Interchange (Km: 52+000) and then proceeds eastward, following the corridor at the foothills of the Taurus Mountains within the boundaries of Serik and Manavgat districts, ending at north of Konaklı neighborhood of Alanya District (Km: 136+000). From this point onwards, the route turns southward with a 2x2 lane connection road and connects to the D400 state road at the Alanya West Interchange. As of April 2025, the current Project design includes a total of 117.8 kilometers of road, comprising 84 kilometers of main road (motorway) and 33.8 kilometers of access roads.

The map showing the construction components and road route within the scope of the Project's construction activities is provided in *Figure I-1.*

[1] The BOT Contract uses the term "Appointed Company" to refer Project Sponsor

[2] It should be noted that the environmental and social baseline characterization, maps and scoping assessments provided in this report are based on the most current design

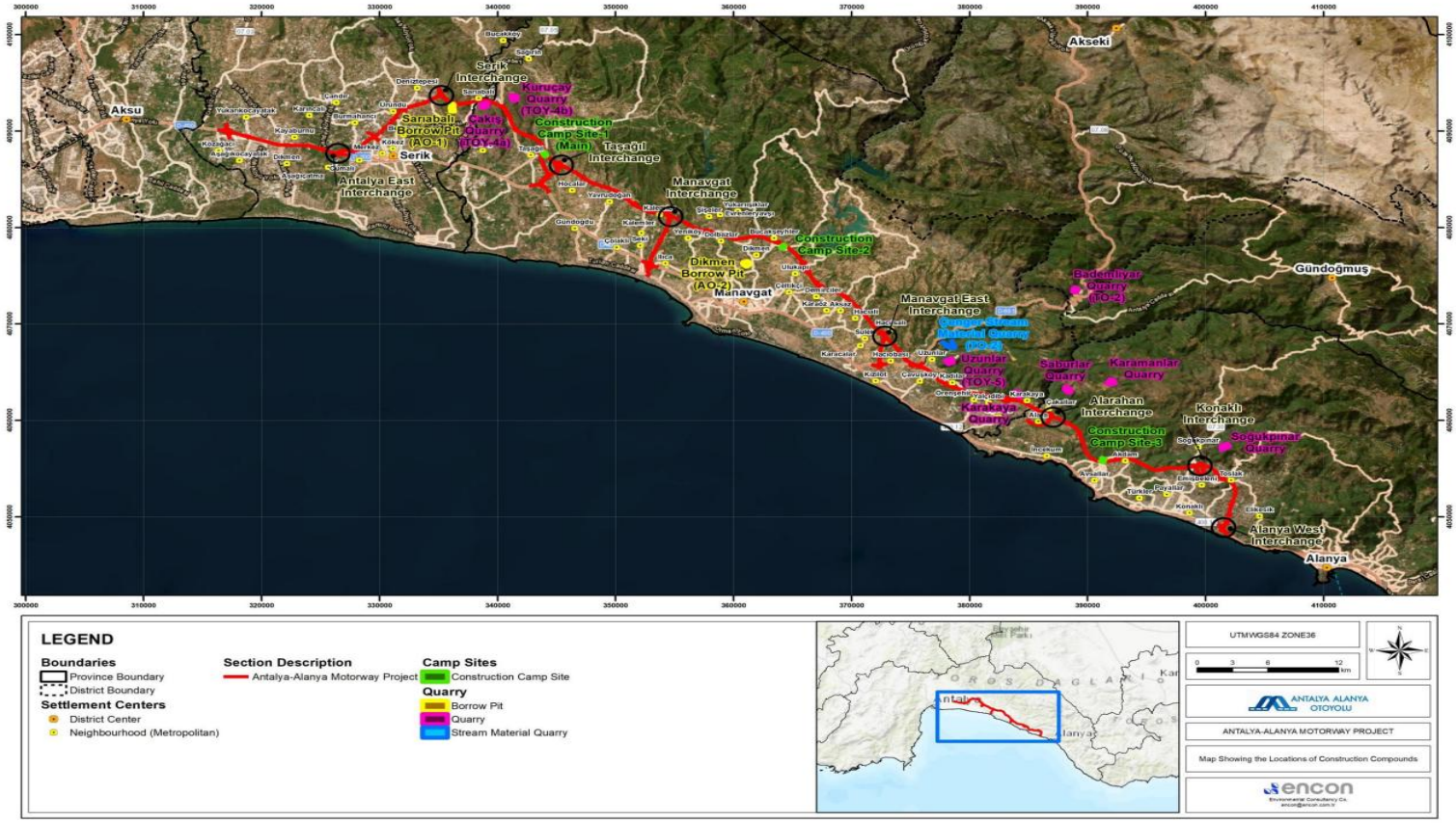

Figure I-1.Map Showing the Locations of Construction Compounds

Other structures to be built as part of the project are as follows:

- 16 viaducts,
- 22 bridges,
- 305 culverts,
- 25 interchanges,
- 56 overpasses,
- 43 underpasses, and
- 5 tunnels.

Excessive noise levels within the scope of the Project's construction activities may primarily arise from the following activities:

- Construction of the motorway itself,
- Construction of the other engineering structures such as the bridges, viaducts, etc,
- Excavation and preparation of construction materials in quarries or stockyards,
- Transportation of excavated and construction materials and workforce,
- Earthworks & Crusher,
- Roadworks.

Increased vibration levels may arise from the following project construction phase activities:

- Piling,
- Operation of vibratory equipment (e.g. compaction),
- Blasting.

I.2 Purpose and Scope

The purpose of this Plan:

- Outline applicable national legislation and standards as relevant to this Plan,
- Identify the sections of applicable international standards to which the Project must comply that are relevant to this Plan,
- Define roles and responsibilities of the personnel, and
- Define mitigation measures.

Moreover, this Plan is to identify significant noise and vibration sources associated with construction activities and to define the necessary mitigation, control, and monitoring measures to minimize potential impacts on the surrounding environment, including both human receptors and wildlife.

This management plan is a living document developed with the best available information and will be reviewed and revised as necessary due to the nature of the construction and progress.

The Plan has been developed in line with applicable Turkish regulations and relevant international standards, including the requirements of international financial institutions. The measures described in this Plan should be implemented to ensure that noise levels remain within acceptable limits throughout the construction phase.

This Plan should be implemented by all relevant parties, including the Project Sponsor, Antalya-Alanya Otoyolu İnşaat Yatırım ve İşletme A.Ş. (AAOİAŞ), the Main Contractor (Limak), and all subcontractors. Responsibilities for implementation, monitoring, and reporting should be clearly defined. Revisions to the Plan should be made if there are changes in site operations, regulatory updates, or project modifications.

II. LEGISLATIVE FRAMEWORK AND REFERENCE STANDARDS

This Plan has been structured to comply with national legislative requirements and relevant international standards that regulate permissible noise and vibration levels for infrastructure projects. Accordingly, the following references should guide the implementation, monitoring, and performance evaluation of noise and vibration control measures during construction phase.

II.1 National Requirements

The following Turkish laws and regulations form the legal basis for the management of noise and vibration impacts arising from project activities:

- Environmental Law (Law No. 2872)
- Regulation on Environmental Noise Control (Official Gazette: 30.11.2022 – No. 32029)
- Regulation on Noise Emissions to the Environment by Equipment Used in Open Areas (Official Gazette: 30.12.2006 – No. 26392)

Noise limits applicable to project activities are defined under the Regulation on Environmental Noise Control. These limits are summarized in *Table II.1.*

Table II-1 Reference Limits and Standards for Monitoring and Mitigation

Noise Source	Measured Parameter	Environmental Noise Level		
		Daytime	Evening	Night
Industrial facilities, transport sources	LAeq,5min.	65 dB(A)	60 dB(A)	55 dB(A)
Establishments with music broadcasting (1)	LAeq 63-250 Hz	60 dB(A)	55 dB(A)	50 dB(A)
Workplaces (including those with music) (2)	LAeq,5min.	Background + 5 dBA		Background + 3 dBA
Multiple workplaces (3)	LAeq,5min.	Background + 7 dBA		Background + 5 dBA
All sources	LCmax	100 dBC		

(1): These limit values are valid as of 31.12.2023. These limit values are provided in each 1/3 octave band of the specified frequency range. In the acoustic reports prepared until this date; environmental noise measurement results and measures determined as a result of the measurement results taken are included.
(2): Workplaces broadcasting music and marine vessels are included.
(3): Each workplace that contributes to the background noise level is equally responsible for ensuring this limit value. Each workplace takes the necessary measures according to their contribution to noise.

In addition, operating hours for construction activities have been defined to limit noise disturbances, as shown in *Table II.2.*

Table II-2 Time period permitted for outdoor activities in residential areas

Activity	Working Hours
Construction site activities	10:00 – 22:00
Blasting activities in quarries/mines	10:00 – 20:00
Use of fireworks	20.00-22.00
Blasting activities in mines, quarries, and other areas	10.00-20.00

Note: For public interest projects such as dams, bridges, tunnels, highways, and urban roads, working hours may be revised by the Provincial Environmental Board.

Regulations on vibration impacts are also included in the Environmental Noise Control Regulation. The limits are defined for various types of structures and activities as presented in *Table II.3, Table II.4, and Table II.5.*

Table II-3 The maximum permissible values of the ground vibrations caused by the vibrations caused by blasting in mines, quarries and similar areas on the nearest structure

Structure Type	Max Vibration Velocity at Foundation (mm/s)			Max at Top Floor (mm/s)(2)
	f= 1-10	f=10-50	f=50-100(1)	
Industrial buildings	20	40	50	40
Residential buildings	5	15	20	15
Sensitive, historical/natural structures(3)	2	8	10	8

(1) For frequencies greater than 100 cycles/sec, a large vibration level is permissible.
(2) For buildings with more than one story, measurements should be taken both at the foundation of the building and at the slab of the top floor.
(3) These limit values for historical and natural structures may be limited by precise, comprehensive vibration measurements and scientific studies to be carried out on-site.

Table II-4 The maximum permissible values of ground vibrations generated by rail and road transportation vehicles, workplaces and industrial facilities in the nearest building and ground vibrations generated by machinery and equipment inside the building

Structure Type	Frequency Range (Hz)	Permissible Vibration Velocity (rms, mm/s)
Residential buildings	1(1)	1.5
	8-100	0.3
Office buildings	1(2)	3.5
	8-100	0.6
Historical/natural buildings (4)	1(3)	0.8
	8-100	0.1

(1) The maximum permissible vibration speed is determined according to the vibration frequency in the graph drawn logarithmically with the specified values.
For example, between 1 Hz-8 Hz, it decreases linearly from 1.5 mm/sec to 0.3 mm/sec in a logarithmic graph.
(2) The highest permissible vibration speed is determined according to the vibration frequency in the graph drawn logarithmically with the specified values.
For example, between 1 Hz-8 Hz, it decreases linearly from 3.5 mm/sec to 0.6 mm/sec in a logarithmic graph.
(3) The highest permissible vibration speed is determined according to the vibration frequency in the graph drawn logarithmically with the specified values.
For example, between 1 Hz-8 Hz, it decreases linearly in the graph drawn logarithmically from 0.8 mm/sec to 0.1 mm/sec.
(4) These limit values determined for historical and natural structures may be limited by precise, comprehensive vibration measurements and related scientific studies to be carried out on site.

Table II-5 The maximum permissible values of ground vibrations caused by pile driving and similar vibration-generating operations in construction and construction machinery outside the nearest structure (in frequency bands between 1 Hz and 80 Hz)

Area Type	Max Vibration Velocity (Peak Value – mm/s)	
	Continuous Vibration	Intermittent Vibration
Residential Areas	5	10
Commercial Areas	15	30
Historical/Natural Structures (1)	2	5

(1) These limit values determined for historical and natural structures may be limited by sensitive, comprehensive vibration measurements and scientific studies to be carried out on-site.

II.2 International Standards and Conventions

In addition to national requirements, the following international guidelines frameworks, standards and agreements should be considered to ensure alignment with best practices and financial institution requirements:

To ensure responsible operations, AIIB adheres to policies addressing environmental and social impacts as outlined in its Environmental and Social Framework ("ESF") document. Updated in June 2024, the ESF reflects AIIB's commitment to international standards and sustainable development practices. The ESF includes the Environmental and Social Policy (ESP), which sets mandatory requirements for all projects, supported by Environmental and Social Standards ("ESSs"):

Moreover, the following standards, guidelines and directives should be used to align Project practices with international lender requirements and good practice environmental and social management.

- IFC Performance Standards and Sectoral Guidelines (2012)
- IFC Environmental, Health and Safety (EHS) General Guidelines (2007)
- IFC EHS Guidelines for Toll Roads (2007)
- IFC Guidance Notes (2012)
- Equator Principles IV (2020)
- World Health Organization (WHO) Guidelines for Community Noise

The IFC EHS Guidelines recommend noise limits for sensitive receptors, as presented below.

Table II-6 The Noise Level Guidelines (IFC General EHS Guidelines – Noise Management

Receptor	One-Hour LAeq (dBA)	
	Daytime (07:00–22:00)	Night (22:00–07:00)
Residential, institutional, educational	55	45
Industrial, commercial	70	70

As per IFC requirements, noise impacts should not exceed these thresholds or result in an increase of more than 3 dB over baseline levels at the nearest off-site receptor.

II.3 Project Standards

The Project will adopt the most stringent limits between national regulations and international standards to ensure effective management of noise and vibration impacts throughout the construction phase. The reference levels presented in the tables above will be used for monitoring and mitigation planning. In case of exceedances, corrective measures should be implemented immediately. Noise and vibration limits for road construction activities are summarized in *Table II.7*. Similarly, limits for vibration levels generated by construction machinery are given in *Table II.8.*

Table II-7 Project Construction Noise Standards

Receptor	One-Hour LAeq (dBA)	
	Daytime (07:00–22:00)	Night (22:00–07:00)

Residential, institutional, educational	55	45
Industrial, commercial	70	70

Table II-8 Project Construction Vibration Standards

Land Use Type	Max Vibration Velocity (Peak Value – mm/s)	
	Continuous	Intermittent
Residential Areas	5	10
Commercial Areas	15	30
Historical/Natural Structures	2	5

III. LINKAGE WITH OTHER PROJECT PLANS AND PROCEDURES

This Plan is supported by other management plans and procedures developed under the Environmental and Social Management System (“ESMS”) of the Project. The following plans and procedures are particularly relevant and should be implemented in coordination with the Noise and Vibration Management Plan:

- Community Health and Safety Management Plan
- Occupational Health and Safety Plan
- Traffic Management Plan,Blasting Management Plan,
- Demolition Management Plan,
- Environmental and Social Management and Monitoring Plan (“ESMMP”)

Each of these plans is linked to the Noise and Vibration Management Plan by addressing sources or impacts of construction-related noise and vibration. The Community Health and Safety Plan manages risks to nearby residents. The Occupational Health and Safety Plan protects workers from noise exposure. The Traffic Management Plan regulates vehicle-related noise. . The ESMMP monitors compliance with noise and vibration controls across all activities.

The effective integration of these plans should be ensured to maintain compliance with national regulations and international standards and to minimize the cumulative environmental and social impacts of construction activities.

IV. ROLES AND RESPONSIBILITIES

Antalya Alanya Otoyol İnşaat Yatırım ve İşletme A.Ş. (SPV) as the Project Sponsor and Limak (EPC) as the main contractor of the Project will be responsible for the following:

General Manager (SPV):

-Define and implement the overall business strategy and direction of the SPV in alignment with shareholder and stakeholder expectations.

-Ensure the provision of necessary resources and organizational support for the implementation of NVMP.

-Supervise and coordinate EPC contractors and subcontractors to ensure proper execution of construction, commissioning, and operational phases.

-Support the E&S Manager (SPV) in preparing, disseminating, and implementing this plan.

E&S Manager (SPV):

-Review and ensure the preparation, revision, and implementation of NVMP in accordance with national laws, regulations, company policies, international standards and lender requirements.

-Ensure the development, revision, and execution of project-specific management plans, including the Environmental and Social Management and Monitoring Plan (ESMMP) in accordance with company policies and international standards.

-Monitor the environmental and social performance of EPC and subcontractors to ensure compliance

H&S Manager (SPV):

-Ensure the conditions and obligations specified in the health, safety, community related plans and documents are implemented and adhered to by EPC and subcontractors in accordance with company policies, regulatory obligations, international standards and lender requirements.

-Contribute to project risk assessments and job hazard analyses (JHAs) and ensure these are updated regularly.

-Ensure that all construction site activities are carried out safely by EPC and subcontractors.

Deputy E&S Manager (SPV):

-Lead the development, implementation, and continuous improvement of the Environmental and Social Management.

-Review the ESHS documents of subcontractors and suppliers and ensure that they comply with the Project ESHS requirements.

-Monitor performance through Key Performance Indicators (KPIs), reports, audits, and meetings.

-Oversee incident and non-compliance regarding to noise and vibration, including investigations, corrective/preventive measures, and stakeholder communication.

-Support E&S Manager (SPV) executive decision-making by providing timely reports and insights on E&S performance, risks, and emerging trends.

-Lead community engagement strategies in collaboration with the Environmental Engineer and , and Social Chief to ensure effective grievance management and positive relations with project-affected communities.

-Ensure that EPC and subcontractor provide the necessary training through the review of training records and relevant training documents.

Social Chief (SPV):

-Supervise and mentor CLOs, ensuring their work aligns with project priorities and stakeholder engagement strategy.

-Develop and implement work plans and schedules for the CLO team.

-Ensure that complaints regarding air quality are recorded, processed, and resolved in a timely and transparent manner.

-Ensure accurate, timely, and complete reporting of CLO activities, stakeholder interactions, and grievance outcomes and inform the E&S Deputy Manager about the complaints and coordinate the assessment and solution of grievances with EPC team.

-Coordinate with the E&S Deputy Manager, CLOs and Environmental Engineer and construction teams to address community-related impacts.

Project Director (EPC):

-Define and oversee the implementation of the overall EPC execution strategy in alignment with contract objectives and company standards.

-Lead interdisciplinary project teams, coordinating EPC functions to achieve key milestones.

-In case of non-compliance regarding to noise and vibration, ensure appropriate corrective and preventive actions are taken in coordination with the E&S Manager and H&S Manager

E&S Manager (EPC):

-Facilitate coordination with the SPV's E&S Manager for compliance audits and reporting.

-Implement environmental and social measures through site practices and method statements.

-Ensure that all conditions and obligations outlined in the The Plan are implemented and adhered to during project activities.

H&S Manager (EPC):

-Ensure the safe execution of construction activities in compliance with NVMP, H&S Plan, legal requirements, international standards, SPV and lender obligations.

-Prepare, review, and improve H&S Plans by integrating noise and vibration control measures into site-specific risk registers, method statements, and monitoring programs.

-Supervise and support Contractors/Subcontractors to implement noise and vibration mitigation measures, and monitor their compliance with H&S and NVMP requirements.

-Coordinate with SPV H&S Manager to address noise/vibration-related incidents, risks, and community safety concerns.

-Ensure that all site personnel receive regular training and toolbox talks covering NVMP obligations,air quality noise/vibration risks, and safe working practices.

-Oversee emergency preparedness and response procedures for noise and vibration incidents (e.g., blast vibration exceedances, community complaints).

-Conduct investigations of noise/vibration-related incidents or complaints, ensure corrective/preventive actions are taken, and report findings to Project Director and SPV.

-Promote a safety-first culture by ensuring noise and vibration risks are proactively managed and lessons learned are integrated into continuous improvement.

Line Manager:

-Ensure the implementation of noise and vibration mitigation measures on site (e.g., use of silencers, mufflers, acoustic barriers).

-Ensure the appropriate selection of vehicles and equipment with low-noise specifications and monitor their regular maintenance to minimize noise and vibration.

-Ensure the proper maintenance of access and internal roads, and enforce speed limits to reduce vibration impacts on nearby sensitive receptors

Environmental Engineer (SPV and EPC):

-Implement and monitor the Noise and Vibration Management Plan (NVMP) on-site, ensuring subcontractor compliance.

-Conduct routine inspections and measurements of noise and vibration levels to verify the effectiveness of mitigation measures.

-Maintain accurate monitoring records and databases, and prepare reports for audits, stakeholders, and regulatory compliance.

-Support training, toolbox talks, and inductions to raise noise and vibration awareness among site personnel.

-Coordinate and follow up corrective and preventive actions for NVMP-related incidents in collaboration with HSE, E&S teams, and subcontractors.

-Liaise with external consultants, laboratories, and regulators for monitoring, reporting, and permit compliance.

-Integrate NVMP requirements into work plans, method statements, and construction activities.

Community Liaison Officer (CLO)(SPV and EPC):

-Communicate with project-affected communities about construction activities, including potential noise-vibration impacts.

-Log, track, and follow up on community complaints or grievances related to noise, ensuring timely resolution via the Grievance Mechanism (GM).

-Support monitoring and documentation of NVMP implementation at site level, including subcontractor activities affecting the community.

-Facilitate equitable community engagement and consultations, ensuring vulnerable or sensitive groups are informed about noise and vibration impacts.

-Coordinate with E&S Manager and other project teams to integrate community feedback into NVMP updates and corrective actions.

V. NOISE AND VIBRATION MANAGEMENT APPROACH

Noise and vibration impacts associated with motorway projects primarily arise during the construction phase from activities such as excavation works, use of heavy machinery and equipment, piling, blasting operations, material transportation, and the operation of batch plants. These sources generate intermittent and continuous noise and ground-borne vibrations, particularly affecting nearby sensitive receptors such as residential areas, schools, hospitals, and ecological habitats.

Vibration impacts during construction are typically associated with activities such as blasting, piling, and the use of vibratory machinery. These operations may result in ground vibrations that can potentially affect structural integrity and human comfort in nearby buildings and facilities. Sensitive receptors, including historical or cultural structures, require particular attention due to their susceptibility to even low levels of vibration.

These impacts should be assessed in the context of current baseline conditions, which show that ambient noise levels in certain areas are already near or above guideline thresholds. As shown in *Table V-1.*

Table V-1.Geographical and Environmental Information of Noise Measurement

Neighborhood	*Coordinates*	*Corresponding Motorway (KM)*	*Environmental Activities*	*Distance to Project Alignment (m)*
Akdam	*393414/4055623*	*127+000*	*Greenhouses, residential areas, a school, and a mosque near a road with vehicle traffic*	*380*
Avsallar	*389720/4055765*	*123+400*	*Greenhouses, residential areas, and hotels near a road with vehicle traffic.*	*640*
Bademliyar	*389655/4072729*	*115+000*	*The Bademliyar quarry is located near the receptor along the Konya-Manavgat D695 highway*	*11,980*
Bucakşeyhler	*363395/4078780*	*86+500*	*Residential areas, tourism facilities, and greenhouses near a road with vehicle traffic.*	*190*
Çakallar	*386572/4060940*	*117+100*	*Residential areas and roads*	*230*
Deniz Tepesi	*334640/4094389*	*52+000*	*Greenhouses and residential areas near a road with vehicle traffic.*	*350*
Emişbeleni	*399364/4055198*	*133+000*	*Greenhouses and residential areas near a road with vehicle traffic.*	*75*
Hacıali	*370544/4070725*	*97+750*	*Greenhouses, residential areas, and a school near a road with vehicle traffic.*	*560*
Hacıobası	*373104/4065985*	*Manavgat East Access Road 1+000*	*Greenhouses and residential areas near a road with vehicle traffic.*	*100*
Kalemler	*353691/4080989*	*76+300*	*Greenhouses and residential areas near a road with vehicle traffic.*	*490*
Karakaya	*385356/4061872*	*115+500*	*Greenhouses and residential areas near a road with vehicle traffic.*	*410*
Konaklı	*401287/404971*	*140+600*	*Greenhouses and residential areas near a road with vehicle traffic.*	*550*

Neighborhood	*Coordinates*	*Corresponding Motorway (KM)*	*Environmental Activities*	*Distance to Project Alignment (m)*
	7			
Köprüçay	*339819/4095932*	*56+700*	*Greenhouses, Köprüçay stream, and residential areas near a road with vehicle traffic.*	*2,860*
Sağırin	*341974/4097230*	*57+250*	*Residential areas, tourism facilities, a school, and a river near a road with vehicle traffic.*	*4,890*
Sarılar	*360448/4076493*	*83+500*	*Greenhouses, Borrow Pit, and residential areas near a road with vehicle traffic.*	*2,335*
Sarıabalı	*337884/4093014*	*55+400*	*Greenhouses, Köprüçay stream, and residential areas near a road with vehicle traffic.*	*0*
Serik	*330608/4089427*	*Serik Access Road 7+000*	*Greenhouses and residential areas near a road with vehicle traffic.*	*690*
Sülek	*371900/4068786*	*100+000*	*Residential areas near a road with vehicle traffic.*	*620*
Taşağıl	*343326/4087476*	*Taşağıl Access Road 2+500*	*Antalya-Konya D687 highway and residential areas*	*310*
Ulukapı	*365551/4075913*	*90+300*	*Greenhouses and residential areas near a road with vehicle traffic.*	*425*
Uzunlar	*376876/4066570*	*105+400*	*Greenhouses, Çenger stream, and residential areas near a road with vehicle traffic.*	*1,330*

Baseline measurements indicated that sound levels at several locations were close to or exceeded the threshold values set by the Regulation on Environmental Noise Control and IFC EHS Guidelines. This is primarily due to the proximity of 21 main and state roads, 20 settlements, 15 agricultural businesses, 3 tourism spots, 3 schools, 1 mosque, and 4 rivers. No significant existing sources of vibration were identified during baseline assessments. The points where baseline measurements were taken are shown in the Figure V-1. Moreover, measurement results are given in Table V-1.

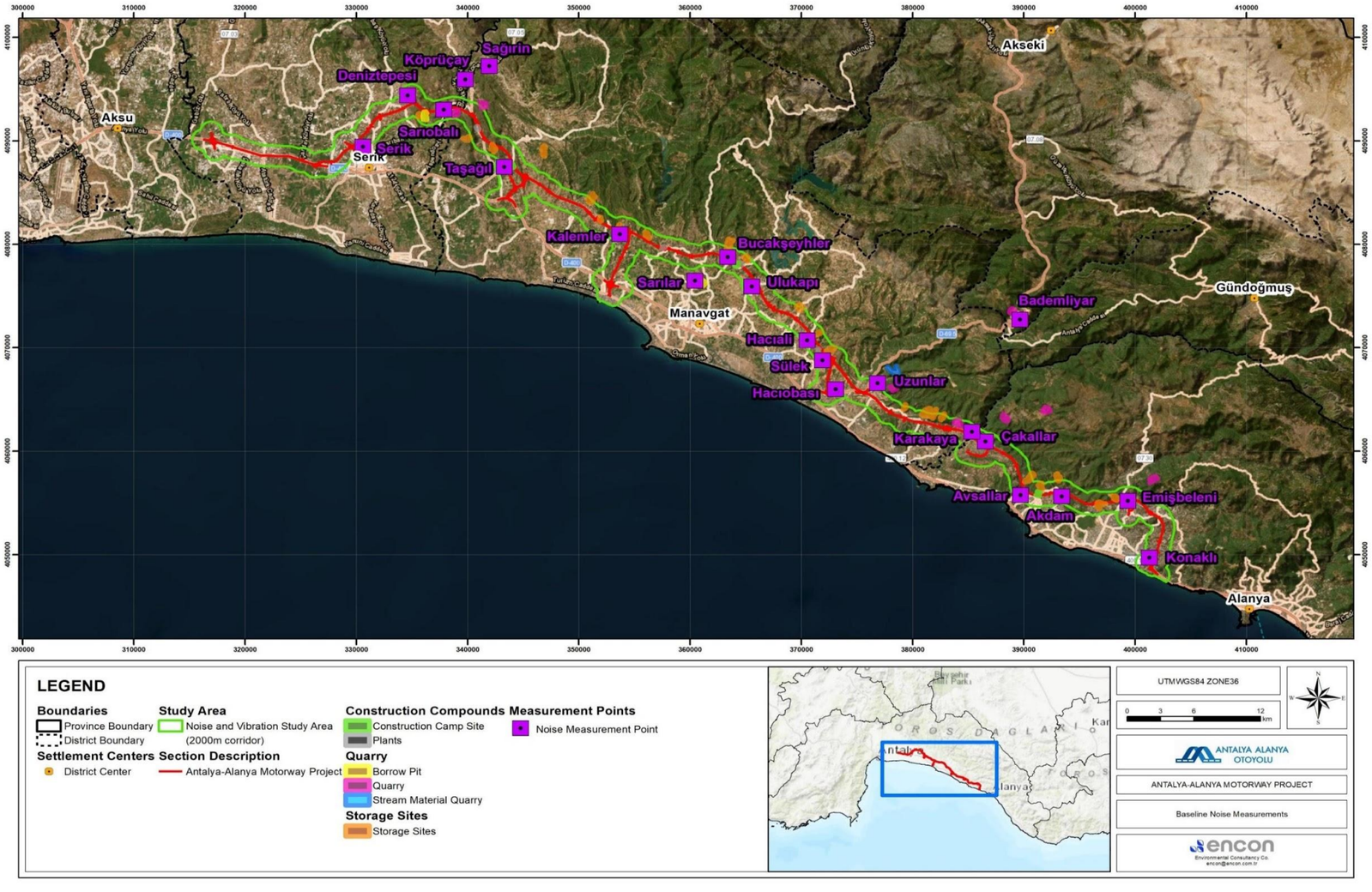

Figure V-1. Baseline Noise Measurements

Table V-1.Noise Measurement Results

Districts	Measurement Date	Environmental Conditions During Sampling	Coordinates (UTM WGS84-Zone 35)		RENC Noise Levels			IFC EHS Guidelines Noise Levels	
			X (North)	Y (East)	L_{eq} Day (7:00–19:00)	L_{eq} Evening (19:00-23:00)	L_{eq} Night (23:00-07:00)	L_{eq} Day (07:00-22:00)	L_{eq} Night (22:00-07:00)
Sarıabalı	16-17.09.2024	Sunny	337884	4093014	62.4	56.2	53.6	61.5	53.2
	21-22.09.2024	Sunny			61.9	55.7	55.6	61.2	55.5
Sarılar	16-17.09.2024	Sunny	360448	4076493	65.5	63.7	62.0	65.1	62.5
	21-22.09.2024	Sunny			63.1	63.0	59.0	63.2	59.3
Bucakşeyhler	16-17.09.2024	Sunny	363395	4078780	70.3	56.3	55.0	69.3	55.6
	21-22.09.2024	Sunny			65.7	64.3	58.7	65.5	59.3
Kalemler	16-17.09.2024	Sunny	353691	4080989	57.6	52.7	45.7	57.1	45.6
	21-22.09.2024	Sunny			66.0	61.7	60.8	65.5	60.6
Köprüçay	16-17.09.2024	Sunny	339819	409532	63.9	58.6	58.5	63.2	58.8
	21-22.09.2024	Sunny			64.0	62.9	62.8	64.0	62.4
Bademliyar	16-17.09.2024	Sunny	389655	4072729	71.8	56.9	55.5	70.9	55.3
	21-22.09.2024	Sunny			63.3	61.7	61.6	63.2	61.2
Ulukapı	16-17.09.2024	Sunny	365551	4075913	60.2	59.8	59.4	60.4	59.0
	21-22.09.2024	Sunny			62.7	57.9	54.9	62.1	55.0

Districts	Measurement Date	Environmental Conditions During Sampling	Coordinates (UTM WGS84-Zone 35)		RENC Noise Levels			IFC EHS Guidelines Noise Levels	
			X (North)	Y (East)	L_{eq} Day (7:00–19:00)	L_{eq} Evening (19:00-23:00)	L_{eq} Night (23:00-07:00)	L_{eq} Day (07:00-22:00)	L_{eq} Night (22:00-07:00)
Taşağıl	16-17.09.2024	Sunny	343526	4087476	79.1	68.5	56.4	78.3	56.5
	21-22.09.2024	Sunny			68.8	65.5	65.3	68.4	65.1
Hacıali	16-17.09.2024	Sunny	370544	4070725	73.1	45.6	43.9	72.2	43.5
	21-22.09.2024	Sunny			68.5	67.2	66.0	68.4	65.9
Deniz Tepesi	16-17.09.2024	Sunny	334640	4094389	63.9	55.2	54.8	63.1	54.8
	21-22.09.2024	Sunny			67.0	61.1	57.8	66.3	57.4
Serik	16-17.09.2024	Sunny	330608	4089427	64.4	63.0	60.4	64.3	60.2
	21-22.09.2024	Sunny			66.6	62.2	60.3	66.1	59.9
Konaklı	17-18.09.2024	Sunny	401287	4049717	56.3	52.4	51.6	55.6	51.4
	21-22.09.2024	Sunny			64.4	63.0	60.4	64.3	60.2
Çakallar	17-18.09.2024	Sunny	386572	4060940	58.3	56.5	41.9	57.9	48.7
	21-22.09.2024	Sunny			62.2	62.7	60.7	61.9	61.7
Avsallar	17-18.09.2024	Sunny	389720	4055765	57.2	54.2	53.9	56.8	53.6
	21-22.09.2024	Sunny			61.6	61.5	55.4	61.9	54.9
Akdam	17-18.09.2024	Sunny	393414	4055623	64.4	62.3	61.5	63.8	62.1
	21-22.09.2024	Sunny			62.1	60.2	57.4	62.0	56.9
Emişbeleni	17-18.09.2024	Sunny	399364	4055198	59.8	59.0	52.2	59.8	52.2

Districts	Measurement Date	Environmental Conditions During Sampling	Coordinates (UTM WGS84-Zone 35)		RENC Noise Levels			IFC EHS Guidelines Noise Levels	
			X (North)	Y (East)	L_{eq} Day (7:00–19:00)	L_{eq} Evening (19:00-23:00)	L_{eq} Night (23:00-07:00)	L_{eq} Day (07:00-22:00)	L_{eq} Night (22:00-07:00)
	21-22.09.2024	Sunny			71.6	69.5	66.7	71.3	66.6
Karakaya	17-18.09.2024	Sunny	385356	4061872	68.7	66.2	62.7	68.5	62.4
	21-22.09.2024	Sunny			73	72.8	63.8	73.2	63.6
Hacıobası	17-18.09.2024	Sunny	373104	4065985	55.9	50.3	50.2	55.3	50.2
	21-22.09.2024	Sunny			61.2	60.2	43.9	61.2	47.6
Uzunlar	17-18.09.2024	Sunny	376876	4066570	62.9	60.6	60.1	62.6	59.8
	21-22.09.2024	Sunny			74.5	62.3	53.5	73.6	54.3
Sülek	17-18.09.2024	Sunny	371900	4068786	57.9	50.5	50.0	57.2	49.8
	21-22.09.2024	Sunny			68.6	66.8	62.4	68.2	63.5
Sağırin	17-18.09.2024	Sunny	341974	4097230	70.7	64.6	64.3	70.1	64.0
	21-22.09.2024	Sunny			67.6	67.0	66.0	67.3	66.5

To ensure compliance with applicable international standards and to minimize adverse impacts on the surrounding environment and communities, appropriate noise and vibration prevention and mitigation measures will be implemented throughout the Project area.

Sensitive receptors, including residential neighborhoods, schools, healthcare facilities, and recreational areas, are locations where vulnerable populations may be more susceptible to the adverse effects of noise and vibration. Within the scope of this Project, several residential areas across the Serik, Manavgat, and Alanya districts have been identified in close proximity to the motorway construction corridor and are listed in *Table V-5* . Due to their location near heavy equipment operations, material transport routes, and potential blasting or piling activities, these areas require careful monitoring and targeted mitigation. All measures will be implemented to ensure that noise and vibration levels at the nearest sensitive receptors remain below threshold values established by national regulations and international guidelines. These measures will be further detailed in this Plan and will be regularly reviewed in response to site conditions and stakeholder feedback.

Table V-5 Settlements Located in The Vicinity of the Motorway Components

Districts	Neighborhoods		
Serik	• Aşağıçatma • Aşağıkocayatak • Burmahancı • Çandır	• Cumalı • Deniztepesi* • Dikmen • Kayaburnu	• Kökez • Merkez • Sarıabalı • Üründü • Yukarıkocayatak
Manavgat	• Aksaz • Aşağıışıklar • Bucakşeyhler* • Çakış • Çavuşköy • Cevizler • Demirciler • Dikmen • Dolbazlar • Evrenleryavşı • Gültepe • Gündoğdu	• Hacıali* • Hacıisalı • Hacıobası • Hatipler • Hocalar • Ilıca • Kadılar • Kalemler* • Karacalar • Karakaya* • Karaöz • Kızılot • Odaönü	• Örenşehir • Sağırin* • Sarılar* • Side • Şişeler • Sülek* • Taşağıl* • Ulukapı • Uzunlar • Yalçıdibi • Yavrudoğan • Yeniköy • Yukarıışıklar
Alanya	• Akdam • Alara • Avsallar	• Çakallar • Elikesik • Emişbeleni* • İncekum	• Konaklı • Soğukpınar • Toslak • Türkler

**Settlements located in areas with significant baseline noise.*

Noise and vibration impacts during construction are closely associated with the location and operation of key project components along the motorway corridor. These include construction camp sites, borrow pits, quarries, stream material quarries, , concrete batching plants, and mechanical plants. The locations, operational capacities, and durations of these facilities are provided in Table V.4, and their spatial distribution is illustrated in Figure V-2. Spread across the Serik, Manavgat, and Alanya districts, many of these facilities are located near settlements identified as sensitive receptors.

Construction camp sites at Km 64+400, 87+500, and 124+300 will generate continuous background noise due to generators, vehicle activity, and workshops. Concrete and asphalt plants will contribute high operational noise from mixers, conveyors, and loaders. Mechanical plants are expected to produce intense machinery noise, especially during peak use. Quarries and borrow pits such as Soğukpınar, Karakaya, and Dikmen may involve blasting and rock breaking, which generate both peak noise and ground-borne vibration. The Çenger Stream Material Quarry poses additional sensitivity due to its proximity to open terrain and watercourses. Given the closeness of these components to residential areas, a targeted monitoring and mitigation strategy will be essential. Measures such as activity scheduling, equipment maintenance, and temporary barriers will be applied as needed. The layout shown in will support the planning of site-specific controls to minimize community exposure.

By aligning targeted noise monitoring with the spatial distribution of sensitive receptors and integrating feedback from community stakeholders, the Project will be better equipped to maintain compliance with national and international standards, while also safeguarding the health and well-being of local communities.

Table V-6 Locations of Borrow Pits / Quarries and Plants

Location	Province	District	Nearest Neighborhood	Description of the Site / Plant	Area (m²)	Capacity Information / Operation Period
Km 53+800	Antalya	Serik	Sarıabalı	Sarıabalı (AO-1) Borrow Pit	249,000	375 m^3/hour
						36 months
Km 55+450	Antalya	Serik	Sarıabalı	Concrete Plant-1	13,946	140 m^3/hour
						36 months
Km 56+500	Antalya	Manavgat	Çakış	Çakış (TOY4a) Quarry	247,300	375 m^3/hour
						36 months
Km 58+500	Antalya	Manavgat	Taşağıl	Kuruçay (TOY4b) Quarry	243,000	375 m^3/hour
						36 months
Km 59+400	Antalya	Manavgat	Taşağıl	Concrete Plant-2	66,450	140 m^3/hour
						36 months
				Mechanical Plant-1		550 tonnes/hour
						16 months
				Asphalt Plant-1		240 tonnes/hour
						16 months
Km 64+400	Antalya	Manavgat	Taşağıl	Construction Camp Site-1 (Main)	-	
Km 80+400	Antalya	Manavgat	Yeniköy	Concrete Plant-3	15,000	140 m^3/hour
						36 months
Km 83+000	Antalya	Manavgat	Sarılar	Dikmen Borrow Pit	244,000	375 m^3/hour
						36 months
Km 87+500	Antalya	Manavgat	Bucakşeyhler	Construction Camp Site-2	-	
Km 87+700	Antalya	Manavgat	Bucakşeyhler	Concrete Plant-4	42,371	140 m^3/hour
						36 months
				Mechanical Plant-2		550 tonnes/hour
						16 months
				Asphalt Plant-2		240 tonnes/hour
						16 months
Km 89+700	Antalya	Manavgat	Ulukapı	Concrete Plant-4a	11,665	140 m^3/hour
						36 months
Km 99+200	Antalya	Manavgat	Sülek	Concrete Plant-5	11,977	140 m^3/hour
						36 months
Km 104+750	Antalya	Manavgat	Gençler	Bademliyar (TO2) Quarry	178,000	375 m^3/hour
						36 months
Km 105+000	Antalya	Manavgat	Uzunlar	Çenger Stream Material Quarry	190,000	375 m^3/hour
						36 months
Km 106+000	Antalya	Manavgat	Uzunlar	Uzunlar (TOY5) Quarry	246,000	375 m^3/hour
						36 months
Km 114+200	Antalya	Manavgat	Karakaya	Karakaya Quarry	249,100	375 m^3/hour

Location	Province	District	Nearest Neighborhood	Description of the Site / Plant	Area (m²)	Capacity Information / Operation Period
						36 months
Km 117+000	Antalya	Alanya	Saburlar	Saburlar Quarry	249,400	375 m^3/hour
						36 months
Km 119+500	Antalya	Alanya	Karamanlar	Karamanlar Quarry	311,900	375 m^3/hour
						36 months
Km 124+300	Antalya	Alanya	İncekum	Construction Camp Site-3	-	
				Concrete Plant-6	85,000	140 m^3/hour
						36 months
				Mechanical Plant-3		550 tonnes/hour
						16 months
				Asphalt Plant-3		550 tonnes/hour
						16 months
Km 134+000	Antalya	Alanya	Soğukpınar	Soğukpınar Quarry	251,000	375 m^3/hour
						36 months

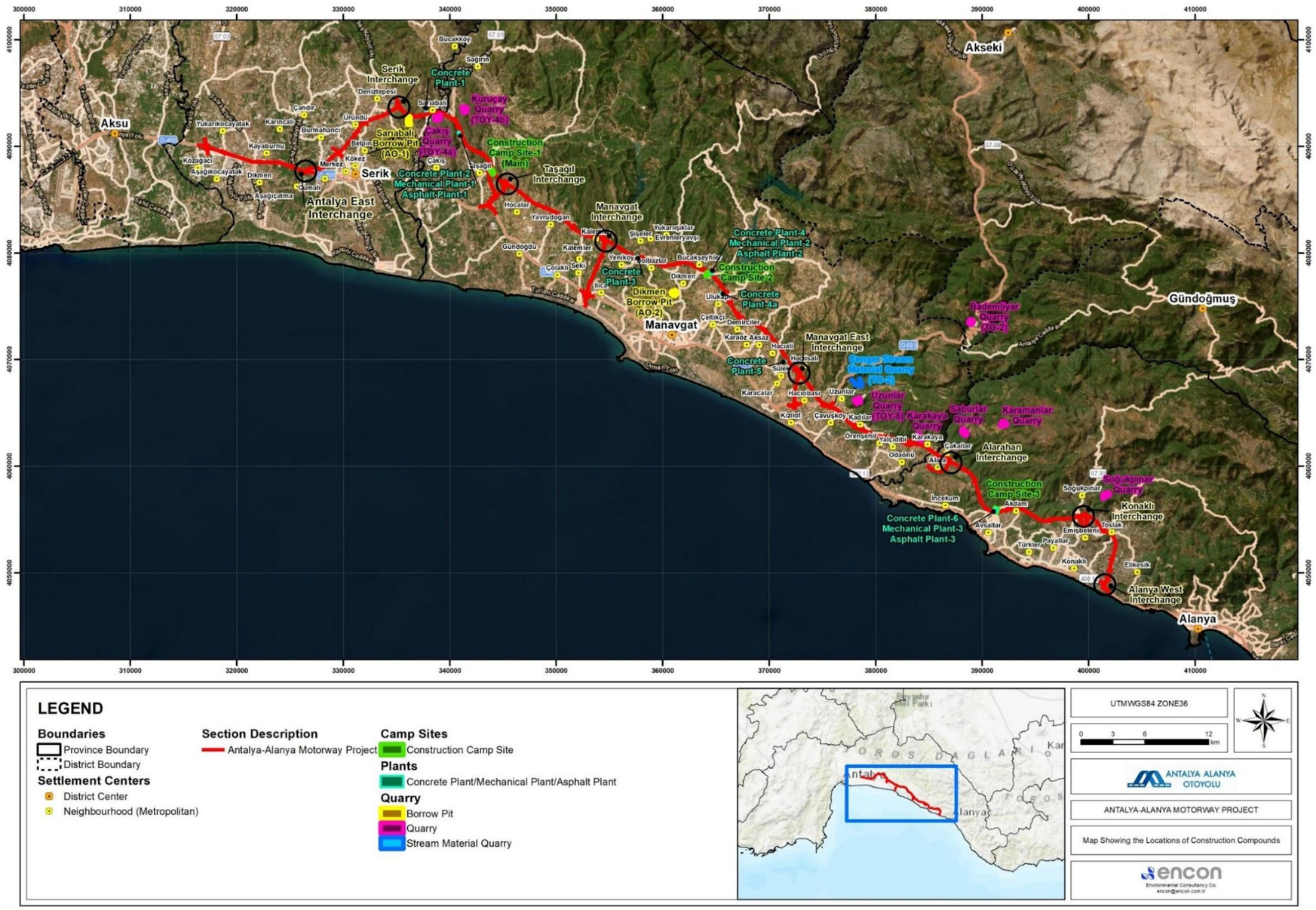

Figure V-2.Spatial Distribution of Construction Camp Sites, Plants, and Material Sources along the Project Route

To assess the potential vibration impacts caused by blasting activities, sensitivity analyses were conducted individually for the settlements that may be affected by the planned tunnel and cut blasting operations. The results of these analyses are presented below.

To support these findings, blast vibration assessments were carried out to identify areas that may be subject to potential impacts based on their proximity to vibration-sensitive structures. For tunnels (Table V-2**Error! Reference source not found.**), and cuts and foundations (Table V-3), the vibration limits are set at 10 mm/s for durable structures and 5 mm/s for vibration-sensitive structures such as mosques, cultural heritage sites, and schools. In contrast, for quarries and borrow pits (Table V-4), the allowable limits increase to 15 mm/s for durable structures and 8 mm/s for vibration-sensitive structures. These assessments help determine which environments could pose risks to sensitive sites and guide the implementation of appropriate safety standards.

Table V-2.Blast Vibration assessment for tunnels with vibration of 10mm/s for durable structures and 5 mm/s for vibration sensitive structure

Blasting Location	KM	Nearest Settlement/Cultural Heritage Sites	Distance to Sensitive Structures (m)	W (kg)	V (mm/s)	Exceedence of the limit of 10 mm/s for Durable Structures	Exceedence of the limit of 5 mm/s for Vibration Sensitive Structures	Vibration Impact
Tunnel 1	Start Km: 54+311	Sarıabalı	158	10.82	3.77	**-6.23**	**-1.23**	**No Impact**
	End Km: 55+378		40	10.82	34.19	**24.19**		**Potential Impact**
	End Km: 55+378	HRM 8*	177	10.82	3.14		**-1.86**	**No Impact**
	Start Km: 54+311	Student Hostel	700	10.82	0.35		**-4.65**	**No Impact**
Tunnel 2	Start Km: 57+366	Çakış	215	10.82	2.30	**-7.70**		**No Impact**
	End Km: 57+985		750	10.82	0.31	**-9.69**		**No Impact**
	Start Km: 57+366	HRM 8*	53	10.82	21.77		**16.77**	**Potential Impact****
Tunnel 3	Start Km: 60+935	Taşağıl	195	10.82	2.69	**-7.31**		**No Impact**
	End Km: 62+477		80	10.82	11.24	**1.24**		**Potential Impact**
	End Km: 62+477	HRM 11*	196	10.82	2.67		**-2.33**	**No Impact**
	End Km: 62+477	Mosque	845	10.82	0.26		**-4.74**	**No Impact**
Tunnel 4	Start Km: 70+131	HRM 16*	163	10.82	3.59		**-1.41**	**No Impact**
	End Km: 70+475		60	10.82	17.84		**12.84**	**Potential Impact****
	End Km: 70+475		60	10.82	17.84		**12.84**	**Potential Impact****
Tunnel 5	Start Km: 88+671	Ulukapı	150	10.82	4.10	**-5.90**		**No Impact**
	End Km: 89+544		110	10.82	6.74	**-3.26**		**No Impact**
	End Km: 89+544	HRM 36*	248	10.82	1.83		**-3.17**	**No Impact**
	End Km: 89+544	Mosque	854	10.82	0.25		**-4.75**	**No Impact**

**See Chapter 13 of ESIA for the details of the locations of Cultural Heritage sites*
*** Site-specific vibration measures for the protection of cultural heritage sites have been detailed in the Table XI.35 of ESIA to address these potential impacts*

Table V-3.Blast vibration assessment for Quarries and Borrow Pits with vibration of 15mm/s for durable structures and 8 mm/s for vibration sensitive structure

Blasting Location	KM	Nearest Settlement/Cultural Heritage Sites	Distance to Sensitive Structures (m)	W (kg)	V (mm/s)	Exceedence of the limit of 15 mm/s for Durable Structures	Exceedence of the limit of 8 mm/s for Vibration Sensitive Structures	Vibration Impact
Sarıabalı (AO-1) Borrow Pit	Km 53+800	Sarıabalı	63	10.82	16.49	**1.49**		**Potential Impact**
		Student Hostel	720	10.82	0.33		**-7.67**	**No Impact**
Çakış (TOY4a) Quarry	Km 56+500	Çakış	180	10.82	3.06	**-11.94**		**No Impact**
		Mosque	570	10.82	0.48		**-7.52**	**No Impact**
Kuruçay (TOY4b) Quarry	Km 58+500	Sağırin	800	10.82	0.28	**-14.72**		**No Impact**
		HRM 8*	720	10.82	0.33		**-7.67**	**No Impact**
Dikmen Borrow Pit	Km 83+000	Sarılar	100	10.82	7.86	**-7.14**		**No Impact**
		HRM 20*	100**	10.82	7.82	**-**	**-0.18**	**No Impact**
		Mosque	770	10.82	0.30		**-7.70**	**No Impact**
Bademliyar (TO2) Quarry	Km 104+750	Güçlüköy	1060	10.82	0.18	**-14.82**		**No Impact**
		School	1060	10.82	0.18		**-7.82**	**No Impact**
Uzunlar (TOY5) Quarry	Km 106+000	Uzunlar	910	10.82	0.23	**-14.77**		**No Impact**
Karakaya Quarry	Km 114+200	Karakaya	460	10.82	0.68	**-14.32**		**No Impact**
		School	620	10.82	0.42		**-7.58**	**No Impact**
Saburlar Quarry	Km 117+000	Saburlar	71	10.82	13.61	**-1.39**		**No Impact**
		Mosque	400	10.82	0.85		**-7.15**	**No Impact**
Karamanlar Quarry	Km 119+500	Karamanlar	366	10.82	0.98	**-14.02**		**No Impact**
Soğukpınar Quarry	Km 134+000	Toslak	326	10.82	1.18	**-13.82**		**No Impact**

** See Chapter 13 of ESIA for the details of the locations of Cultural Heritage sites*
*** Site-specific vibration measures for the protection of cultural heritage sites have been detailed in the Table XI.35 to address these potential impacts*

Table V-4.Blast Vibration Assessment for Cut, and Foundation with vibration of 10mm/s for durable structures and 5 mm/s for vibration sensitive structure

Blasting Location	KM	Nearest Settlement/Cultural Heritage Sites	Distance to Sensitive Structures (m)	W (kg)	V (mm/s)	Exceedence of the limit of 10 mm/s for Durable Structures	Exceedence of the limit of 5 mm/s for Vibration Sensitive Structures	Vibration Impact
Cut and Foundation	Serik Access Road Km 2+000	Sarıabalı	30	10.82	54.26	**44.26**		**Potential Impact**
		Mosque	820	10.82	0.27		**-4.73**	**No Impact**
	Serik Access Road Km 1+700	HRM 58	10**	10.82	316.41	**-**	**311.41**	**Potential Impact**
	Km 52+500	Deniztepesi	125	10.82	5.49	**-4.51**		**No Impact**
		HRM 5*	5**	10.82	962.52	**-**	**957.52**	**Potential Impact**
	Km 53+500	Sarıabalı	60	10.82	17.84	**7.84**		**Potential Impact**
		Student Hostel	990	10.82	0.20		**-4.80**	**No Impact**
	Km 58+800	HRM 9*	-**	10.82	-	**-**	**-**	**No Impact**
	Km 66+200	Hocalar	91	10.82	9.14	**-0.86**		**No Impact**
	Km 66+500	HRM 12*	332	10.82	1.15		**-3.85**	**No Impact**
	Km 73+500	Yavrudoğan	32	10.82	48.92	**38.92**		**Potential Impact**
	Km 76+500	Kalemler	26	10.82	68.27	**58.27**		**Potential Impact**
		Mosque	235	10.82	1.99		**-3.01**	**No Impact**
	Km 79+000	Yeniköy	110	10.82	6.74	**-3.26**		**No Impact**
	Km 84+000	Yukarıışıklar	62	10.82	16.92	**6.92**		**Potential Impact**
		Mosque	640	10.82	0.40		**-4.60**	**No Impact**
	Km 85+000	Dikmen	65	10.82	15.69	**5.69**		**Potential Impact**
		HRM 27*	166	10.82	3.48		**-1.52**	**No Impact**
		Mosque	290	10.82	1.42		**-3.58**	**No Impact**
	Km 94+500	Karaöz	57	10.82	19.37	**9.37**		**Potential Impact**
	Km 95+500	Aksaz	44	10.82	29.34	**19.34**		**Potential Impact**
		HRM 38*	15**	10.82	165.06	**-**	**160.06**	**Potential Impact**
	Km 97+500	Hacıali	51	10.82	23.15	**13.15**		**Potential Impact**
		School	510	10.82	0.57		**-4.43**	**No Impact**
	Km 100+500	Hacıaisalı	56	10.82	19.93	**9.93**		**Potential Impact**
	Km 104+500	Uzunlar	121	10.82	5.79	**-4.21**		**No Impact**
		HRM 41*	20	10.82	104.02		**99.02**	**Potential Impact**
		Mosque	260	10.82	1.70		**-3.30**	**No Impact**
	Km 105+500	Uzunlar	144	10.82	4.38	**-5.62**		**No Impact**
		School	800	10.82	0.28		**-4.72**	**No Impact**
	Km 112+000	Yalçıdibi	35	10.82	42.37	**32.37**		**Potential Impact**
		HRM 45*	30	10.82	54.26		**49.26**	**Potential Impact**

Blasting Location	KM	Nearest Settlement/Cultural Heritage Sites	Distance to Sensitive Structures (m)	W (kg)	V (mm/s)	Exceedence of the limit of 10 mm/s for Durable Structures	Exceedence of the limit of 5 mm/s for Vibration Sensitive Structures	Vibration Impact
		Mosque	660	10.82	0.38		**-4.62**	**No Impact**
	Km 116+000	HRM 47*	258	10.82	1.72		**-3.28**	**No Impact**
	Km 116+500	Çakallar	53	10.82	21.77	**11.77**		**Potential Impact**
		School	330	10.82	1.16		**-3.84**	**No Impact**
	Km 118+500	Çakallar	55	10.82	20.51	**10.51**		**Potential Impact**
	Km 120+800	HRM 57*	10**	10.82	316.41	**-**	**311.41**	**Potential Impact**
	Km 121+500	Hacılar	587	10.82	0.46	**-9.54**		**No Impact**
		Mosque	876	10.82	0.24		**-4.76**	**No Impact**
	Km 124+000	Avsallar	211	10.82	2.37	**-7.63**		**No Impact**
	Km 126+500	Akdam	30	10.82	54.26	**44.26**		**Potential Impact**
		Mosque	250	10.82	1.81		**-3.19**	**No Impact**
	Km 130+000	Türkler	130	10.82	5.16	**-4.84**		**No Impact**
		Mosque	350	10.82	1.05		**-3.95**	**No Impact**
	Km 133+000	Soğukpınar	39	10.82	35.61	**25.61**		**Potential Impact**
	Km 133+800	HRM 50*	74	10.82	12.74		**7.74**	**Potential Impact****
	Km 136+000	Toslak	65	10.82	15.69	**5.69**		**Potential Impact**
		HRM 51*	100	10.82	7.86		**2.86**	**Potential Impact****
		HRM 52*	106	10.82	7.16		**2.16**	**Potential Impact****
	Km 140+000	Konaklı	27	10.82	64.26	**54.26**		**Potential Impact**
		HRM 53*	26	10.82	68.27		**63.27**	**Potential Impact****
		Mosque	630	10.82	0.41	**-9.59**		**No Impact**
	Km 141+500	Mosque	250	10.82	1.81	**-8.19**		**No Impact**

** See Chapter 13 of ESIA for the details of the locations of Cultural Heritage sites*
*** Site-specific vibration measures for the protection of cultural heritage sites have been detailed in the Table XI.35 of ESIA to address these potential impacts.*

VI. MITIGATION MEASURES FOR IMPACTS OF NOISE AND VIBRATION

AAOİAŞ will be responsible for managing noise and vibration in accordance with the provisions of the Environmental Law (Law No. 2872), the relevant implementing regulations, and applicable international standards. . Mitigation measures will be implemented during the construction phase of the Project. On-site specification, implementation, and supervision of these measures will be under the responsibility of the Environmental Department.

To minimize noise a impacts on nearby sensitive receptors and to ensure compliance with applicable legal limits, the following mitigation measures should be implemented throughout the construction phase:

- Equipment and machinery with lower sound power levels and noise-reduced models will be prioritized when possible and feasible.
- Newer and/or well-maintained vehicles, machinery and equipment will be preferred for procurement.
- Maintenance of construction machinery and equipment will be carried out regularly.
- Silencers will be installed on appropriate machinery and equipment, including mechanical plants machinery and construction vehicle exhausts.
- Portable barriers and acoustic enclosures will be installed around noise-generating stationary machinery, such as power generators, if necessary.
- Speed limits for construction vehicles will be enforced, particularly near sensitive areas.
- Traffic through residential areas will be minimized wherever possible. Dedicated site access roads will be constructed to reach Project components (campsites, the Motorway, quarries etc.) to avoid disturbances in residential areas when necessary.
- Noise monitoring will be conducted during the construction phase according to the Environmental Monitoring Plan Noise levels in nearby settlements will be regularly monitored, and corrective measures will be taken immediately if any exceedance of national regulation and/or international standard limits is detected.
- Any noise related complaints received through the Project's Grievance Mechanism will be assessed, and corrective actions will be implemented as necessary.
- Construction vehicles will not be permitted to keep engines running while waiting to enter the site or waiting on-site.
- Ancillary components in campsites, such as power generators, will be placed with consideration of potential noise disturbances.
- The Motorway alignment will be used for transportation whenever feasible.
- Roads used during the construction of the Motorway will be well maintained.
- Site personnel will be trained to carry out construction activities using noise-reduction methods.
- Vegetated buffer zones should be established between service areas and the road corridor to provide natural noise barriers.
- During the construction phase of the motorway in the Sarıabalı region, it is therefore recommended that machinery and equipment to be used in this area be selected based on low noise emission criteria, and that quarterly (monitoring will be conducted more frequently depending on the intensity of construction work) regular noise monitoring be conducted to ensure compliance with applicable noise limits.

To minimize vibration impacts and ensure compliance with regulatory thresholds, the following measures should be implemented:

- Modern blasting techniques will be employed to minimize vibration, including the use of millisecond delays with low charge weights, which will be determined based on geological formation and rock density.
- Vibration monitoring should be conducted during activities such as piling and blasting, particularly in sensitive areas. Where exceedances are observed, equipment and

methodologies generating lower vibration levels should be adopted.

- To prevent excessive vibration, alternative piling methods (e.g., bored piles instead of driven piles) should be used where feasible.
- The number of blasted holes per shot and total charge amounts per shot will be optimized to comply with the regulatory limit values and minimize fly rock incidents. All blast vibrations will be monitored by using vibrometers to be placed at appropriate locations, with records kept on charge amounts, delays, distance to blast sites, and resulting vibration levels. Blasting activities will adhere to the limit values specified in the Regulation on Environmental Noise Control for ground vibrations.
- Blasting activities will adhere to the limit values specified in the Regulation on Environmental Noise Control for ground vibrations. Records of air shock and vibration measurements will be maintained, and compliance with regulatory limit values will be monitored to minimize impacts on local residents.
- The Construction Noise and Vibration Guide (NSW Government, Transport, Roads and Maritime Services, 2016) recommend minimum working distances from sensitive receptors for vibrating construction equipment. Recommended working distances will be taken into account.
- Prior to the blasting operations, the sensitivity of nearby settlements/buildings against noise and vibration will be assessed. Buildings located within 100 meters of major vibration sources will be identified and assessed for vibration sensitivity prior to construction. Structural conditions of buildings located within 100 meters of the motorway alignment will be recorded before and after construction works to assess any possible vibration-induced damage.
- Detailed records of blasting operations will be kept and blasting related impacts will be closely monitored.
- The number of blasted holes per shot and total charge amounts per shot will be optimized to comply with the regulatory limit values and minimize fly rock incidents. During blasting activities will be kept on charge amounts, delays, distance to blast sites, and resulting vibration levels. During blasting activities, compliance with the limit will be monitored in potential sensitive receptors.
- The Project's grievance mechanism will be active for any complaints related to vibration impacts. Complaints will be thoroughly evaluated, and corrective actions will be implemented as necessary.

The significance of identified impacts before and after the implementation of mitigation measures is presented in the table. During the land preparation and construction phase, noise levels in certain areas—such as Sarıabalı—were found to exceed national daytime limits by up to 3 dB(A), also surpassing IFC's 55 dB(A) threshold. With the implementation of noise control measures, such as proper scheduling, equipment maintenance, and where necessary, temporary barriers, these impacts are expected to be reduced to acceptable levels. Vibration impacts during construction are expected to cause short-term disturbances, particularly near sensitive receptors, but are anticipated to remain within medium to low levels after mitigation. It should be noted that high baseline noise levels in some locations contribute significantly to the overall impact, underscoring the need for continued mitigation and monitoring throughout the Project lifecycle.

VII. TRAINING

Upon hiring, all staff will receive structured training addressing sources of noise and vibration, associated health and environmental risks, and potential impacts on nearby sensitive receptors, along with the corresponding mitigation strategies applicable to their responsibilities within the Project (e.g., appropriate use of protective equipment, operation of low-noise equipment, and adherence to designated work hours). In addition, personnel assigned to noise and vibration monitoring will be provided with specialized training to ensure accurate, effective, and compliant performance of their duties.

VIII. MONITORING

A structured internal monitoring program will be implemented to assess the effectiveness of the noise and vibration mitigation measures outlined in this Plan during the construction and operation phases of the Project. The scope and frequency of monitoring activities will be periodically reviewed and revised where necessary, based on site-specific conditions, noise and vibration trends, stakeholder concerns, or changes in applicable environmental regulations.

Monitoring activities will be coordinated by the Environmental and Social (E&S) Manager (SPV) in close collaboration with the Health and Safety (H&S) Manager (SPV) and the Engineering, Procurement and Construction (EPC) Contractor Director. Key responsibilities will include verifying the implementation of noise and vibration mitigation measures, evaluating the proper functioning and maintenance of construction machinery, and ensuring the consistent application of noise control strategies near sensitive receptors such as residential areas, schools, and healthcare facilities.

Environmental noise level (dBA) will be measured at selected settlements during construction (quarterly or upon complaint) and operation (annually) and compared with legal limit values and Project-specific standards. These measurements will be used to evaluate compliance and identify any needs for corrective actions.

Monitoring activities will include site inspections, review of non-conformance records, and collection of feedback through the Project's Grievance Mechanism. In addition, personnel will be trained to carry out monitoring responsibilities and respond to identified issues.

Performance of contractors and subcontractors in implementing noise and vibration management requirements will be reviewed through environmental audits, site supervision reports, and field observations. Any non-conformities will trigger corrective and preventive action plans. Follow-up assessments will be carried out to confirm the effectiveness of the implemented measures and to prevent recurrence.

In addition to internal monitoring, inspections may be conducted by public institutions, including the Ministry of Environment, Urbanization and Climate Change, in accordance with Turkish legislation. The frequency and scope of these inspections will be determined by the authorities and may include review of monitoring records, implementation practices, and compliance documentation.

Monitoring efforts will be guided by the framework provided in Table VIII.1, which outlines the parameters to be monitored, the corresponding monitoring locations, monitoring methods, frequency, and responsible parties. These monitoring activities are essential for evaluating the effectiveness of

noise and vibration control measures and ensuring full compliance with national regulations and Project standards.

Table VIII-1 Key Monitoring Activities

Parameter	Monitoring Station / Location	Monitoring Method	Monitoring Frequency	Responsible Parties
Environmental noise level (dBA)	Sensitive Receptors considering all Project components including: Construction camp sites, borrow pits, quarries, stream material quarries, asphalt plants, concrete plants, mechanical plants, and nearby residential areas	Site measurements (24-hour average)	Quarterly/ Monthly and upon grievance (depending on the intensity of construction work and the sensitivity of location)	-SPV -EPC -Sub-Contractor -Accredited laboratories
Environmental noise level (dBA)	Sarıabalı District (Sensitive Receptor)	Site measurements (24-hour average)	Quarterly/ Monthly and upon grievance (depending on the intensity of construction work)	-SPV -EPC -Sub-Contractor -Accredited laboratories
Number of non-conformance records related to noise emission management	Project construction areas	Review and control of non-conformance logs	Quarterly	Environmental Eng. (SPV) and Environmental Eng. (EPC)
Number of complaints related to noise emission management	Communities and stakeholders in project vicinity	Documentation under the GM Procedure	Weekly	CLO - SPV and EPC
Ground vibration value	Sensitive Receptors considering all Project components including: Construction camp sites, borrow pits, quarries, stream material quarries, asphalt plants, concrete plants, mechanical plants, and nearby residential areas	Measurement with vibrometer	Quarterly and upon grievance	-SPV -EPC -Sub-Contractor -Accredited laboratories
Number of non-conformance records related to vibration management	Project construction areas	Review and control of non-conformance logs	Quarterly	Environmental Eng. (SPV) and Environmental Eng. (EPC)
Number of complaints related to vibration management	Communities and stakeholders in project vicinity	Documentation under the GM Procedure	Weekly	CLO - SPV and EPC
Number of training sessions conducted	Project personnel and contractor workers	Tracking and recording training delivery	Quarterly	E&S Manager / Deputy E&S Manager (SPV)

In cases of non-compliance identified through internal oversight or external audits, AAOİAŞ will ensure that corrective and preventive measures are promptly implemented in coordination with the Contractor (Limak) and relevant subcontractors.

All noise and vibration-related findings, including exceedances, non-compliance incidents, or complaints received from surrounding communities, will be documented in accordance with national

environmental regulations and Project procedures. In the event of serious violations—such as significant exceedance of regulatory limits—AAOİAŞ will ensure that the issue is reported to the competent authorities and that appropriate technical, procedural, and contractual actions are taken.

IX. KEY PERFORMANCE INDICATORS

The following Key Performance Indicators (KPIs) will be monitored, verified, and evaluated.

Table IX-1 Key Performance Indicators – Construction Phase KPIs

Monitoring Parameter / Performance Indicator	Target	Frequency	Responsible Party
Percentage of noise monitoring results in compliance with standards referenced in Chapter II.	100%	Quarterly	Environmental Specialist (EPC)
Percentage of vibration monitoring results in compliance with standards referenced in Chapter II.	100%	Quarterly	Environmental Specialist (EPC)
Inspection report coverage for buildings within 100meters of major vibration sources	100%	Monthly	Environmental Specialist (EPC) and Environmental Engineer (EPC)
Number of penalties issued by authorities related to noise exceedances	< 20	Monthly	Environmental and Social (E&S) Manager (SPV)
Complaints related to noise	90% of complaints resolved within two weeks	Continuous (upon each complaint)	Community Liaison Officer (CLO, SPV), and Social Chief (EPC)
Complaints related to vibration	90% of complaints resolved within two weeks	Continuous (upon each complaint)	Community Liaison Officer (CLO, SPV), and Social Chief (EPC)

X. AUDIT AND REVIEW

The implementation of this Plan should be regularly monitored and reviewed in accordance with the ESMMP. All noise- and vibration-related non-conformities, incidents, and complaints should be documented and reported as outlined in this Plan. Contractors and subcontractors should be subject to audits conducted by the Project Sponsor, in line with the scope and schedule defined in the Supply Chain and Subcontractor Management Plan. These audits and the associated records should be managed in compliance with the Project's environmental and social management procedures. Records to be reviewed during noise and vibration audits will include, but are not limited to, the external and internal grievance and suggestion tracking databases, records of training sessions related to noise and vibration management, non-conformity and incident records, noise and vibration monitoring results, and any documentation of mitigation measures applied near sensitive receptors. Observations and deficiencies identified during audits should be documented in formal audit reports, and all findings requiring improvement should be registered under Corrective Actions. Project management should review audit outcomes and corrective action records, follow up on progress, and ensure that additional measures are implemented where necessary to maintain compliance with national regulations and applicable international performance standards on noise and vibration management.

XI. REPORTING

Regular reporting should be conducted to ensure the effective implementation and continuous improvement of noise and vibration management activities throughout the construction phase of the Project. Reporting should be structured to address both internal monitoring and auditing outcomes, as well as external compliance obligations and stakeholder engagement requirements.

Based on monitoring results, necessary corrective and preventive actions should be identified, and any required updates should be incorporated into this Plan. The training program will also be revised accordingly to address observed gaps. Regular audits and site inspections should be conducted to verify that all activities are being undertaken in accordance with the provisions of this Plan.

Reports should be prepared using data gathered through noise and vibration monitoring activities defined under this Plan. The results and supporting evidence of these monitoring activities (e.g., noise level measurements, vibration monitoring logs, and photographs) should be documented in detail using standardized reporting formats. This section of the Plan outlines the instructions and requirements for implementing these reporting activities.

Reporting activities under this Plan will include noise monitoring data (e.g., dBA levels), the number and nature of vibration-related inspections, training records, mitigation measures implemented at noise-sensitive receptors, and any non-compliance findings. In the event of significant environmental incidents related to noise or vibration (e.g., complaints from sensitive receptors, exceedance of permissible noise or vibration limits), an incident report including root cause analysis (RCA), mitigation, and corrective actions will be prepared.

All monitoring data, together with the outcomes of inspections and audits, will be summarized in the noise and vibration section of the Environmental and Social Monitoring Report prepared on a quarterly basis. This report will include any non-compliances identified, corrective actions taken, and recommendations for time-bound corrective measures. All findings should be supported with documentary evidence, such as site photos, field logs, and measurement results.

All personnel are encouraged to raise concerns, suggestions, or complaints related to noise and vibration management through the established grievance mechanism by completing the designated grievance form. Public grievances regarding construction or traffic noise, ground-borne vibration, or any other related disturbances should also be addressed promptly and followed up accordingly. The available channels for submitting grievances are outlined in the Stakeholder Engagement Plan.

Throughout the construction phase of the Project, this Plan will be reviewed by the Environmental and Social (E&S) Manager (SPV), based on the results of audits, incident reports, and any significant changes in site activities or conditions. Updates to the Plan will be agreed upon between the Environmental and Social (E&S) Manager (SPV), ensuring that it remains responsive to evolving project risks and compliance requirements.

CHANGE MANAGEMENT PLAN

REVISION STATUS		
Revision Date	**Rev. No**	**Explanation**
01.04.2025	00	This plan is prepared according to TS EN ISO/IEC 9001:2015, TS EN ISO/IEC ISO 14001:2015, TS EN ISO/IEC 45001:2018 and IFC Performance Standards
23.05.2025	01	Revision
16.06.2025	02	Revision as per revision made under ESDD submitted by the Lender consultant
08.09.2025	03	Revision as per revision made under ESDD submitted by the Lender consultant

CHANGE MANAGEMENT PLAN

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AAOİAŞ	Antalya-Alanya Otoyolu İnşaat Yatırım ve İşletme A.Ş.
CLO	Community Liaison Officer
E&S	Environmental and Social
EHS	Environmental, Health, and Safety
ESIA	Environmental and Social Impact Assessment
ESMMP	Environmental and Social Management and Monitoring Plan
ESMS	Environmental and Social Management System
EU	European Union
IFC	International Finance Corporation
KGM	General Directorate of Highways
LACRP	Land Acquisition and Compensation/Resettlement Plan
SEP	Stakeholder Engagement Plan

I. INTRODUCTION

Ministry of Transport, and Infrastructure (former Ministry of Transport, Maritime Affairs and Communications), General Directorate of Highways ("KGM" or "the Administration"), as the owner of the Antalya-Alanya Motorway Project, has tendered for a contract in accordance with the Law on Implementation of Some of the Investments and Services in the Framework of Build, Operate and Transfer Model (Law No: 3996). Following the tendering process, KGM has awarded Antalya-Alanya Otoyolu İnşaat Yatırım ve İşletme A.Ş. (AAOİAŞ or the Project Sponsor) with a Build, Operate and Transfer (BOT) contract for the implementation of the Project. Accordingly, AAOİAŞ will be referred as Project Sponsor[1] in the scope of this report. The main contractor for the Project has been designated as Limak and will henceforth be referred to as the Contractor (or EPC).

The project is designed to connect the districts of Serik and Alanya via the Manavgat district of Antalya province. The Project will enhance the existing transportation network services with its surrounding provinces: Burdur, Muğla, Konya, Isparta, Karaman and Mersin. Various environmental, social, and technical studies have been conducted along the initial route of the Project tendered by the KGM. Based on these studies, the route was optimized, incorporating engineering practices and addressing environmental and social considerations, particularly issues of involuntary and economic resettlement, before being finalized. According to the most current design, the total length of the Motorway, which will be a dual carriageway of mostly 3 and partially 2 lanes (3x2 and 2x2) in each direction, is 117.8 kilometers including the main carriageway and the access roads[2].

This Change Management Plan ("CMP" or "Plan") has been prepared by Antalya-Alanya Highway Construction Investment and Operation Inc. ("AAOİAŞ" or "SPV") for the Antalya-Alanya Highway Project ("Project") in accordance with national legislation, the Equator Principles ("EP"), the International Finance Corporation ("IFC") Performance Standards ("PSs"), and the international standards that reference the relevant legislative sections. The Plan covers the construction phase of the Project.

II. PURPOSE AND SCOPE

This Change Management Plan ("the Plan") has been prepared for the Antalya-Alanya Motorway Project ("the Project").

The purpose of this Plan is to define the procedure that should be followed for identifying, documenting, evaluating, approving, and implementing changes that may arise during the construction phase of the Project. The Plan aims to ensure that any proposed changes to the Project—especially those that deviate from the scope and commitments defined in the ESIA—are managed systematically and transparently.

This management plan is a living document developed with the best available information and will be reviewed and revised as necessary due to the nature of the construction and progress.

This Plan should be implemented by all relevant parties, including the Project Sponsor (Antalya-Alanya Otoyolu İnşaat Yatırım ve İşletme A.Ş. - AAOİAŞ), the Main Contractor (Limak), and all subcontractors involved in the construction phase. Responsibilities for change identification, assessment, mitigation planning, and documentation should be clearly defined.

[1] The BOT Contract uses the term "Appointed Company" to refer Project Sponsor

[2] It should be noted that the environmental and social baseline characterization, maps and scoping assessments provided in this report are based on the most current design

To ensure that the potential environmental and social risks associated with changes are adequately managed, the procedure described in this Plan incorporates applicable Turkish legislation as well as relevant international standards and requirements of international financial institutions. Necessary updates to the Plan should be made when there are modifications to the project design, construction methodology, or legal framework.

III. LEGISLATIVE FRAMEWORK AND REFERENCE STANDARDS

The Plan has been structured to align with both national and international requirements, including legislation, guidelines, and sectoral standards that govern project change processes and environmental compliance obligations. Accordingly, the following sources of reference should be used to guide the implementation and compliance procedures.

III.1 National Requirements

The following Turkish laws and regulations should be used as the legal basis for managing project changes during construction:

- Environmental Law
- Electricity Market Law
- Energy Efficiency Law
- Expropriation Law
- Forestry Law
- Groundwater Law
- Labor Law
- Law on the Conservation of Cultural and Natural Assets
- Law on Improvement of Olive Cultivation and Budding of Wild Species
- Law on Soil Protection and Land Use
- Municipality Law
- National Parks Law
- Occupational Health and Safety Law
- Pasture Law
- Public Hygiene Law
- Resettlement Law
- Highway Traffic Law

III.2 International Standards and Conventions

In addition to national requirements, the following international guidelines and agreements should be considered to ensure alignment with best practices and financial institution requirements:

- IFC Performance Standards (2012), specifically:
  - Performance Standard 1: Assessment and Management of Environmental and Social Risks and Impacts
- IFC Environmental, Health and Safety (EHS) General Guidelines (2007)
- IFC EHS Guidelines for Toll Roads (2007)
- IFC Guidance Notes (2012)
- Equator Principles IV (2020)

These references should be used to guide the implementation, monitoring, and performance evaluation of change management procedures throughout the construction phase.

IV. LINKAGE WITH OTHER PROJECT PLANS AND PROCEDURES

This Plan is supported by other management plans and procedures developed under the Environmental and Social Management System (ESMS) of the Project. The following plans and procedures are particularly relevant and should be implemented in coordination with this Plan:

- Environmental Accident and Spill Response Management Plan
- Cultural Heritage Management Plan
- Air Pollution and Emissions Management Plan
- Noise and Vibration Management Plan
- Traffic Management Plan
- Community Health and Safety Management Plan
- Occupational Health and Safety Management Plan
- Hazardous Material Management Plan
- Water, Wastewater, and Storm Water Management Plan
- Solid Waste Management Plan
- Training and Communication Management Plan
- Subcontractor Management Plan
- Construction Camp Site Management Plan
- Environmental and Social Management and Monitoring Plan (ESMMP)

The effective integration of these plans should be ensured to maintain compliance with national regulations and international standards and to minimize the cumulative environmental and social impacts of construction activities.

V. ROLES AND RESPONSIBILITIES

SPV E&S Manager:

- Responsible for reviewing and approving the change proposals, ensuring compliance with national regulations and international standards. Provides these oversight to EPC and monitors the correct application of changes.

Project Manager (EPC):

- Provides resources and supports EPC E&S and H&S managers for implementation.

EPC E&S Manager:

- Responsible for implementing the approved changes on site, ensuring all E&S requirements are integrated into construction activities, and reporting progress/challenges to SPV. Coordinates with site supervisors and subcontractors for effective implementation.

H&S Manager (EPC):

- Ensures that proposed and implemented changes are evaluated for occupational health and safety risks, communicates change requirements to workers, and verifies them.

Supervisors (EPC):

- Apply the changes at field level, ensure workers are briefed, and provide feedback to managers about practicality and challenges.

VI. CHANGE MANAGEMENT APPROACH

Changes in such infrastructure projects are considered typical, within this regard there might be changes required for the design and construction methods of the Project. While the most of the changes will be technical with little to no ESIA relevance, the others are expected to be issues that are already covered by the ESIA studies and the Resettlement Action Plan (RAP). An overview of the Change Management Procedure is provided in Figure V.1.

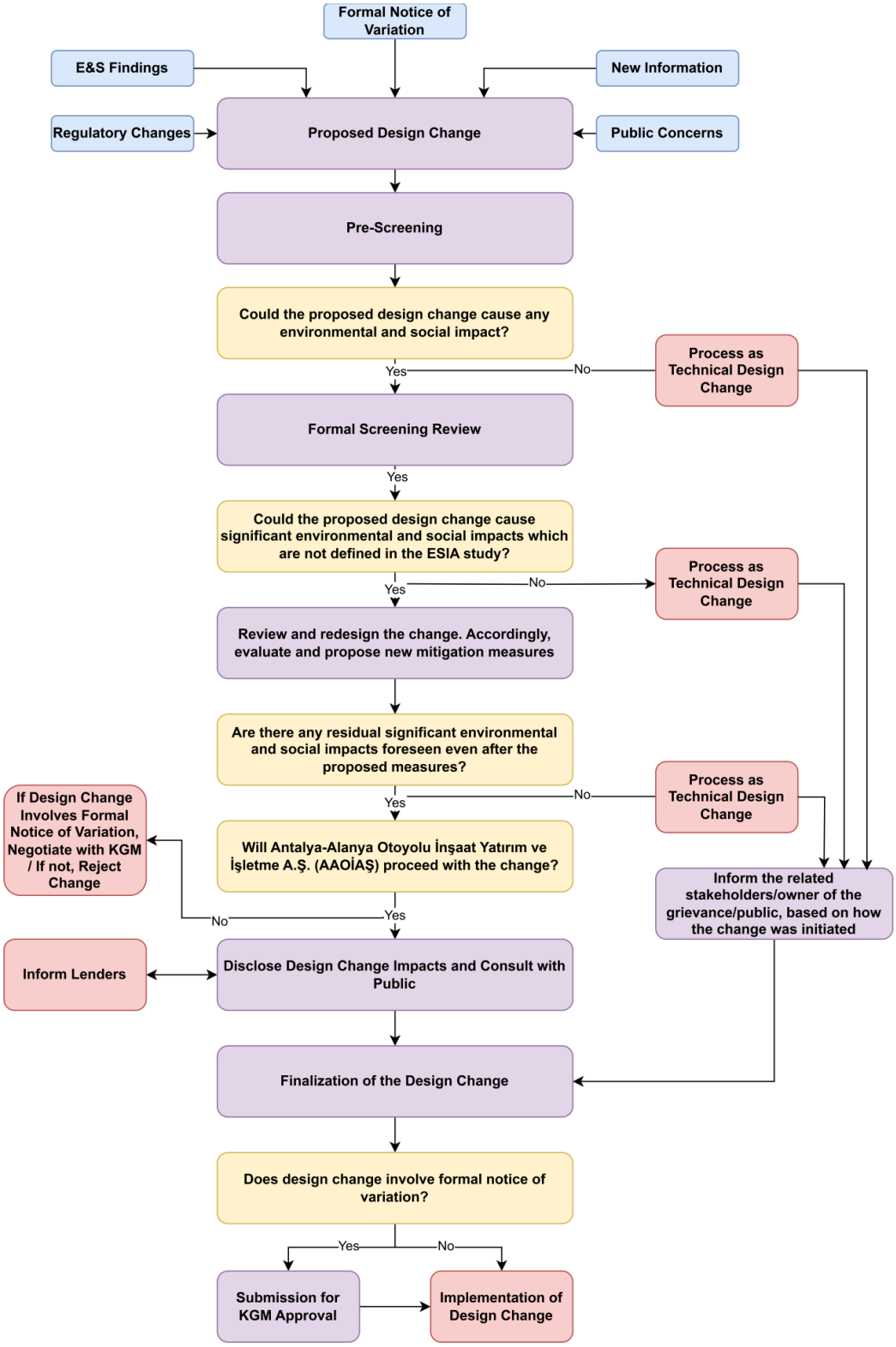

Figure VI-1.Overview of Change Management Approach

VI.1 Sources for Consideration of Change

Possible design changes might occur due to various reasons given below:

- Requests from KGM;
- Detailed design development;
- Changes in construction methodologies;
- Changes in regulations;
- The accepted considerations of the stakeholders raised through the grievance mechanism,
- Concerns expressed by public/stakeholders/lenders; and
- Results of field surveys and monitoring activities.

In addition to the above given cases, change management procedure must be processed formally regardless of the case.

VI.2 Pre-Screening

Pre-screening will ensure that proposed design changes that are not related with the environmental and social issues or that are low in significance in terms of project implementation, will not be evaluated for further screening. If the proposed design changes will not be subjected to further screening, the change will be processed as technical design change. Pre-screening will be performed by Environmental and Social Department of the AAOİAŞ with the support from independent experts, if needed.

VI.3 Screening

For any proposed design changes that could result in new or additional significant impacts which are not defined in the ESIA study, the screening will cover the following process:

- Compliance with Turkish and international regulations and standards;
- Compliance with ESIA-related legal standards and permitting requirements;
- Any new impacts on current stakeholders and impact to new/additional stakeholders which are not considered in ESIA study;
- Any expansion of Project's footprint that requires additional land acquisition and expropriation;
- Impacts on cultural heritage/archaeology; and
- Any additional/different ESIA-related topics that are not evaluated in the ESIA studies.

The screening will be performed by Environmental and Social Department of the AAOİAŞ with the support from independent experts, if needed. Screening results will be logged and recorded in a suitable format (to be determined by AAOİAŞ and Lenders). The screening results will be available for review by the Lenders.

The potential outcomes of the screening of design changes can be grouped as given below:

- **No Significant Environmental and/or Social Impacts:** No significant implications or additional negative impacts are identified compared to the evaluations performed in the ESIA study and change does not require any additional or new mitigation measures. Within this case, the change will be processed as technical design change.
- **Significant Environmental and/or Social Impacts:** Significant or potentially significant implications with respect to ESIA-related topics that could not be mitigated without any additional mitigation and were not evaluated in the ESIA studies. Within this case, screening results will be logged and Change ESIA Review process will be undertaken.

VI.4 Review and Redesign of Change

For the proposed changes that could have significant/potentially significant ESIA-related impacts, Environmental and Social Department of the AAOİAŞ will undertake consultation internally and with independent experts regarding any further mitigation or other measures such as design review, to comply with the relevant ESIA commitments. The significance of a potential impact will be determined based on the corresponding definitions in the ESIA studies for the relevant environmental and social topics. If no further residual significant environmental and social impact is foreseen, the change will be processed as technical design change.

VI.5 Stakeholder Engagement

AAOİAŞ will directly inform relevant stakeholders in writing when a proposed design change is initiated based on their suggestions, complaints, or feedback collected through the Project's grievance mechanism or engagement processes.

If a proposed change is anticipated to result in significant environmental and/or social impacts that cannot be addressed through existing mitigation measures, or if it introduces impacts on stakeholders not previously considered in the ESIA, additional public disclosure and stakeholder engagement should be undertaken. These efforts should be tailored based on the significance, scale, and geographic extent of the anticipated impacts.

While the Project involves a wide range of stakeholders, community-related engagement should particularly focus on the settlements located in the vicinity of the motorway components, as outlined in Table V.1.

Table VI-1.Settlements Located in The Vicinity of the Motorway Components

Districts	Neighborhoods		
Serik	• Aşağıçatma • Aşağıkocayatak • Burmahancı • Çandır	• Cumalı • Deniztepesi • Dikmen • Kayaburnu	• Kökez • Merkez • Sarıabalı • Üründü • Yukarıkocayatak
Manavgat	• Aksaz • Aşağıışıklar • Bucakşeyhler • Çakış • Çavuşköy • Cevizler • Demirciler • Dikmen	• Hacıali • Hacıisalı • Hacıobası • Hatipler • Hocalar • Ilıca • Kadılar • Kalemler	• Örenşehir • Sağırin • Sarılar • Side • Şişeler • Sülek • Taşağıl • Ulukapı

Districts	Neighborhoods		
	• Dolbazlar • Evrenleryavşı • Gültepe • Gündoğdu	• Karacalar • Karakaya • Karaöz • Kızılot • Odaönü	• Uzunlar • Yalçıdibi • Yavrudoğan • Yeniköy • Yukarıışıklar
Alanya	• Akdam • Alara • Avsallar	• Çakallar • Elikesik • Emişbeleni • İncekum	• Konaklı • Soğukpınar • Toslak • Türkler

The type and extent of stakeholder consultation should correspond to the nature of the change and may include public meetings, direct engagement with affected communities, and updates via the Project website. A feedback period of no more than 30 calendar days should be provided to enable meaningful stakeholder input. All regulatory requirements and formal procedures related to stakeholder engagement will be fulfilled during this stage.

AAOİAŞ will also notify the Lenders of any design changes associated with significant environmental and social impacts and will share the relevant supporting documentation, including stakeholder consultation materials and updated mitigation measures.

Following agreement with the Lenders on the reporting and notification procedures, this Plan will be revised by the Environmental and Social Interaction Department of AAOİAŞ, with the support of independent experts, to reflect the final approach to change-related stakeholder communication.

A summary of the proposed change, the stakeholder feedback received, and the planned mitigation measures will be included in public disclosure materials and made available on the official Project website to ensure transparency and accountability.

VI.6 Finalization of the Design Change

Environmental and Social Department of the AAOİAŞ, with the support from independent experts, will review and compile any feedback received from Lenders, public and other affected parties, and will prepare a final design change version that incorporates consideration of the feedback and comments received. Further evaluations of the measures may be needed based on the stakeholder engagement findings.

VI.7 Submission for KGM Approval

If the change is related to a KGM-approved change, then formal notice of variation will be prepared that includes relevant mitigation measures and considerations, and will be submitted to KGM for their approval. After the approval, AAOİAŞ will implement the agreed changes.

If the change is not related to a KGM-approved change, then AAOİAŞ will implement the changes defined in finalized version of the design change.

VII. MONITORING

Monitoring activities under this Plan should be implemented on a case-by-case basis, triggered by the initiation or implementation of changes during the construction phase of the Project. A structured approach should be followed to evaluate whether each proposed or executed change has been properly screened, documented, and managed in accordance with the Change Management Procedure and in line with the commitments outlined in the ESIA, as well as relevant national and international standards.

Monitoring should be coordinated by the E&S Team of AAOİAŞ, in collaboration with the Contractor (Limak) and relevant subcontractors. Key responsibilities include verifying whether proposed changes have undergone formal screening, ensuring the appropriate implementation of additional mitigation measures, and confirming the completeness of all supporting documentation, such as screening records, stakeholder engagement logs, and revised mitigation plans.

Since monitoring is event-based rather than periodic, its scope should reflect the nature, scale, and complexity of the change in question. Special attention should be given to changes that may result in environmental or social risks not previously evaluated in the ESIA, or that affect previously unassessed stakeholders.

In cases of non-compliance—such as the execution of unapproved changes, inadequate documentation, or failure to notify stakeholders—corrective and preventive actions should be initiated without delay. Follow-up assessments should be conducted to evaluate the effectiveness of these measures and to prevent recurrence.

Monitoring outcomes and related documentation should be made available to regulatory authorities or international financial institutions upon request, particularly in the context of audits, inspections, or project-level reviews.

VIII. AUDIT AND REVIEW

The implementation of the Change Management Plan should be subject to periodic audits and internal reviews in accordance with the ESMMP. These audits should evaluate the effectiveness of the change screening, review, and documentation processes, and confirm alignment with ESIA commitments, stakeholder engagement requirements, and applicable legislation.

Audits should be conducted by the E&S teamt of AAOİAŞ, with support from independent experts when necessary. Contractors and subcontractors should also be evaluated for their compliance with change-related responsibilities, including notification, mitigation implementation, and recordkeeping.

Audit findings should be formally documented and shared with Project management and, where appropriate, Lenders and regulatory authorities. Any deficiencies or non-conformities should be recorded, followed by corrective actions with defined timelines and responsibilities. Where recurring issues are observed, the Plan should be revised accordingly to close procedural gaps and improve effectiveness.

The Change Management Plan should be reviewed or in response to major incidents, design updates, or regulatory amendments. Outcomes of the audit process should inform necessary updates to the Plan, training programs, or related management systems.

IX. REPORTING

Effective reporting is essential to ensure transparency, accountability, and traceability in the management of changes during the construction phase of the Project. Reporting under this Plan should address internal monitoring and auditing outcomes, stakeholder engagement related to changes, and compliance with external requirements.

Change-related reports should include:

- A register of all proposed changes screened during the reporting period, including outcomes and categorization (technical vs. ESIA-relevant);
- Documentation of stakeholder engagement related to design changes, including grievances or feedback received;
- Details of any approved changes that resulted in updates to environmental or social mitigation measures;
- Records of corrective actions taken in cases of procedural non-compliance; and
- Notifications submitted to KGM, regulatory authorities, or Lenders, where applicable.

These reports should be incorporated into the quarterly Environmental and Social Monitoring Report, under a dedicated section for Change Management. Supporting documentation—including screening checklists, audit forms, stakeholder communication records, and photographic evidence—should be annexed to the report.

Where significant changes with potential ESIA implications are proposed or implemented, incident reports should be submitted to the Ministry of Environment, Urbanization and Climate Change, in accordance with national regulations.

All personnel should be encouraged to report any unapproved changes, risks, or improvement suggestions through the Project's grievance mechanism. The grievance channels for change-related concerns are outlined in the Stakeholder Engagement Plan (SEP), and all feedback received should be evaluated and integrated into the Plan's continuous improvement process.

COMMUNITY HEALTH AND SAFETY MANAGEMENT PLAN

REVISION STATUS		
Revision Date	**Rev. No**	**Explanation**
01.03.2025	00	This plan is prepared according to TS EN ISO/IEC 9001:2015, TS EN ISO/IEC ISO 14001:2015, TS EN ISO/IEC 45001:2018 and IFC Performance Standards
23.05.2025	01	Revision
16.06.2025	02	Revision as per revision made under ESDD submitted by the Lender consultant
08.09.2025	03	Revision as per revision made under ESDD submitted by the Lender consultant

COMMUNITY HEALTH AND SAFETY MANAGEMENT PLAN

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LIST OF ABBREVIATIONS

AAOİAŞ	Antalya-Alanya Otoyolu İnşaat Yatırım ve İşletme A.Ş.
CLO	Community Liaison Officer
CSOs	Civil Society Organizations
CHS	Community Health and Safety
E&S	Environmental and Social
EHS	Environmental, Health, and Safety
ESIA	Environmental and Social Impact Assessment
ESMMP	Environmental and Social Management and Monitoring Plan
ESMS	Environmental and Social Management System
GBVH	Gender-Based Violence and Harassment
HR	Human Resources
IFC	International Finance Corporation
KPIs	Key Performance Indicators
Limak	Limak İnşaat Sanayi ve Ticaret A.Ş.
OHS	Occupational Health and Safety
RCA	Root Cause Analysis
SEP	Stakeholder Engagement Plan
WHO	World Health Organization

COMMUNITY HEALTH AND SAFETY MANAGEMENT PLAN

I. INTRODUCTION

Ministry of Transport, and Infrastructure (former Ministry of Transport, Maritime Affairs and Communications), General Directorate of Highways ("KGM" or "the Administration"), as the owner of the Antalya-Alanya Motorway Project, has tendered for a contract in accordance with the Law on Implementation of Some of the Investments and Services in the Framework of Build, Operate and Transfer Model (Law No: 3996). Following the tendering process, KGM has awarded Antalya-Alanya Otoyolu İnşaat Yatırım ve İşletme A.Ş. (AAOİAŞ or the Project Sponsor) with a Build, Operate and Transfer (BOT) contract for the implementation of the Project. Accordingly, AAOİAŞ will be referred as Project Sponsor[1] in the scope of this report. The main contractor for the Project has been designated as Limak and will henceforth be referred to as the Contractor (or EPC).

The project is designed to connect the districts of Serik and Alanya via the Manavgat district of Antalya province. The Project will enhance the existing transportation network services with its surrounding provinces: Burdur, Muğla, Konya, Isparta, Karaman and Mersin. Various environmental, social, and technical studies have been conducted along the initial route of the Project tendered by the KGM. Based on these studies, the route was optimized, incorporating engineering practices and addressing environmental and social considerations, particularly issues of involuntary and economic resettlement, before being finalized. According to the most current design, the total length of the Motorway, which will be a dual carriageway of mostly 3 and partially 2 lanes (3x2 and 2x2) in each direction, is 117.8 kilometers including the main carriageway and the access roads[2].

This Community Health and Safety Management Plan ("Plan") has been prepared by Antalya-Alanya Highway Construction Investment and Operation Inc. ("AAOİAŞ" or "SPV") for the Antalya-Alanya Highway Project ("Project") in accordance with national legislation, the Equator Principles ("EP"), the International Finance Corporation ("IFC") Performance Standards ("PSs"), and the international standards that reference the relevant legislative sections. The Plan covers the construction phase of the Project.

I.1 Project Description

The Project starts at Serik Interchange (Km: 52+000) and then proceeds eastward, following the corridor at the foothills of the Taurus Mountains within the boundaries of Serik and Manavgat districts, ending at north of Konaklı neighborhood of Alanya District (Km: 136+000). From this point onwards, the route turns southward with a 2x2 lane connection road and connects to the D400 state road at the Alanya West Interchange. As of April 2025, the current Project design includes a total of 117.8 kilometers of road, comprising 84 kilometers of main road (motorway) and 33.8 kilometers of access roads.

The map showing the construction components and road route within the scope of the Project's construction activities is provided in *Figure I-1.*

[1] The BOT Contract uses the term "Appointed Company" to refer Project Sponsor

[2] It should be noted that the environmental and social baseline characterization, maps and scoping assessments provided in this report are based on the most current design

COMMUNITY HEALTH AND SAFETY MANAGEMENT PLAN

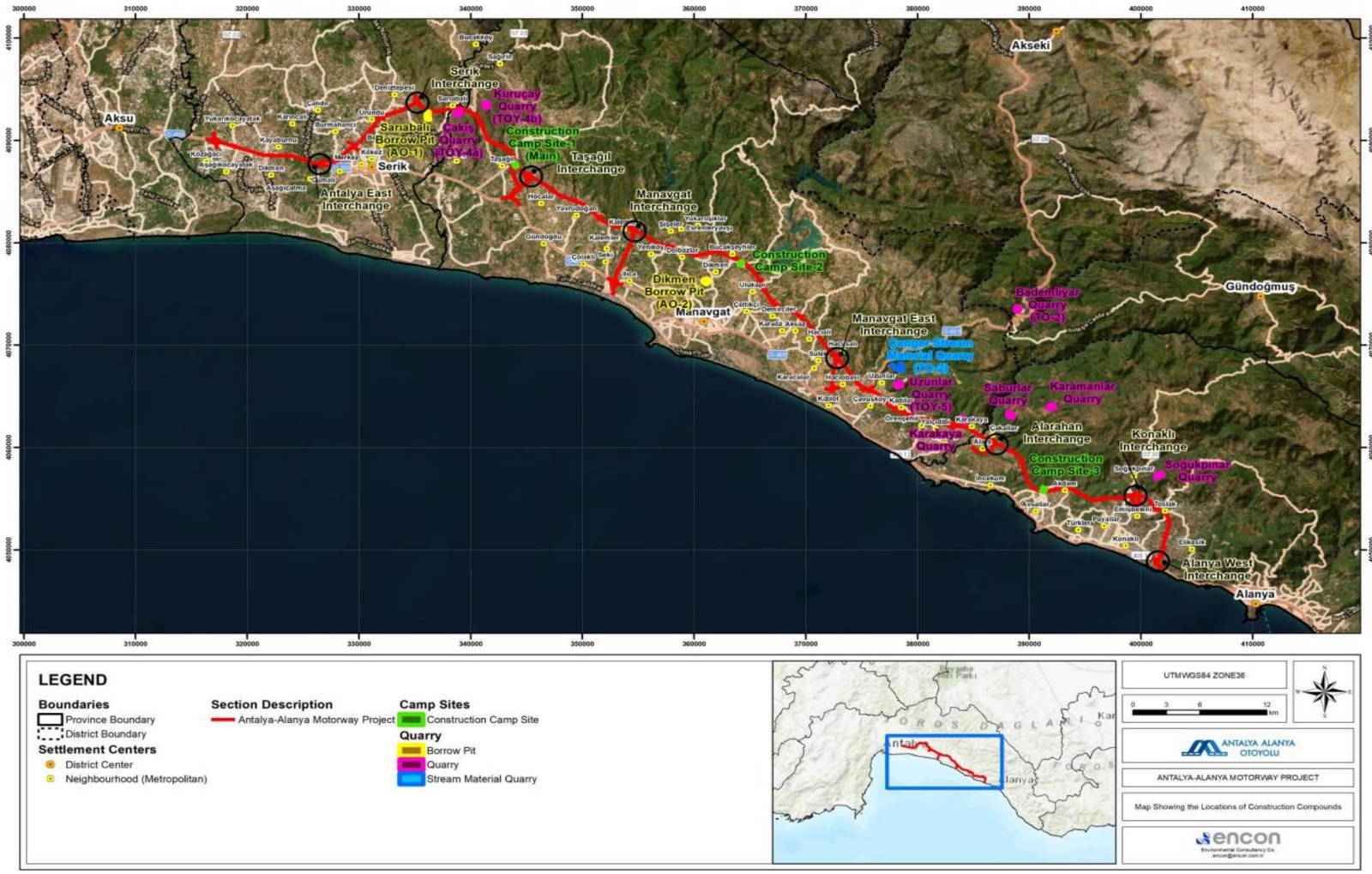

Figure I-1.Map Showing the Locations of Construction Compounds

Other structures to be built as part of the project are as follows:

- 16 viaducts,
- 22 bridges,
- 305 culverts,
- 25 interchanges,
- 56 overpasses,
- 43 underpasses, and
- 5 tunnels.

The activities to be carried out within the scope of the Project that are likely to have an impact on water resources are as follows:

- Excavation
- Soil stockpiling
- Quarry activities
- Plant and wheel washing
- Road construction
- Washing of finished road surfaces to remove accumulated soil

I.2 PURPOSE AND SCOPE

This Community Health and Safety Management Plan (“the Plan”) has been prepared for the Antalya–Alanya Motorway Project (“the Project”).

The purpose of this Plan is to assess the potential impacts of construction activities on the health, safety, and security of communities and to outline the measures that should be done to prevent, reduce, or manage these risks. It aims to ensure that the Project’s construction phase is implemented in a manner that safeguards the well-being of the public in the surrounding area.

This management plan is a living document developed with the best available information and will be reviewed and revised as necessary due to the nature of the construction and progress.

This Plan has been developed in accordance with applicable national legislation and the requirements of relevant international standards, including those of international financial institutions. It sets forth the responsibilities of the Project Sponsor, the Main Contractor, and subcontractors; outlines the procedures for risk mitigation, monitoring, emergency response, and community engagement; and provides guidance on grievance mechanisms relevant to community health and safety.

The Plan should be implemented by all parties involved in the construction phase, including Antalya-Alanya Otoyolu İnşaat Yatırım ve İşletme A.Ş. (AAOİAŞ) as the Project Sponsor, the Main Contractor (Limak), and all subcontractors. Revisions to the Plan should be done when significant changes occur in project design, construction activities, or regulatory requirements.

II. LEGISLATIVE FRAMEWORK AND REFERENCE STANDARDS

This Plan has been structured in accordance with both national legal requirements and internationally recognized standards concerning community health, safety, and security. These references form the foundation for defining the necessary measures that should be done during the construction phase to ensure effective risk management, impact mitigation, and compliance with best practices.

II.1 National Requirements

The following Turkish legislation and regulations should be considered in the implementation of community health and safety measures during construction:

- Environmental Law (Law No. 2872)
- Public Hygiene Law (Law No. 1593)
- Occupational Health and Safety Law (Law No. 6331)
- Regulation on Occupational Health and Safety Services
- Regulation on Health and Safety Measures in Construction Works
- Regulation on the Control of Environmental Noise
- Regulation on the Transport of Dangerous Goods by Road
- Road Traffic Law
- Regulation on Fire Protection of Buildings

II.2 International Standards and Conventions

In addition to national requirements, the following international standards and guidelines should be followed to ensure that community health and safety measures are consistent with international good practices:

- IFC Performance Standards (2012), specifically:
  - Performance Standard 4: Community Health, Safety, and Security
- IFC Environmental, Health and Safety (EHS) General Guidelines (2007)
- IFC EHS Guidelines for Toll Roads (2007)
- IFC Guidance Notes (2012)
- Equator Principles IV (2020)
- IFC Good Practice Note: Addressing Gender-Based Violence and Harassment (GBVH)
- European Landscape Convention (entered into force in 2000, ratified by Türkiye in 2003)

These references should be used to guide the implementation, monitoring, and periodic updating of community health and safety measures throughout the construction phase of the Project.

III. LINKAGE WITH OTHER PROJECT PLANS AND PROCEDURES

This Plan is supported by other thematic management plans and procedures prepared under the Environmental and Social Management System (ESMS) of the Project. These complementary documents collectively guide the implementation of mitigation and monitoring measures during the construction phase. The following plans and procedures are particularly relevant and should be implemented in coordination with the Community Health and Safety Management Plan:

- Traffic Management Plan
- Occupational Health and Safety Plan
- Environmental Accident and Spill Response Management Plan
- Noise and Vibration Management Plan
- Hazardous Materials Management Plan
- Solid Waste Management Plan
- Water Quality, Wastewater and Storm Water Management Plan
- Environmental Accident and Spill Response Management Plan
- Environmental and Social Management and Monitoring Plan (ESMMP)
- Demolition Management Plan
- Emergency Response and Management Plan
- Resettlement Action Plan (RAP)
- Stakeholder Management Plan (SEP)

Effective coordination among these plans should be ensured to prevent duplication, close any procedural gaps, and minimize cumulative health and safety risks to the community throughout the construction phase.

IV. ROLES AND RESPONSIBILITIES

Antalya Alanya Otoyol İnşaat Yatırım ve İşletme A.Ş. (SPV) as the Project Sponsor and Limak (EPC) as the main contractor of the Project will be responsible for the following:

EPC Project Director

The EPC Project Director has the overall responsibility and accountability for the Project including delivery of the construction activities in line with applicable national and international standards. He/She ensures relevant activities are carried out in accordance with this OHSMP.

The EPC Project Director has the ultimate responsibility for ensuring the health, safety and wellbeing of all project personnel, sub-contractors, suppliers, visitors and members of the public that may be affected by the works that are being performed. He/She will also ensure the implementation of required corrective actions in response to identified nonconformities or incidents regarding to this Plan. He/she ensures periodical review of the OHSMP effectiveness.

The Project Director will ensure that necessary resources are allocated for the management of the Plan including competent personnel and financial resources for implementing of risk mitigation measures such as trainings and external sources.

- Ensure that all project activities comply with local laws, environmental regulations, corporate governance policies, and international best practices and lender requirements.
- Promote a culture of environmental and social responsibility across the EPC and its stakeholders.
- Define and implement the overall business strategy and direction of the EPC in alignment with SPV and stakeholder expectations.
- Ensure the provision of necessary resources and organizational support for the implementation of all plans.
- Supervise and coordinate subcontractors to ensure proper execution of construction and commissioning phase.
- Support the E&S Manager in preparing, disseminating, and implementing this plan.In case of non-compliance, ensure correct and preventive actions are taken in collaboration with the SPV and other responsible parties.
- Make executive decisions on project budgeting, resource allocation including employee, and capital management to support project execution and sustainability, E&S compliance.
- Ensure the monitoring environmental, social and financial performance, reporting, and risk exposure of the SPV, ensuring transparency and accountability to all stakeholders, including EPC, stakeholders and other related parties.
- Approval of project management plans (HSE, E&S, QA/QC, etc.) in line with company policies, legal frameworks, international standards, SPV and lender requirements.

- Ensure that all employees comply with the obligations specified in the project's management plans during activities.
- Serve as the primary EPC representative to the SPV, client, and key stakeholders.
- Maintain communication channels with SPV, subcontractors, and vendors to ensure alignment and compliance.
- Coordinate with regulatory authorities, community representatives, and auditors as required.
- Address stakeholder concerns proactively and transparently, particularly those related to safety, environmental, and social matters.
- Oversee risk management and mitigation strategies related to technical, health, safety, community safety, environmental, and social aspects.
- Supervise the preparation and approval of documentation related to claims, variations, and commercial issues.

EPC H&S Manager

The H&S Manager is responsible for health and safety management during the construction phase of the Project. Reporting to the EPC Project Director, he/she develops the necessary procedures, plans and training requirements for on-the-ground implementation of the related national and international requirements, standards, SPV's health and safety commitments made in Environmental and Social Impact Assessment (ESIA), and this Plan.

Duties of the EPC H&S Manager are as follows

- Coordinate the preparation, revision, and implementation of the Plan with E&S Manager in accordance with the Project ESIA and EIA, SPV's corporate policies, regulatory obligations, international standards and lender requirements and are implemented by EPC and subcontractors through appropriate method statements and site practices.
- Ensure that all construction site activities are carried out safely by EPC and subcontractors.
- Ensure root causes are identified, documented, and that corrective actions are implemented and verified.
- Ensure timely and appropriate resolution of complaints related to community health and safety issues.
- Ensure and conduct the completion of the specific training and safety briefings to reinforce awareness on site.
- Ensure relevant measures are communicated to all stakeholders and updated in a timely manner on human health and safety issues.

- Monitor the compliance of EPC and subcontractors with the safety, health, and community safety related plans, and applicable laws, international standards and lender requirements.
- Conduct regular inspections, audits, and hazard identification walkthroughs on construction sites.
- Conduct and lead a comprehensive accident and incident investigation process. Analyse trends from incidents and near-misses to identify systemic issues and develop long-term preventive strategies.
- Provide technical support to EPC and subcontractors for the proper implementation of the Project's plans.
- Ensure the accurate records of inspections, incidents, safety meetings, and training records.
- Ensure the corrective actions process is followed up on by all parties strictly.
- Report on H&S performance, non-compliance, and corrective actions to the EPC Project Director.
- Engage with regulatory authorities on inspections, audits, and compliance verification.
- Coordinate emergency preparedness and response procedures, including drills and communication protocols, in collaboration with relevant departments.

EPC E&S Manager

- Coordinate the preparation, revision, and implementation of the Plan with H&S Manager in accordance with the Project ESIA and EIA, SPV's corporate policies, regulatory obligations, international standards and lender requirements and are implemented by EPC and subcontractors through appropriate method statements and site practices.
- Facilitate coordination with the SPV's E&S Manager for compliance audits and reporting.
- Implement environmental and social measures through site practices and method statements.
- Ensure that all conditions and obligations outlined in the environmental and social management plans are implemented and adhered to during project activities.
- Ensure relevant measures are communicated to all stakeholders and updated in a timely manner on human health and safety issues.
- Ensure employees and contractors fulfil the requirements and relevant training of the environmental and social management plans.

- Ensure the environmental and social management plans are communicated and implemented by Contractors/Subcontractors.
- Monitor compliance of Contractors/Subcontractors with environmental and social management plans requirements.
- Supervise the Environmental Engineers, Biodiversity Specialist, Archaeologist, CLOs and oversee monitoring site practices and management plans.
- Ensure the development and follow-up of corrective/improvement actions.
- Conduct comprehensive investigations of accidents and incidents and promote continuous improvement via lessons learned.
- Enforce behaviour protocols related to community safety.
- Establish emergency preparedness and response procedures.
- Ensure inclusive practices by integrating gender, vulnerability, and social inclusion principles into site-level practices.

EPC HSE Chief

The EPC HSE Chief who will be reporting to SPV H&S Manager. The number of the H&S Chief will be defined considering the existing workload, work locations and the work plan of the EPC Contractor.

The EPC HSE Specialist will be responsible for supporting H&S Manager and monitoring the compliance of all activities associated with the Project against the requirements of the ESMP and any other relevant health and safety legislation defined in this Plan.

- Monitor the compliance of Contractors/Subcontractors with the requirements of the Plan and report non-conformities.
- Monitor health, safety and community safety measures through site practices and method statements.
- Review and validate training records and related documentation from Contractor/Subcontractor.
- Participate a comprehensive investigation in the event of accidents, incidents, or near misses.
- Implement and monitor the development and follow-up of corrective and/or improvement actions to address safety-related gaps or risks.
- Prepare regular reports to H&S manager summarizing H&S performance, compliance status, and key risks.

EPC HSE Engineer

The EPC HSE Engineer will be responsible for supporting HSE Chief and monitoring the compliance of all activities associated with the Project against the requirements of the ESMP and any other relevant health and safety legislation defined in this Plan.

- Support all employees in fulfilling the conditions and obligations of this Plan during project activities.
- Provide technical support to Contractors/Subcontractors for the implementation of health and safety plans.
- Monitor the health, safety and community safety measures through site practices and method statements.
- Monitor the enforcement of behaviour protocols and community health and safety guidelines on and around the construction site.
- Review and validate training records and related documentation from Contractor/Subcontractor
- Support comprehensive investigations in the event of accidents, incidents, or near misses, ensuring findings are documented and corrective actions are implemented.
- Ensure the development and follow-up of corrective and/or improvement actions to address safety-related gaps or risks.
- Follow prompt and structured resolution of complaints related to public health, safety, and security.

EPC HSE Technician

The EPC HSE Technician will be responsible for supporting HSE Engineer and monitoring the compliance of all activities associated with the Project against the requirements of the ESMP and any other relevant health and safety legislation defined in this Plan.

- Monitor the implementation of the Health, Safety, Social and Environmental Management Plans on-site.
- Assist in the inspection of site conditions, equipment, and practices to ensure compliance with HSE protocols.
- Monitor proper use of PPE by workers and subcontractors and ensure daily compliance.
- Assist in the documentation of incidents, near-misses, and unsafe acts/conditions.
- Support the organization of safety toolbox talks and drills, and participate in site safety briefings.
- Assist in maintaining updated HSE records.
- Escalate social and environmental issues and observations for timely corrective actions.
- Promote a proactive safety culture through daily site presence and informal engagement with workers.

EPC HSE Worker

Duties of the EPC HSE Worker are as follows

- Perform routine safety checks and observations on construction activities to support accident prevention.
- Support field-level enforcement of basic HSE requirements such as PPE usage, housekeeping, and emergency access.
- Report unsafe behaviours, near-misses, or incidents to the HSE Technician or Engineer.
- Assist with basic safety logistics such as placement of safety signs, first aid kits, and fire extinguishers.
- Provide assistance during emergency drills and real-time evacuations if needed.
- Assist in controlling site entry for compliance with safety rules.
- Support spill response and clean up efforts as guided by supervisors.

SPV E&S Manager

- Review and ensure the preparation, revision, and implementation of the Plan in accordance with national laws, regulations, company policies, international standards and lender requirements.
- Ensure and monitor that EPC and subcontractors correctly implement site practices and management plans.
- Ensure relevant measures are communicated to all stakeholders and updated in a timely manner on human health and safety issues.
- Provide technical support to EPC and subcontractors for the implementation of E&S plans.
- Collaborate with internal teams (e.g., H&S, Legal, Procurement) to integrate E&S criteria into project operations and contracts. Monitor the environmental and social performance of EPC and subcontractors to ensure compliance.
- Prepare and submit E&S compliance and performance reports to internal and external stakeholders, including lenders and regulators.
- Support stakeholder engagement activities and consultations with local communities.
- Oversee the Grievance Mechanism (GM) and ensure timely resolution of community and worker complaints
- Engage with regulatory authorities, auditors, and NGOs on E&S compliance and performance matters.

- Lead the implementation of corrective actions and incident prevention measures.

SPV H&S Manager

Duties of the SPV H&S Manager are as follows:

- Ensure the preparation, revision, and implementation of the health and safety-related plans and documents in accordance with the Project ESIA and EIA, SPV's corporate policies, regulatory obligations, international standards and lender requirements and are implemented by EPC and subcontractors through appropriate method statements and site practices.
- Ensure that all construction site activities are carried out safely by EPC and subcontractors.
- Ensure root causes are identified, documented, and that corrective actions are implemented and verified.
- Ensure timely and appropriate resolution of complaints related to occupational health and safety.
- Ensure safety inductions and community health and safety training are conducted and recorded.
- Monitor the compliance of EPC and subcontractors with the safety, health, and community safety related plans, and applicable laws, international standards and lender requirements.
- Conduct regular inspections, audits, and hazard identification walkthroughs on construction sites.
- Conduct a comprehensive accident and incident investigation process.
- Engage with regulatory authorities on inspections, audits, and compliance verification.
- Ensure relevant measures are communicated to all stakeholders and updated in a timely manner on human health and safety issues.

Site Doctor

Adequately experienced and certified Occupational Doctors will be employed as required according to national regulation requirements.

Duties of the Site Doctor are as follows

- Ensure and support the preparation, revision, and implementation of the health and safety-related plans and documents in accordance with the Project ESIA and EIA,

SPV's corporate policies, regulatory obligations, international standards, disease control guidelines, industrial good practices, and lender requirements and are implemented by EPC and subcontractors through appropriate method statements and site practices.

- Conduct collective assessment with related parties, such as H&S and E&S Manager on occupational injury and illness and disease control.
- Provide on-site medical care, first aid, and emergency response to site personnel.
- Ensure relevant measures are communicated to all stakeholders and updated in a timely manner on human health and safety issues.
- Monitor the health status of workers through routine check-ups, Pre-employment or pre-placement examinations and undertake health assessments for fitness to work.
- Maintain accurate and confidential health records and incident logs.
- Identify and manage occupational health risks, hygiene, sanitation, and disease control measures and recommend preventive measures.
- Conduct health awareness sessions and support mental health and wellness programs.
- Ensure compliance with local occupational health laws and project-specific health standards.
- Collaborate with external hospitals, disease control centres or clinics for referrals and medical emergencies.
- Participate in site inspections and contribute to health-related sections of HSE audits.
- Provide medical input to risk assessments, method statements, and H&S Plans.
- Support pandemic response procedures as needed.
- Detect occupational injuries and illnesses and prepare relevant prevention plans.
- Track of all health records of all employees including occupational injuries and illnesses.

V. COMMUNITY HEALTH AND SAFETY MANAGEMENT APPROACH

Community health and safety risks associated with motorway construction projects primarily arise from increased construction traffic, the operation of heavy machinery, exposure to hazardous substances, elevated levels of noise and dust, and the potential occurrence of accidental events such as vehicle collisions, fuel or chemical spills, and fires. These risks are particularly pronounced in areas where construction activities are carried out in close proximity to residential settlements or areas with public access, including schools, clinics, or marketplaces.

During the construction phase, significant concerns include the increased likelihood of traffic accidents due to the movement of heavy vehicles along access roads and within settlements; the exposure of sensitive receptors to construction-related dust, noise, and vibration; and the risk of disease transmission associated with the influx of non-local workers and the establishment of temporary campsites. Moreover, the close interface between construction areas and local communities can result

in physical safety hazards, particularly in cases where access to hazardous zones is not adequately restricted or where fencing and warning signage are insufficient. The improper handling, storage, or disposal of fuels, chemicals, and construction materials may also pose direct and indirect health risks to surrounding populations.

The Antalya–Alanya Motorway Project passes through multiple districts—Serik, Manavgat, and Alanya—where several residential settlements are located within the Project's area of influence. These neighborhoods are listed in Table V.1. The presence of residences, schools, health centers, agricultural lands, and public access areas in or near these neighborhoods requires heightened attention to community health and safety. Specific risks related to dust, noise, vibration, blasting, construction traffic, and restricted access to hazardous areas must be carefully managed in coordination with the affected communities such as Serik (Üründü, Burmahanci, Cumali), Manavgat (Taşağıl, Hocalar, Kalemler,Yukarıışıklar, Hacıobası, Yalcıdibi, Karakaya) and Alanya (Alara, Çakallar, Akdam, Emişbeleni,Toslak).

Table V.1 Settlements Located in The Vicinity of the Motorway Components

Districts	Neighborhoods		
Serik	• Aşağıçatma • Aşağıkocayatak • Burmahancı • Çandır	• Cumalı • Deniztepesi • Belpınarı Abdulrahmanlar • Kayaburnu	• • • Sarıabalı • Üründü • Yukarıkocayatak
Manavgat	• Aksaz • Aşağıışıklar • Bucakşeyhler • Çakış Çolaklı • • Cevizler • Demirciler • Dikmen • Dolbazlar Evren• Evrenleryahşı • • Gündoğdu	• Hacıali • Hacıisalı • Hacıobası • Hocalar • Ilıca • Kadılar • Kalemler • Karakaya • Karaöz • • Odaönü	• Örenşehir • Seki• • Şişeler • Sülek • Taşağıl • Ulukapı • Uzunlar • Yalçıdibi • Yavrudoğan • Yeniköy • Yukarıışıklar
Alanya	• Akdam • Alara • Avsallar Payalar	• Çakallar • Elikesik • Emişbeleni • İncekum	• • Toslak Telatiye • Türkler

To minimize these impacts, construction activities should be planned and executed in a manner that prioritizes the protection of public health and community well-being. Preventive measures such as physical access control to construction sites, the implementation of dust and noise suppression strategies, and the safe design of traffic routes should be undertaken. Public information campaigns and worker-community interaction protocols should be developed to raise awareness among both construction personnel and community members regarding potential risks and acceptable behavior standards.

In cases where risks escalate or complaints are received, mitigation strategies should be reviewed and strengthened. Coordination with local authorities, emergency response units, and public health institutions should be done to ensure timely and effective responses to any incident that may impact community health and safety. Community Liaison Officers will ensure communication with project-affected communities and support grievance management processes.

The overall goal should be to ensure that construction activities do not generate health and safety risks that exceed acceptable thresholds, in line with Turkish legislation and relevant international good practices, and to maintain open communication and responsiveness to the concerns of affected communities.

VI. MITIGATION MEASURES FOR COMMUNITY HEALTH AND SAFETY RISKS

The construction phase of the Antalya Alanya Motorway Project presents several health and safety risks to the community. These include increased noise, vibration, and dust levels, as well as disturbance to the public and grazing animals due to blasting activities. Construction traffic, including heavy machinery, is expected to elevate road safety risks. The risk of communicable disease (e.g., STI/HIV/AIDS etc.) transmission may increase due to worker-community interactions, while the potential for gender-based violence and harassment (GBVH) may also rise. To address these risks, the following mitigation measures will be implemented during the construction phase.

Vegetation Clearance and Excavation Activities

- Due to the sensitive receptor designation of Hacıali neighborhood, an air quality monitoring point has been determined, monitoring will be carried out every three months and in case of complaints.
- The Health & Safety (H&S) team member or CLO assigned within the Project will visit households and carry out community information activities and free mask distribution (including spares) before construction works approach within 1,000 meters of any residential area.
- If dust levels reduce visibility, safety personnel will be stationed at pedestrian crossings to ensure safe passage for individuals.
- Dust emissions will be controlled by water spraying. In cases where excavation trucks must pass close to residential areas, the loads will be covered to minimize dust spread during transport.

Community Severance

- In areas where the project route intersects with existing village roads, farm tracks, or rural connection routes, temporary access solutions such as gravel service roads, temporary bridges, and directional signage should be provided. Before any temporary closure is implemented, local residents will be informed at least 7 days in advance through verbal channels (e.g., public announcements, village offices), and maps showing alternative routes should be posted on-site.
- In locations where the project intersects with main roads, secondary roads, or internal access routes within settlements, construction activities will be phased to reduce disruption. Night-time construction should be limited, and temporary traffic signals or trained traffic marshals should be deployed where necessary. Especially near sensitive areas such as schools, health clinics, mosques, and marketplaces, safe pedestrian access must be maintained at all times. Where necessary, temporary pedestrian overpasses, protective barriers, and metal crossing structures should be installed, along with adequate lighting and traffic-calming measures.

Close coordination with tourism facility managers is essential to minimize disruptions to visitor movement and local economic activity. Additionally, in situations where children, patients, or other residents are unable to access schools, healthcare services, or public transport due to temporary construction closures, the Project Sponsor may provide shuttle services or temporary transport support as needed.

Public Health and Safety & Worker Well-Being Measures

- Collaboration with local law enforcement, healthcare providers, and NGOs, especially on water supply issues, is the responsibility of all parties to ensure victim support services and enforcement of legal and social protections.
- Civilian access to the construction site will be restricted to the greatest extent possible.
- Leakage or spills of fuels, oils, and solvents may lead to soil and groundwater pollution, potentially affecting agricultural lands, local water resources, and thereby public health. The Project's related plans will be followed during construction activities.
- Improper storage and handling of fuels and explosives can create fire and explosion risks, which may endanger both workers and nearby communities.
- Direct or indirect exposure to hazardous chemicals (vapors, dust, or accidental contact) may result in respiratory issues, skin irritation, or other health problems for workers and local populations.
- Improper handling of chemicals, such as paints and solvents, may create strong odors that disturb nearby settlements and affect quality of life.
- Pre-employment health screenings will be conducted in accordance with Turkish regulations, and workers will undergo regular medical check-ups throughout their employment on the Project.
- Public health campaigns within local communities will be supported as part of the Project's community engagement and health risk mitigation efforts.
- Access to healthcare services will be facilitated for individuals from local communities who may be adversely affected by construction activities. Measures will be taken to ensure that emergency medical care is available and reachable when needed.
- Primary healthcare services and basic first aid will be made available to all workers at construction sites. Medical care will be provided by qualified personnel to ensure timely response to injuries and health issues.
- All Project workers will be provided with routine medical check-ups and centralized access to medical treatment as needed. These services will help monitor workforce health and ensure early response to health concerns.
- An occupational physician will be responsible for maintaining health records for all workers. These records will be reviewed regularly using a sickness monitoring chart to identify recurring or serious health conditions, and findings will be addressed through training sessions and health-focused toolbox meetings.
- Health awareness training will be provided to all workers, including contractors and subcontractors. The training will include briefings on hygiene practices such as handwashing, prevention of communicable and infectious diseases, and key facts on transmission routes and symptoms of high-risk illnesses.
- Infectious disease screening protocols will be implemented for all workers, including those of subcontractors, particularly at the time of initial recruitment. All protocols will comply with the most up-to-date national health guidelines issued by the relevant authorities.
- An effective waste management system will be implemented to prevent the creation of new vector breeding grounds and to deter rodents from being attracted to worker accommodations or construction sites. Waste will be regularly removed and disposed of in accordance with environmental and health standards.
- Measures will be taken to reduce the presence of stagnant water at construction sites through environmental controls and source reduction strategies. These actions will prevent the formation of breeding areas for bacteria and disease-carrying insects.
- Worker camps will be maintained in a clean and sanitary condition, free of waste accumulation. Access to safe and clean drinking water will also be ensured at all accommodation and work areas.
- Safe food preparation practices will be followed, and food storage and handling will be monitored to ensure compliance with relevant food safety standards. Regular inspections will be carried out to verify adherence to hygiene protocols in food services.

- The basic approach will be to reuse the wastewater generated by project activities in the activity cycle during construction. This approach will not require any water discharge to environmental media. Especially for the reuse of wastewater generated in concrete batching plants, three-compartment settling ponds will be constructed. In order to reuse the water used during vehicle washing operations, vehicle washing stations will be established and the necessary pools and installations will be constructed for the reuse of water at these stations.
- Storm water collected on construction sites may become contaminated with pollutants such as chemicals, sediments, and construction debris due to runoff. To prevent or minimize the discharge of such polluted storm water into receiving water bodies, appropriate control measures will be implemented.
- Groundwater resources may also be at risk, particularly in areas with shallow overburden, where accidental discharges of hazardous substances could contaminate aquifers. Construction activities such as site clearance, earthworks, vehicle refueling, and wastewater discharge (both sanitary and industrial) pose potential threats to groundwater quality if not properly managed. Some excavation works may require groundwater dewatering, which could have implications for local aquifer levels. Additionally, earthworks in bedrock or shallow overburden areas may lead to blockage of fissure permeability by infiltrating fines or sediments.
- The Project Sponsor (AAOİAŞ) is responsible for overseeing wastewater and storm water management in line with national regulations. The Environmental Department of the Contractor is responsible for on-site implementation, supervision, and inspection of mitigation measures. Compliance with all legal requirements related to water management should be ensured throughout the construction phase.
- The camp perimeter should be fenced, and entry/exit points should be controlled (without restricting individuals' freedom of movement). In order to deter potential criminal activities and facilitate the detection of any incidents, both the interior and perimeter of the camp area should be monitored through security cameras. To support these objectives, the perimeter of the camp should be illuminated to a level equivalent to that of the interior will be utilized. These measures will contribute to ensuring the safety of local communities and temporary settlers (workers), while also ensuring compliance with the IFC Performance Standards.
- Throughout the road construction process, specialized engineers will be engaged to ensure the structural safety of the works.
- Compliance of drivers and operators with professional competency requirements will be ensured.
- Complaint boxes will be placed in all mukhtar offices within the area of influence, and the grievance mechanism will be introduced during the site visits conducted by the CLOs.

Noise, Vibration, and Blasting Risk Management

- Blasting warning signs will be placed prominently along the perimeter of the blasting area and in zones where the effects of blasting, such as flying debris, may pose a risk. The signs will be clear, highly visible, and positioned to alert both workers and nearby community members.
- Access to blasting areas will be strictly controlled to prevent the entrapment of animals or unauthorized entry by individuals during blasting operations. The area will remain restricted until a designated representative of the Contractor confirms that no unusual hazards—such as slope instability or unexploded materials—are present and that access and movement within the area can safely resume.
- Residents of nearby communities will be informed in advance of any scheduled blasting activities. Notifications will include the blasting schedule, identification of areas where blasting will take place, the expected date and time range for detonations, the access control methods to be used, and descriptions of the audible warning and all-clear signals that will be employed before and after the event.
- Truck movements will be routed to avoid residential settlements and noise-sensitive areas to the greatest extent possible as a key avoidance and mitigation measure for protecting

community safety. Haulage routes will be scheduled to prevent passage through villages or populated areas, and additional measures such as speed restrictions, regular vehicle maintenance, and safe driving practices will be implemented.

- Noise monitoring should be conducted at pre-determined locations in accordance with the Environmental and Social Monitoring Plan. If exceedances occur, corrective actions should be implemented immediately.
- Potentially affected structures such as hospitals should be identified in advance, and nighttime works near these locations should be minimized or avoided.
- A community engagement program should be implemented to inform residents, businesses, and stakeholders in areas where construction activities may cause elevated noise levels.
- Prior to the blasting operations, the sensitivity of nearby settlements/buildings against noise and vibration will be assessed. Buildings located within 100 meters of major vibration sources will be identified and assessed for vibration sensitivity prior to construction. Structural conditions of buildings located within 100 meters of the motorway alignment will be recorded before and after construction works to assess any possible vibration-induced damage.
- During the entire construction phase, regular surveys will be carried out throughout blasting and drilling activities by the contractor, capturing photographic records of all structures adjacent to blasting areas to detect and evaluate any damage that may arise post-blasting. Explosive charges will be optimized accordingly.
- Detailed records of blasting operations will be kept and blasting related impacts will be closely monitored.
- Modern blasting techniques will be employed to minimize vibration, including the use of millisecond delays with low charge weights, which will be determined based on geological formation and rock density.
- The number of blasted holes per shot and total charge amounts per shot will be optimized to comply with the regulatory limit values and minimize fly rock incidents. During blasting activities will be kept on charge amounts, delays, distance to blast sites, and resulting vibration levels. During blasting activities, compliance with the limit will be monitored in potential sensitive receptors.
- Blasting activities will adhere to the limit values specified in the Regulation on Environmental Noise Control for ground vibrations. Records of air shock and vibration measurements will be maintained, and compliance with regulatory limit values will be monitored to minimize impacts on local residents.
- The Project's grievance mechanism will be active for any complaints related to vibration impacts. Complaints will be thoroughly evaluated, and corrective actions will be implemented as necessary.
- Construction works will be designed and scheduled to minimize vibration and its adverse effects.
- Blasting will be carried out at designated times in order to prevent disturbance.
- Construction machinery and equipment will be operated by taking into account the recommended minimum working distances.
- A specialized blasting team will be engaged to ensure safe and efficient operations.
- In locations where Potential Impact Zones are identified and cannot be mitigated through design or excavation changes, the contractor will implement tailored risk mitigation strategies.
- Modifying blast patterns and using low-risk techniques, such as reducing charge per delay, to minimize hazards.
- A blast attenuation survey will be conducted by the consultant to determine the distance at which vibration levels reduce to acceptable thresholds.

Displacement

- All Parties shall follow the RAP, SEP and additionally below requirements;
- Advance notification and scheduling of construction activities
- Compensation for verified income losses
- Maintaining alternative access to affected businesses
- Support programs for re-establishing livelihoods
- Provision of fair and timely compensation
- Psychological and logistical support for affected households
- Prioritization of vulnerable groups

Traffic Safety and Management Measures

All Parties shall follow the Traffic Management Plan and additionally below requirements;

- Construction works on existing roads will not be started until relevant traffic safety measures (including traffic signing and placement of equipment) are taken on roads serving pedestrian and vehicle traffic. These measures will be designed to ensure the safety of life and property of the local people and the users of the roads.
- In the scope of better working organization, construction traffic routes will be strictly defined and road construction machinery will use only these routes.
- Passage of the routes through the settlements (i.e. neighborhoods) will be avoided where alternative routes are available. Dangerous routes that are to be avoided, if there is any, will be specified and informed. In this scope, construction contractors will construct service roads in order not the affect (such as increasing the heavy traffic load) the natural flow on the existing roads and for avoiding the passage of heavy vehicles through residential areas to the extent possible. In addition service roads will be constructed where the traffic will be temporarily diverted. Furthermore, service roads will be used for transportation of the construction machinery, equipment and materials used for Project.
- Pedestrian interaction with construction vehicles will be minimized by taking appropriate measures in and around the construction corridor.
- Valid licenses will be required for the drivers and operators.
- Working hours of the day for the drivers/operators will be specified and informed to relevant personnel.
- Limits will be defined for the working/trip duration for the drivers and operators to avoid overtiredness.
- Speed control devices will be used on trucks.
- All the construction machinery and equipment will be operated in alignment with the direction of the traffic flow.
- Rigid objects will not be used for the purpose of traffic diversion.
- Unused construction materials, equipment or machinery will not be left on the road in an uncontrolled way. They will be put in designated places.
- Construction-related traffic delays will be minimized. Flow of traffic will be allowed periodically.
- Road signing for night traffic will be provided with reflectors and flashing signals of sufficient number.
- Relevant dust control measures will be taken at the road construction sites so that safe sight distances could be maintained on the existing roads under service.
- Upon the completion of works, signing equipment will be immediately removed and standard signing will be provided.

- To reduce transportation distances, services and materials required for construction works will be aimed to be primarily supplied from the local sources, wherever possible
- A Traffic Management Plan will be implemented to manage traffic-related risks throughout the construction phase. This plan will include the enforcement of appropriate speed limits, driver safety training, advance warnings of detours and closures, and other measures to reduce the risk of accidents involving drivers, passengers, and other road users.
- Drivers and operators of Project vehicles will be trained and informed on safe driving practices, with a specific focus on minimizing risks to other drivers, pedestrians, and livestock. Awareness will be promoted to reduce the likelihood of road-related incidents in and around construction areas. Detailed information can be seen in Traffic Management Plan.
- All Project vehicles, including those operated by subcontractors, will be clearly identifiable. This will be ensured through the display of visible markings or symbols that indicate their association with the Project and facilitate accountability.
- Construction equipment and machinery will be secured when not in use to prevent unauthorized access. Access to construction sites will be controlled to prevent unauthorized or accidental entry by members of the public. Entry points will be monitored and physical barriers such as fences and gates will be installed where necessary.
- As one of the key avoidance and mitigation measures to protect community safety, truck movements should be determined based on the routes in a way that avoids residential areas and noise-sensitive zones as much as possible. Drivers will be informed about the haulage routes, and they will be regularly reminded of the rules to be followed within residential areas, and additional measures such as speed restrictions, regular vehicle maintenance, and safe driving practices will be implemented.
- The professional competency certificates of operators and drivers will be checked during the recruitment process, and the validity of these certificates will be ensured by the relevant department in cooperation with the OHS Committee, OHS Department, and HR Department. The relevant documents will be archived in the personnel files.
- Vehicles and machinery shall not deviate from the designated route.

Security

- A Security Management Plan will be implemented to ensure that all security-related risks during the construction phase are systematically identified, mitigated, and monitored. The Plan will be developed in accordance with national legislation and international good practice.
- Certified security personnel will receive comprehensive training on security protocols, with a focus on the Voluntary Principles on Security and Human Rights. Training will emphasize respect for the rights of workers and community members, and the prohibition of excessive use of force under all circumstances.
- All instructions to security personnel will be based on applicable Turkish legal requirements and will be formally incorporated into their employment terms. In light of their regular interaction with local communities, security staff will also be trained on the Project's Grievance Mechanism, including procedures for addressing complaints in a respectful, timely, and effective manner.
- In cases of non-compliance with defined standards and codes of conduct, corrective actions will be taken. These may include termination of subcontracts with private security providers. All security personnel will receive clear instructions regarding acceptable conduct and authorized actions, with such training reinforced through ongoing professional development initiatives.

Social Conduct, Community Engagement, and GBVH Prevention

- All employees and contractors will be required to acknowledge and adhere to the Project's environmental and social work practices, including all community health and safety (CHS) procedures, the Code of Conduct for Workers, and the Zero Tolerance Policy and Policy on Gender-Based Violence and Harassment (GBVH). They will also be expected to report any safety hazards, unsafe practices, unacceptable conditions, or environmental and social concerns observed on-site.
- All contractor agreements will include clear references to compliance with applicable Turkish health and safety laws, as well as relevant national and international standards and policies. Contracts will also require explicit commitment to the Project Sponsor's Zero Tolerance Policy and Policy on GBVH, and will outline identified GBVH risks along with agreed prevention and response measures.
- Employment contracts will include a requirement for all workers to be informed of, and to sign, the Code of Conduct for Workers at the time of recruitment.
- Training and orientation programs will be provided with a specific focus on gender sensitivity, human rights, and GBVH risk awareness. These sessions will include clear guidance on respecting local communities and vulnerable groups, and will emphasize the importance of maintaining a safe environment for women and children. Actions such as catcalling or inappropriate behavior toward community members or other workers will not be tolerated.
- A functioning and accessible grievance mechanism will be maintained throughout the Project. All relevant personnel will be made fully aware of their roles in the grievance resolution process to ensure timely and effective responses to concerns raised by local stakeholders. A dedicated and confidential grievance mechanism will be established to address GBVH complaints. This system will include anonymous reporting options, access to referral pathways, and a support structure for workers. All GBVH-related complaints will be managed by a trained gender focal point with expertise in GBVH investigations and appropriate response protocols.
- Awareness campaigns will be carried out to inform local communities about the risks of blasting activities and entering construction zones. These campaigns will include educational sessions on the meaning of warning signs, the dangers of playing near equipment, and the importance of using designated pedestrian paths.

Chemicals And Fuels

- All fuels and chemicals will be stored in sealed, properly labeled, and licensed storage facilities. Separate storage arrangements will be ensured for flammable and explosive materials.
- Spill containment systems, secondary containment structures, and absorbent materials will be available at storage and use areas. Emergency spill kits will always be kept accessible.
- Vehicles, equipment, and storage tanks will undergo regular maintenance and inspections, and any equipment with leakage risks will be repaired immediately.
- All personnel handling chemicals will receive regular training on safe storage, transportation, usage, and emergency response. Participation will be mandatory, and trainings will be documented.
- Storage areas will be fire-resistant, and firefighting equipment will be available at all times. Explosives will only be handled by competent and authorized personnel.
- During the transportation of chemicals and fuels, vehicles compliant with national regulations will be used, and transport routes will be planned to avoid residential areas as much as possible
- Local communities will be informed about potential risks and the preventive measures taken, and they will be able to communicate their concerns through the grievance mechanism.
- An Emergency Preparedness and Response Plan (EPRP) will be implemented for potential spill, fire, or explosion scenarios, and its effectiveness will be tested through regular drills

- Air, soil, and water quality will be regularly monitored, and rapid response will be ensured in case of detected contamination.
- An inventory of all chemicals and fuels used during the Project will be established and continuously updated to ensure proper tracking, management, and compliance with applicable regulations.

VII. TRAINING

As part of the Communication and Training Plan, all personnel will receive structured training upon hiring, which will cover topics related to community health and safety risks and their potential consequences. The training will include an overview of legal obligations, roles, and responsibilities under applicable legislation, as well as specific mitigation measures relevant to each worker's duties (e.g., use of personal protective equipment, appropriate behavior near local communities, and adherence to site access protocols). Topics will also include recognizing and responding to situations that may endanger public health and safety, such as unsafe equipment operations, community exposure to dust or noise, or improper handling of hazardous materials. Training records will be maintained by the Human Resources Department in coordination with the Environmental and Social Team. This training will be reinforced through regular refresher sessions throughout the construction phase.

VIII. MONITORING

A structured internal monitoring program will be implemented to assess the effectiveness of community health and safety mitigation measures outlined in this Plan during the construction phase of the Project. The scope and frequency of monitoring activities will be periodically reviewed and revised where necessary, based on site-specific conditions, observed risks or incidents, stakeholder concerns, or changes in applicable national regulations and international standards.

Monitoring activities will be coordinated by the Corporate Communication, in close collaboration with the Environmental, Occupational Health and Safety (OHS), and Construction Management teams. Key responsibilities will include verifying the implementation of community access control measures, ensuring the visibility and condition of safety signage, reviewing traffic safety measures around construction zones, and assessing adherence to blasting protocols and emergency response readiness near sensitive receptors such as residential areas, schools, and healthcare facilities.

Regular site-level monitoring will be conducted to evaluate compliance with national legislation and Project-specific community health and safety requirements. This will include visual inspections, review of site access logs, observation of construction traffic behavior near populated areas, tracking of safety-related grievances, and assessment of community outreach and awareness activities conducted under the Stakeholder Engagement Plan (SEP).

The performance of contractors and subcontractors in implementing community health and safety measures will be reviewed through internal audits, site supervision reports, and direct observations in the field. Any identified non-conformities will trigger timely corrective and preventive action plans. Monitoring will also include follow-up assessments to verify the effectiveness of implemented measures and ensure that risks are mitigated without recurrence.

In addition to internal monitoring, inspections may be carried out by relevant public institutions, such as the Ministry of Health or local municipal authorities, in accordance with Turkish legislation. The frequency and scope of these inspections will be determined by the authorities and may include review of community complaints, inspection of construction site boundaries, and evaluation of compliance with emergency preparedness procedures.

Monitoring efforts will be guided by the framework provided in Table VIII.1, which outlines key parameters to be monitored, relevant locations, monitoring methods, frequency, and responsible parties. These monitoring activities are essential for evaluating the effectiveness of community health and safety mitigation efforts and ensuring full compliance with applicable regulations and Project standards.

Table VIII.1 Key Monitoring Activities

Parameter	Monitoring Location	Monitoring Method	Monitoring Frequency	Responsible Parties
Certificates of operators and drivers	Relevant department	Certificates will be ensured by the relevant department	During the recruitment process	SPV EPC
Number of Trainings, participants, Conducted	Project personnel and contractor workers receiving training	Review of training records	Monthly	SPV EPC
Compliance with Plan Implementation	Availability of relevant records in the system	Review of documented compliance with Plan procedures	Monthly	SPV EPC
Number of Complaints Related to the Plan	Records kept under the Grievance Mechanism Procedure	Review of grievance registration and resolution logs	Weekly	SPV EPC
-Employment data on the security personnel -Trainings provided to security personnel -Grievances received and replied to regarding the acts of security personnel	-Project office -Camp Sites	-Document review	Weekly	SPV EPC
Number of complaints received on traffic	Public relations records and grievance system	Logging and monitoring of grievances as per the Grievance Mechanism Procedure	Weekly	SPV EPC

In cases of non-compliance identified through internal oversight audits, AAOİAŞ will ensure that corrective and preventive measures are promptly implemented in coordination with the Contractor (Limak) and relevant subcontractors.

All community health and safety-related findings, including non-compliance incidents, or complaints received from surrounding communities, will be documented in accordance with national environmental regulations and Project procedures. In the event of serious violations—such as significant exceedance of short-term or long-term limit values—AAOİAŞ will ensure that the issue is reported and that appropriate actions are taken.

IX. KEY PERFORMANCE INDICATORS

The following Key Performance Indicators (KPIs) will be monitored, verified, and evaluated.

Table IX.1 Key Performance Indicators – Construction Phase KPIs

Monitoring Parameter / Performance Indicator	Target	Frequency	Responsible Party
Number of trainings conducted	All personnel to receive training	Quarterly	AAOİAŞ,
Non-conformities with standards	Less than five	Monthly	AAOİAŞ,
Complaints related to community health and safety	Less than five	Monthly	AAOİAŞ,

X. AUDIT AND REVIEW

The implementation of this Plan should be regularly monitored and reviewed in accordance with the Environmental and Social Management and Monitoring Plan (ESMMP). All incidents and non-conformities related to community health and safety should be documented and reported as outlined in this Plan. Contractors and subcontractors should be subject to audits conducted by the Project Sponsor within the scope and schedule defined in the Supply Chain and Subcontractor Management Plan. These audits and the associated records should be managed in compliance with the Project's established plans and procedures. Records to be reviewed during community health and safety audits will include, but are not limited to, the External and Internal Grievance and Suggestion Tracking Databases, records of community health and safety training sessions, non-conformity and incident records, emergency drill evaluations, and site-specific environmental and social monitoring data such as dust, noise, or vibration measurement reports. Observations and deficiencies identified during audits should be recorded in formal audit reports, and all findings requiring improvement should be registered under Corrective Actions. Project management should review audit outcomes and corrective action records, follow up on progress, and ensure that additional measures are implemented where necessary.

XI. REPORTING

Regular reporting should be conducted to ensure the effective implementation and continuous improvement of community health and safety management activities throughout the construction phase of the Project. Reporting should be structured to address both internal monitoring and auditing outcomes, as well as external compliance obligations and stakeholder engagement requirements.

Based on monitoring results, necessary corrective and preventive actions should be identified and the required updates should be incorporated into this Plan. The training program will also be revised accordingly to address any observed gaps. Regular audits and visual inspections should be conducted to verify that all activities are being undertaken in accordance with the provisions of this Plan.

Reports should be prepared using data gathered through community health and safety monitoring activities defined under this Plan. The results and supporting evidence of these monitoring activities (e.g., observations, grievance logs, community engagement records, and photos) should be documented in detail within appropriate reporting formats. This section of the Plan outlines the instructions and requirements for implementing these reporting activities.

Reporting activities under this Plan mainly relate to community grievances, implementation of awareness and training programs, performance of emergency response drills, monitoring of blasting activities and road safety measures near populated areas, and access control around high-risk construction zones. In the event of significant community health and safety incidents (e.g., injuries, unauthorized site access, unannounced blasting), an incident report including root cause analysis (RCA), mitigation and compensation measures should be submitted to the relevant authorities in accordance with Turkish legislation and Project procedures.

All data, together with the results of inspections and audits, should be summarized in the dedicated community health and safety chapter of the Environmental and Social Monitoring Report prepared on a quarterly basis. This report will include any non-compliances identified, corrective actions taken, and any recommended time-bound corrective measures. These should be supported with documentary evidence such as photographs, checklists, and field logs.

All personnel are encouraged to raise concerns, suggestions, or complaints related to community health and safety through the established grievance mechanism by completing the grievance form or using designated communication channels. Public grievances regarding safety, access, noise, blasting, or other community-related risks should also be addressed and followed up accordingly. The available communication channels for submitting grievances are outlined in the Stakeholder Engagement Plan.

Throughout the construction phase of the Project, this Plan will be reviewed quarterly by the E&S Manager, based on the results of audits and any community health and safety incidents or changes in site activities. Updates to the Plan will be agreed upon between the E&S Manager and the Site Manager.

CONSTRUCTION CAMP SITE MANAGEMENT PLAN

REVISION STATUS		
Revision Date	**Rev. No**	**Explanation**
01.03.2025	00	This plan is prepared according to TS EN ISO/IEC 9001:2015, TS EN ISO/IEC ISO 14001:2015, TS EN ISO/IEC 45001:2018 and IFC Performance Standards
23.05.2025	01	Revision
16.06.2025	02	Revision as per revision made under ESDD submitted by the Lender consultant
08.09.2025	03	Revision as per revision made under ESDD submitted by the Lender consultant

CONSTRUCTION CAMP SITE MANAGEMENT PLAN

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LIST OF ABBREVIATIONS

AAOİAŞ	Antalya-Alanya Otoyolu İnşaat Yatırım ve İşletme A.Ş.
CLO	Community Liaison Officer
CO	Carbon Monoxide
E&S	Environmental and Social
EHS	Environmental, Health, and Safety
ESIA	Environmental and Social Impact Assessment
ESMMP	Environmental and Social Management and Monitoring Plan
ESMS	Environmental and Social Management System
IFC	International Finance Corporation
ITS	Intelligent Transportation Systems
KPIs	Key Performance Indicators
Limak	Limak İnşaat Sanayi ve Ticaret A.Ş.
NO_x	Nitrogen Oxides
OHS	Occupational Health and Safety
PM_{10}	Particulate Matter with a diameter of 10 micrometers or less
SEP	Stakeholder Engagement Plan
SEP	Stakeholder Engagement Plan
VOC	Volatile Organic Compounds
WHO	World Health Organization

CONSTRUCTION CAMP SITE MANAGEMENT PLAN

I. INTRODUCTION

Ministry of Transport, and Infrastructure (former Ministry of Transport, Maritime Affairs and Communications), General Directorate of Highways ("KGM" or "the Administration"), as the owner of the Antalya-Alanya Motorway Project, has tendered for a contract in accordance with the Law on Implementation of Some of the Investments and Services in the Framework of Build, Operate and Transfer Model (Law No: 3996). Following the tendering process, KGM has awarded Antalya-Alanya Otoyolu İnşaat Yatırım ve İşletme A.Ş. (AAOİAŞ or the Project Sponsor) with a Build, Operate and Transfer (BOT) contract for the implementation of the Project. Accordingly, AAOİAŞ will be referred as Project Sponsor[1] in the scope of this report. The main contractor for the Project has been designated as Limak and will henceforth be referred to as the Contractor (or EPC).

The project is designed to connect the districts of Serik and Alanya via the Manavgat district of Antalya province. The Project will enhance the existing transportation network services with its surrounding provinces: Burdur, Muğla, Konya, Isparta, Karaman and Mersin. Various environmental, social, and technical studies have been conducted along the initial route of the Project tendered by the KGM. Based on these studies, the route was optimized, incorporating engineering practices and addressing environmental and social considerations, particularly issues of involuntary and economic resettlement, before being finalized. According to the most current design, the total length of the Motorway, which will be a dual carriageway of mostly 3 and partially 2 lanes (3x2 and 2x2) in each direction, is 117.8 kilometers including the main carriageway and the access roads[2].

This Construction Camp Site Management Plan ("Plan") has been prepared by Antalya-Alanya Highway Construction Investment and Operation Inc. ("AAOİAŞ" or "SPV") for the Antalya-Alanya Highway Project ("Project") in accordance with national legislation, the Equator Principles ("EP"), the International Finance Corporation ("IFC") Performance Standards ("PSs"), and the international standards that reference the relevant legislative sections. The Plan covers the construction phase of the Project.

I.1 Project Description

The Project starts at Serik Interchange (Km: 52+000) and then proceeds eastward, following the corridor at the foothills of the Taurus Mountains within the boundaries of Serik and Manavgat districts, ending at north of Konaklı neighborhood of Alanya District (Km: 136+000). From this point onwards, the route turns southward with a 2x2 lane connection road and connects to the D400 state road at the Alanya West Interchange.

As of April 2025, the current Project design includes a total of 117.8 kilometers of road, comprising 84 kilometers of main road (motorway) and 33.8 kilometers of access roads. Other structures to be built as part of the project are as follows:

- 16 viaducts,
- 22 bridges,
- 305 culverts,
- 25 interchanges,
- 56 overpasses,
- 43 underpasses, and
- 5 tunnels

The map showing the construction components and road route within the scope of the Project's construction activities is provided in Figure I.1.

[1] The BOT Contract uses the term "Appointed Company" to refer Project Sponsor

[2] It should be noted that the environmental and social baseline characterization, maps and scoping assessments provided in this report are based on the most current design.

CONSTRUCTION CAMP SITE MANAGEMENT PLAN

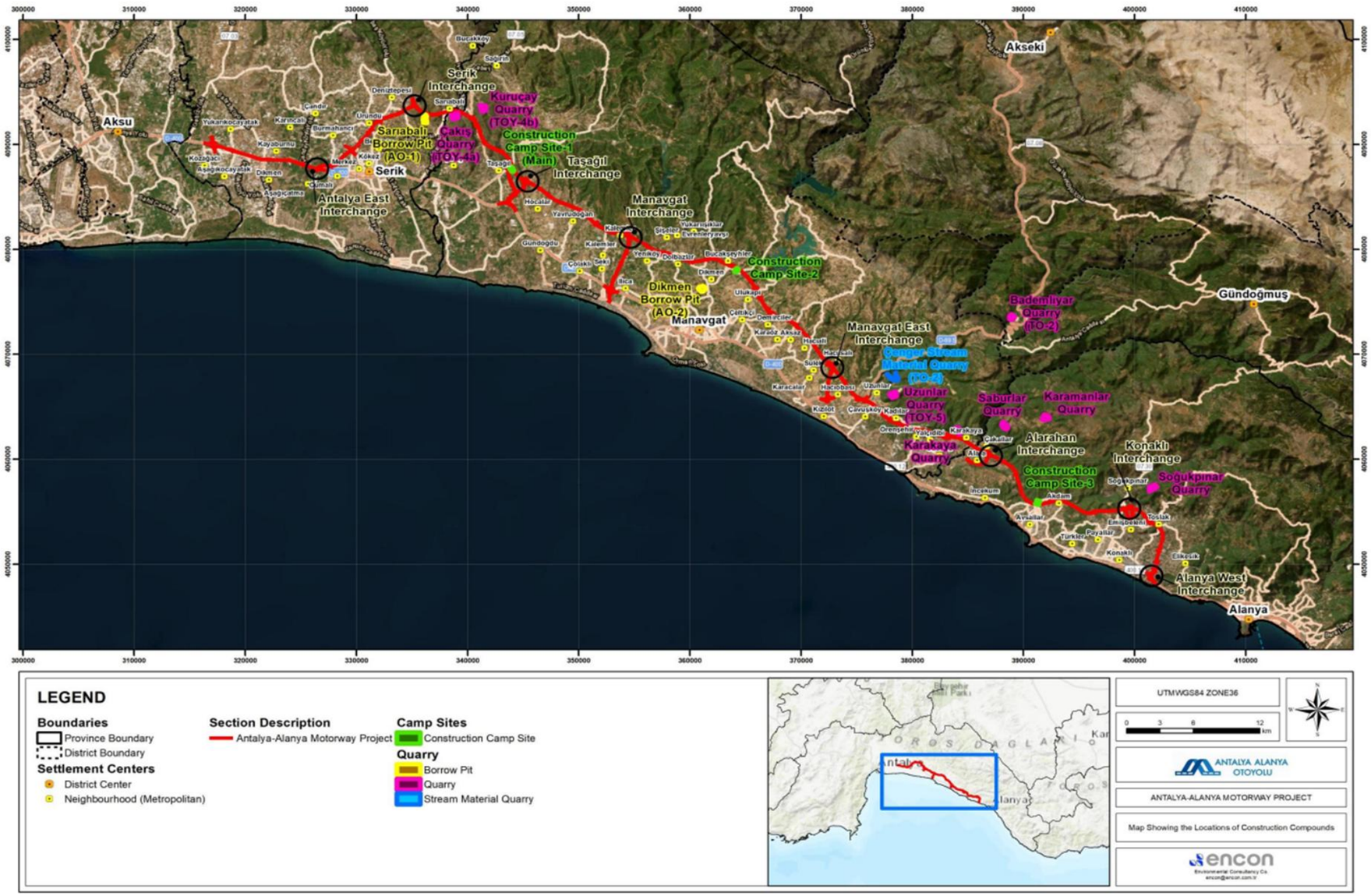


Figure I.1 Map Showing the Locations of Construction Compounds

CONSTRUCTION CAMP SITE MANAGEMENT PLAN

II. PURPOSE AND SCOPE

This Plan has been prepared by Antalya-Alanya Otoyolu İnşaat Yatırım ve İşletme A.Ş. ("AAOİAŞ" or "SPV") for the Antalya-Alanya Motorway Project ("the Project").

This management plan is a living document developed with the best available information and will be reviewed and revised as necessary due to the nature of the construction and progress.

The purpose of this Plan is to define the principles and procedures for the management of camp sites in accordance with applicable national regulations and international standards. In addition, the Plan sets out the standards for campsite facilities, including accommodation conditions, spatial arrangements, room requirements, water quality, and other essential aspects to ensure compliance and safeguard the health, safety, and well-being of workers accordance with applicable national regulations and international standards. The Construction Campsite Management Plan aims to minimize risks to human health, property, and the environment associated with the establishment, operation, and maintenance of campsite facilities during the construction phase, and sets a standard for worker accommodation conditions.

The Plan should be implemented by all parties involved in the construction phase, including the Project Sponsor – AAOİAŞ, the Main Contractor (Limak), and all subcontractors. Roles and responsibilities regarding campsite management should be clearly defined. The Plan should be reviewed and updated as necessary to reflect changes in project conditions, design, or legal requirements.

III. LEGISLATIVE FRAMEWORK AND REFERENCE STANDARDS

This Plan has been prepared in alignment with relevant national legislation and international reference standards that regulate environmental protection, occupational health and safety, and social management during construction activities. The Plan aims to ensure compliance with applicable legal requirements and best practice standards set by international financial institutions.

III.1 National Requirements

The following national laws and regulations provide the legal basis for the establishment, operation, and management of temporary construction camps during the construction phase:

- Occupational Health and Safety Law (Law No. 6331)
- Labor Law (Law No. 4857)
- Environmental Law (Law No. 2872)

III.2 International Standards and Conventions

The following international standards and conventions should be considered to ensure that construction camp site activities are implemented in accordance with international good practice and the requirements of international financial institutions.

To ensure responsible operations, AIIB adheres to policies addressing environmental and social impacts as outlined in its Environmental and Social Framework ("ESF") document. Updated in June 2024, the ESF reflects AIIB's commitment to international standards and sustainable development practices.

- IFC Performance Standards (2012), specifically:
  - Performance Standard 1: Assessment and Management of Environmental and Social Risks and Impacts
  - Performance Standard 2: Labor and Working Conditions
- IFC Environmental, Health and Safety (EHS) General Guidelines (2007)
- IFC EHS Guidelines for Toll Roads (2007)
- IFC Guidance Notes (2012)
- Equator Principles IV (2020)
- European Landscape Convention (entered into force in 2000; ratified by Türkiye in 2003)
- Workers' accommodation: processes and standards A guidance note by IFC and the EBRD

These references should guide the development, implementation, and monitoring of all environmental and social measures associated with construction camp facilities. Compliance with these standards should be ensured throughout the construction phase, especially in areas such as worker accommodation, sanitation, resource use, safety, and community health.

IV. LINKAGE WITH OTHER PROJECT PLANS AND PROCEDURES

This Plan is supported by other management plans and procedures developed under the Environmental and Social Management System (ESMS) of the Project. The following plans and procedures are particularly relevant and should be implemented in coordination with the Construction Camp Site Management Plan:

- Human Resources and Labor Management Plan
- Subcontractor Management Plan
- Solid Waste Management Plan
- Water, Wastewater, Storm Water Management Plan
- Hazardous Materials Management Plan
- Air Quality and Emissions Management Plan
- Noise and Vibration Management Plan
- Environmental and Social Management and Monitoring Plan (ESMMP)

The effective integration of these plans should be ensured to maintain compliance with national regulations and international standards and to minimize the cumulative environmental and social impacts of construction camp operations during the construction phase.

V. ROLES AND RESPONSIBILITIES

Antalya Alanya Otoyol İnşaat Yatırım ve İşletme A.Ş. (SPV) as the Project Sponsor and Limak (EPC) as the main contractor of the Project will be responsible for the following:

Project Manager (EPC)

- The project manager is responsible for construction of the mobilization area according to the lender's requirements

- Ensure implementation of the requirements and for making the resources available that may be required during implementation of this plan.

Administrative Affairs Supervisor and Camp Supervisor (EPC)

- Ensures compliance with health, safety, and worker accommodation standards.
- Coordinates daily administrative and welfare operations in the camp.
- Manages room allocation, occupancy records, and resident registration.
- Oversees catering, laundry, cleaning, and transport services.
- Ensures compliance with IFC & EBRD workers accommodation standards, labor law, and project policies.
- Ensure that the grievances received about campsite from CLO's is managed and resolved in a timely and transparent matter.
- Supervises daily camp operations, and maintenance.
- Monitors hygiene, sanitation, waste management, and utilities.
- Oversees security, emergency procedures, and fire safety measures.
- Conducts inspections of dining, accommodation, and recreational facilities.
- Takes action with the OHS team in emergency situations.
- Coordinates with the E&S and OHS teams to ensure compliance with legal and international requirements.
- Reports non-compliances to the Project Manager and ensures that they are resolved in a timely manner.

E&S Department and OHS Department (EPC)

- Inform, train and guide the camp supervisor about lender's requirements and regulations.
- Conduct joint labor audits together with the SPV including E&S team, OHS department, camp doctor, food engineer and camp supervisor from the EPC - regarding with legal/international requirements and the camp checklist presented in ANNEX IV: CAMP SITE CHECKLIST prepared according to the IFC/EBRD Guidance Note. Document the condition of accommodation sites, dining halls, and workers' facilities through records and photographs. Share audit findings.
- Conduct routine inspection about condition of accommodation sites, dining halls, and workers' facilities.
- Share the non-compliances of the audits and inspections with Project Manager of EPC, and make sure that the necessary steps are taken.
- Train relevant personnel particularly about the plan and campsite rules

E&S Department and Occupational Safety Department (SPV)

- Conducts quarterly labor audits with the EPC's E&S team, OHS department, camp doctor, food engineer and camp supervisor regarding with legal/international requirements and regarding the camp checklist presented in ANNEX IV: CAMP SITE CHECKLIST prepared according to the IFC/EBRD Guidance Note. Share the findings of the audit findings (report, photographs) with the EPC team.
- Revise campsite management plan depending on changing conditions.
- Ensure that the relevant personnel are trained particularly about the plan and campsite rules.
- Share the findings of the audits with Project Manager of EPC, and make sure that the necessary steps are taken in any case of non-compliance.

Food Engineer (EPC)

- Ensure that all meals are prepared, stored, and served in compliance with hygiene and food safety standards.
- Monitor kitchen staff for proper food handling, storage temperatures, and cleanliness.
- Conduct routine inspections of dining halls, kitchens, and food storage areas.
- Oversee food quality and nutritional value to ensure workers receive balanced meals.
- Provide training to food handlers on hygiene, sanitation, and safe practices.
- Record and report non-compliances (e.g., spoiled food, poor hygiene) and follow up on corrective actions.
- Take samples from all meals served and store them in a +4 °C cold storage for 72 hours.
- Monitor and control the expiration dates of goods delivered to the warehouses and those maintained in the cold chain.
- Join the audits/inspections conducted by the SPV and EPC Team.

Camp Site Doctor (EPC)

- Provide primary healthcare services to workers and maintain medical records.
- Conduct routine health checks and manage treatment of illnesses and injuries at the campsite.
- Ensure first aid kits, medicines, and medical equipment are available and up to standard.
- Coordinate health awareness campaigns (e.g., hygiene, communicable diseases, occupational health).
- Oversee sanitation and hygiene conditions in accommodation and communal facilities from a health perspective.
- Support emergency preparedness by assisting with emergency response plans and conducting medical drills.
- Refer workers to external hospitals/clinics when necessary and liaise with local health authorities.
- Join the audits/inspections conducted by the SPV and EPC Team.

Subcontractors

- Train and inform the workers staying in Limak's campsite about this plan and make sure that the workers are obliging to the Plan and campsite rules,
- Ensure that the workers are participating the awareness trainings given by the EPC's E&S and OHS departments.

Employees

- Participate in trainings given by EPC and follow the camp site's rules accordingly.
- Share his/her grievances or any non-compliance through grievance channels; if urgent share it with the camp supervisor.
- Accommodate in the premises in such way that does not harm himself and his colleagues.

ANTALYA ALANYA MOTORWAY	**ANTALYA-ALANYA MOTORWAY PROJECT**
Revision No: 3	**Date:** 08.09.2025
CONSTRUCTION CAMP SITE MANAGEMENT PLAN	

VI. CONSTRUCTION CAMP SITE MANAGEMENT APPROACH

Construction camps are critical support facilities during the construction phase of large-scale infrastructure projects. If not properly managed, these sites can result in a range of environmental, health, and social impacts. Key issues associated with construction camps include improper solid and liquid waste management, inadequate sanitation, occupational health and safety risks, pressure on local resources (e.g., water, land), and poor accommodation and hygiene conditions for workers.

Social impacts may arise from worker-community interactions, insufficient grievance mechanisms, and non-compliance with labor standards. In addition, increased demand for water, energy, and waste treatment capacity can place stress on local infrastructure.

Construction camps are also expected to contribute to emissions through the use of fossil fuel-based generators and heating systems. These systems can emit pollutants such as particulate matter (PM_{10}), nitrogen oxides (NO_x), carbon monoxide (CO), and volatile organic compounds (VOCs), particularly in the absence of proper maintenance or emission controls. Noise and vibration disturbances may also occur due to the operation of heavy equipment, vehicle traffic, and power generation units.

To mitigate these risks, construction camps will be sited, designed, and operated in accordance with applicable national regulations and international best practice standards. Camp layouts should incorporate designated areas for accommodation, dining, hygiene facilities, waste storage, and emergency response. Adequate infrastructure should be provided to ensure the provision of potable water, safe sanitation, reliable electricity, and effective drainage.

As of the current planning phase, three primary construction camp sites have been identified along the Antalya–Alanya Motorway Project corridor. These camps will be established to support key segments of the construction works, provide accommodation and welfare services to workers, and house essential facilities and equipment. Table VI.1 presents the locations of the proposed construction camps.

Table VI.1 Proposed Construction Camp Site Locations

Location (Km)	Province	District	Nearest Neighborhood	Description
Km 59+400	Antalya	Manavgat	Taşağıl	Temporary Construction Camp Site
Km 64+500	Antalya	Manavgat	Taşağıl	Construction Camp Site-1 (Main)
Km 87+800	Antalya	Manavgat	Bucakşeyhler	Construction Camp Site-2
Km 124+300	Antalya	Alanya	İncekum	Construction Camp Site-3

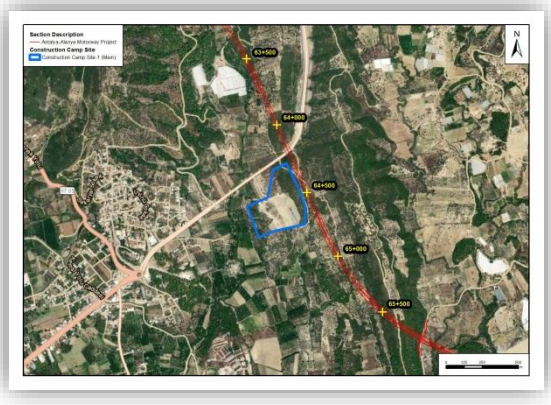
Temporary Construction Camp Site is located near Km 59+400 in the Taşağıl neighborhood of Manavgat district. The site is approximately 1 km from the center of the Taşağıl neighborhood. This site is planned to be used until the Main Construction Camp Site No.1 is constructed. Once the main camp site is established, one asphalt plant, one mechanical plant, and one concrete plant will be installed in this area. A general view of the site is shown in Figure VI.1 and its layout is presented in ANNEX I: Temporary Construction Camp Site.

Construction Camp Site-1

General View

Figure VI.1 Satellite Image and Photograph of the Temporary Construction Camp Site (Km 59+400)

Main Construction Camp Site No. 1 is located near Km 64+500 in the Taşağıl neighborhood of Manavgat district. The site is approximately 1 km from the center of the Taşağıl neighborhood. This site is planned to remain in use as a maintenance and operation area following the construction phase. A general view of the site is shown in Figure VI.2 and its layout is presented ANNEX II: Main Construction Camp Site.

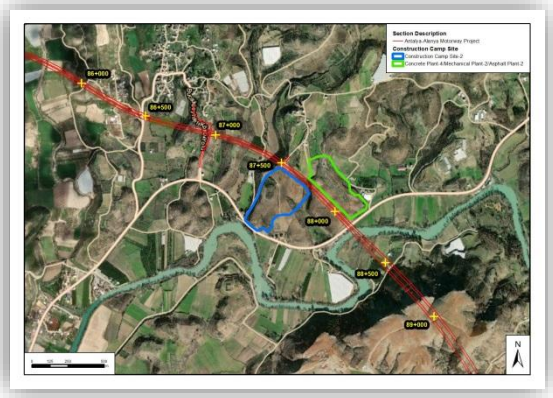


Construction Camp Site-1

General View

Figure VI.2 Satellite Image and Photograph of the Construction Camp Site-1 (Km 64+500)

Construction Camp Site No. 2 is located near Km 87+800 in the Bucakşeyhler neighborhood of Manavgat district. The site is approximately 1.1 km from the center of the Bucakşeyhler neighborhood. A general view of the camp site is shown in Figure VI.3 and its layout is presented inANNEX III: Manavgat Construction Camp Site .

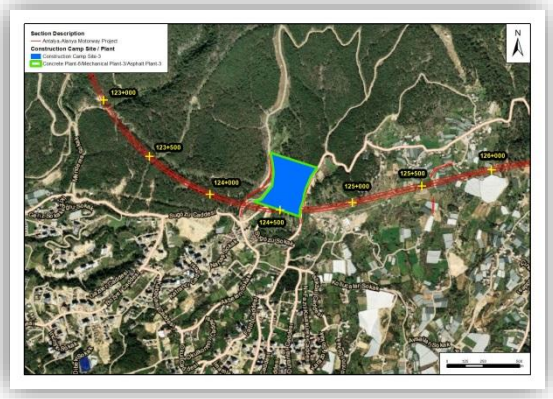


Construction Camp Site-2

General View

Figure VI.3 Satellite Image and Photograph of the Construction Camp Site-2 (Km 87+700)

Construction Camp Site No. 3 is located near Km 124+300 in the forest area between Avsallar and İncekum neighborhoods of Alanya district. The site is approximately 500 m from the center of the İncekum neighborhood. A general view of the camp site is shown in Figure VI.4.



Construction Camp Site-3

General View

Figure VI.4 Satellite Image and Photograph of the Construction Camp Site-3 (Km 124+300)

Each campsite will include facilities such as cafeteria, infirmary, showers and toilets, wastewater treatment plants/septic tanks, and water supply facilities.

The total equivalent population for these plants is 3,750 people. Package WWTPs will be constructed in each campsite to treat the domestic wastewater that will be generated during the construction phase of the Project.. A total of 3,300 people will be accommodated across three campsites as part of the Project. It is assumed that approximately 1,100 people will stay at each campsite.

Considering potential visitors and occasional overcapacity, a package WWTP with a capacity for 1,250 people is calculated to be sufficient for the domestic wastewater treatment needs of each campsite.

Wastes anticipated to be generated at the campsites during the construction phase of the Project would mainly include cleared vegetation, municipal (domestic) solid wastes, domestic wastewater, treatment sludge, packaging wastes, excavation wastes, construction wastes, debris from settling ponds at concrete plants, hazardous wastes (including packaging wastes that contacted with hazardous substances), waste oils, waste tires, waste vegetable oils and other types of special wastes. Further information on the main types of wastes are detailed in Solid Waste and Hazardous Waste Management Plans.

All activities associated with camp construction, operation, and decommissioning would be conducted under strict health, safety, and environmental management procedures. Implementation of this Plan would be closely coordinated with relevant management plans, including those on waste, wastewater, health and safety, and subcontractor .

Monitoring of camp conditions should be carried out regularly to ensure compliance with the ESMS, and corrective actions should be taken promptly where non-conformities are identified. Worker welfare standards and community relations should be continuously monitored and improved throughout the construction phase.

VII. MITIGATION MEASURES FOR IMPACTS OF CONSTRUCTION CAMPS

The following measures will be implemented to prevent or minimize environmental, occupational health and safety, and social risks associated with the construction and operation of camp facilities during the construction phase:

- Camp-related waste will be managed in accordance with relevant Waste Management Plans (e.g., solid waste, wastewater, hazardous waste).
- Emergency response equipment will be available on-site in compliance with legal requirements to respond to fire, medical, and environmental emergencies.
- Access to and from the camp site will be controlled in accordance with the provisions outlined in the Security Management Plan.
- A fire detection and firefighting system will be installed and maintained in all accommodation units, kitchens, storage areas, and social facilities, with regular inspections and drills conducted to ensure readiness.
- Hygienic and legally compliant meal service areas will be established within the camp to meet workers' nutritional and health needs.
- Adequate quantities of safe and hygienic drinking water will be supplied and maintained at all times in compliance with national health regulations.
- Toilet, shower, laundry, changing, and dressing areas will be provided in sufficient quantity, in hygienic conditions, and in accordance with international (lenders') requirements.
- Comfort conditions (ventilation, lighting, heating, etc.) in on-site office buildings and worker housing will be ensured in line with applicable occupational health and safety regulations, seasonal needs and legal requirements.
- A drainage system will be installed across the camp site to prevent water accumulation and runoff, prevent contamination risks within worker living areas in accordance with relevant legislation.
- Campsites will host on-site infirmaries staffed by trained health professionals to provide initial

response in case of injuries or health incidents. In the event of an emergency, coordination with local authorities-including village heads, municipalities, healthcare units, and law enforcement-will enable swift and organized action.

- Legally compliant medical units and first-aid equipment will be established within the camp site and made readily accessible to all personnel.
- Workshop areas (such as those used for equipment maintenance and repair) within the camp will be managed to prevent adverse impacts on the environment, community, and worker health.
- Waste and hazardous materials generated in these areas will be stored separately in sealed, leak-proof containers and in designated enclosed areas, in line with related management plans.
- Measures will be taken to prevent the release of contaminants into soil and water, including the implementation of spill containment protocols and secondary containment systems.
- Building materials used in worker accommodation will comply with applicable fire safety and hygiene regulations.
- Accommodation units will be positioned at a reasonable distance from active construction zones to ensure worker safety and comfort.
- Systems for the organized collection and disposal of domestic and operational waste will be established, including clearly designated bins and regular collection services.
- Routine pest control will be implemented to maintain sanitary conditions in worker accommodation facilities.
- Each worker will be assigned a personal bed, and all rooms will be equipped with operable windows, secure door locks, and fly screen, air conditioner, and wardrobe.
- Separate storage areas for personal protective equipment, including boots and other gear, will be provided to avoid cross-contamination and ensure organization.
- Regular cleaning of accommodation dormitory, baths and toilets will be carried out to maintain hygiene and prevent health issues.
- Toilets and sleeping quarters will be located within the same building to enhance accessibility, safety, and convenience for workers.
- Cleaning schedules will be posted in all areas where cleaning is performed, and cleaning activities will be regularly recorded.
- There will be a recreation room for workers to rest and spend their free time.
- Lounge areas will be built in the camp areas for workers relax.
- There will be a Wi-Fi network in the recreation room and rooms for workers to access the internet.
- Meals will be provided in the camp areas to ensure that workers eat regularly and healthily.
- Shuttle services with appropriate air conditioning will be provided to the nearby town center at certain times of the day.
- All camp areas will be inspected at regular intervals by companies authorized by the OHS, E&S Team, campsite supervisor, food engineers, camp site doctor.
- Mechanical maintenance workshops, warehouses, and other such facilities will be separated from accommodation and rest areas in the camp areas.
- Waste management in camp areas will be carried out in accordance with the guidelines provided in the Hazardous Waste and Material Management Plan and the Solid Waste Management Plan, with separate areas for hazardous and non-hazardous waste collection.
- Sufficiently sized and numbered prayer room will be established for workers.
- In order to implement the internal complaint mechanism, grievance boxes will be placed in areas without camera surveillance, and the requests, suggestions, and complaints collected will be logged into CLO's archive and resolved by management.
- Workers will have access to hot water 24 hours a day.
- Camp rules will be clearly communicated to workers, and necessary measures and incentives will be implemented to ensure compliance with camp rules.

- Access to camp areas from outside will be restricted, and security will be ensured.
- Security staff have a clear mandate and have received clear instruction about their duties and responsibilities, in particular their duties not to harass, intimidate, discipline or discriminate against workers. Security staff have received adequate training in dealing with domestic violence and the use of force.
- The campsite shall implement adequate security measures and awareness programs to prevent GBVH, ensuring that all facilities are safe, inclusive, and respectful for both men and women, with clear reporting channels for any incidents. Particular attention will be paid to the safety and security of women workers.
- Workers' rights must be respected in both living and working areas, and all house rules should be fair, non-discriminatory, and give equal opportunities to everyone
- All camp areas, accommodation facilities, toilets, bathrooms, prayer rooms, lounge areas will be assessed at internal labor audits conducted by the SPV and EPC's OHS, E&S Team, campsite supervisor, food engineers, camp site doctor according to the legal / international requirements and by the checklist prepared in ANNEX IV: CAMP SITE CHECKLIST regarding the IFC/EBRD's guidance note. The findings of these audits will be analyzed actions will be taken according to that.

VIII. TRAINING

When evaluating training needs for the implementation of this procedure, several key considerations will be addressed. All Project personnel, including contractor staff, will be informed of basic hygiene practices, safety rules, emergency response procedures, pollution prevention, waste management procedures, general camp site and accommodation rules and other requirements outlined under the Project. Personnel responsible for the management, security, cleanliness, and maintenance of the camp site and accommodation areas, including those employed by contractors, will be required to hold professional training certifications in accordance with applicable legislation. It will also be ensured that a sufficient number of staff trained in first aid is present at all times. Training records will be maintained by the Human Resources and/or the Environment and Social team.

IX. MONITORING

A structured internal monitoring program will be implemented to assess the effectiveness of campsite management measures outlined in this Plan during the construction phase of the Project. The scope and frequency of monitoring activities will be periodically reviewed and revised where necessary, based on site-specific conditions, health and safety observations, worker feedback, or changes in applicable legislation and Project requirements.

Monitoring activities will be coordinated by the E&S and OHS Department of EPC and SPV in close collaboration with the and Camp Management teams. Key responsibilities will include verifying the adequacy of accommodation standards, monitoring sanitation and hygiene conditions, ensuring the proper functioning of wastewater and solid waste management systems, and confirming that food preparation and storage practices meet health and safety requirements.

Regular audits will be carried out by the EPC and SPV Team at all worker accommodation and support facility areas to ensure compliance with national standards, IFC/EBRD requirements, and Project-specific campsite management criteria. The conditions to be checked are presented in ANNEX IV: CAMP SITE CHECKLIST. This will include checks on room occupancy, cleanliness of common areas

(e.g., kitchens, dining halls, toilets, and showers), availability of drinking water, adequacy of waste segregation and disposal practices, and implementation pest control measures.

The performance of contractors and subcontractors in meeting campsite management standards will be assessed through internal labor audits, supervisor inspections, worker interviews, and grievance records. Any identified non-conformities will trigger the preparation and implementation of corrective and preventive actions. Follow-up inspections will be conducted to confirm the resolution of issues and ensure ongoing compliance.

In addition to internal monitoring, inspections may be conducted by relevant public institutions, such as the Ministry of Health, Provincial Directorates, or the Ministry of Environment, Urbanization and Climate Change. The frequency and scope of these inspections will be determined by the competent authorities and will cover environmental health, hygiene, and worker welfare aspects of the campsites.

Monitoring efforts will be guided by the framework provided in Table IX.1, which outlines the specific parameters to be monitored, their corresponding locations within the campsite, monitoring frequency, and responsible parties. These activities will be essential for ensuring that campsite facilities remain safe, hygienic, and compliant with national regulations and international best practices.

Table IX.1 Key Monitoring Activities

Parameter	Monitoring Station / Location	Monitoring Method	Monitoring Frequency	Responsible Parties
Borders of the camp sites	Camp Sites	Site audit	Daily	SPV EPC -Sub-Contractor
Area of exposed lands at each camp sites (m^2)	Locations of exposed lands within the expropriation corridor	Site audit	Daily	-SPV -EPC -Sub-Contractor
List of hazardous materials/chemicals supplied, stored and used (inc. information on type and amount/volume) Type (i.e. municipal, packaging, waste oil, etc.) and amount of wastes produced/disposed of Waste management/disposal agreements done with licensed companies Temporary Waste Storage Areas	Camp Sites	-Site audit -Document review	Monthly	-SPV -EPC -Sub-Contractor
Site practices on waste management (e.g. general housekeeping rules, source separation practice, containers, containment structures, etc.)	Camp Sites	Visual inspection	Daily	-SPV -EPC -Sub-Contractor
Sources and amount of water supply Water supply permits	Camp sites	-Document review	Monthly	-SPV -Acridities Laboratory

Parameter	Monitoring Station / Location	Monitoring Method	Monitoring Frequency	Responsible Parties
Employment agreements -Number of personnel who are infected with an infectious disease -Source and quality of drinking water	Camp sites	-Document review	Weekly	-SPV -EPC
-Use of PPEs -Health and safety signs -Fire safety equipment/systems -Accommodation conditions	Camp sites	Site audit Visual observation	Daily	-SPV -EPC
Number of health and safety trainings provided	Camp sites	Document review	Monthly	SPV
-Employment data on the security personnel -Trainings provided to security personnel -Grievances received and replied to regarding the acts of security personnel	Camp sites	Document review	Weekly	SPV
Visual barriers	Camp sites	Site audit Review of grievance logs	Monthly	SPV
Number of trainings conducted	Camp sites	Tracking the number of Project personnel and contractor workers who have received training	Quarterly	EPC (E&S Department – OHS Department)
Number of audits conducted	Construction camp sites	Audit reports, checklists, records of findings and corrective actions	Quarterly	EPC (E&S Department – OHS Department) SPV
Complaints related to camp site management	Public relations records and grievance system	Logging and monitoring of grievances as per the Grievance Mechanism Procedure	Regularly	EPC (E&S Department – OHS Department) SPV
Compliance with Plan implementation	Worker Rooms, cafeterias, social areas, bathrooms, toilets, etc.	Visual inspection, check-lists	Regularly	EPC (E&S Department – OHS Department)

In cases of non-compliance identified through internal audits SPV will ensure that corrective and preventive measures are promptly implemented in coordination with the EPC and relevant subcontractors.

All campsite-related findings—including hygiene deficiencies, overcrowding, inadequate waste or wastewater management, food safety violations, or grievances rose by workers—will be documented in accordance with national legislation and Project procedures. In the event of serious violations, such as confirmed breaches of minimum accommodation standards, health and sanitation failures, or conditions posing risks to worker welfare, SPV will ensure that the issue is reported to the relevant authorities and that appropriate technical, procedural, and contractual actions are undertaken without delay.

X. KEY PERFORMANCE INDICATORS

The following Key Performance Indicators (KPIs) will be monitored, verified, and evaluated.

Table X.1 Key Performance Indicators – Construction Phase KPIs

Monitoring Parameter / Performance Indicator	Monitoring Frequency	Target	Responsible Party
Number of trainings conducted	Continuous	All personnel to receive training	EPC (E&S Department – OHS Department) SPV
Non-compliance with standards	Monthly	Less than five	EPC (E&S Department – OHS Department) SPV
Number of complaints received about camp site accommodation and welfare facilities	Monthly	Less than five	EPC (E&S Department) SPV
Number of inspections conducted	Continuous	Fewer than five non-compliances per month	EPC (E&S Department – OHS Department)
Number of audits conducted	Quarterly	Fewer than 15 non-compliances per quarter	EPC (E&S Department – OHS Department) SPV

XI. AUDIT AND REVIEW

The implementation of this Plan should be regularly monitored and reviewed in accordance with the ESMMP. All incidents and non-conformities should be documented and reported as outlined in the plan. Contractors and subcontractors should be subject to audits conducted by the EPC and SPV within the scope and schedule defined in the Contractor and Subcontractor Management Plan. These audits and the associated records should be managed in compliance with the Project's established plans and procedures. Observations and deficiencies identified during audits will be included in formal audit reports, and any required improvements will be registered under Corrective Actions. The audits will be conducted in accordance with the Camp Site Checklist, prepared in line with the IFC/EBRD Workers' Accommodation Guidance Note as shown in ANNEX IV: CAMP SITE CHECKLIST. Project management should review audit outcomes and corrective action records, follow up on progress, and ensure that additional measures are implemented where necessary and update this document.

XII. REPORTING

Regular reporting will be carried out to ensure the effective implementation and continuous improvement of environmental and social (E&S) site management practices throughout the construction phase of the Project. Reporting will address both internal monitoring and auditing results, as well as stakeholder communication obligations related to site operations.

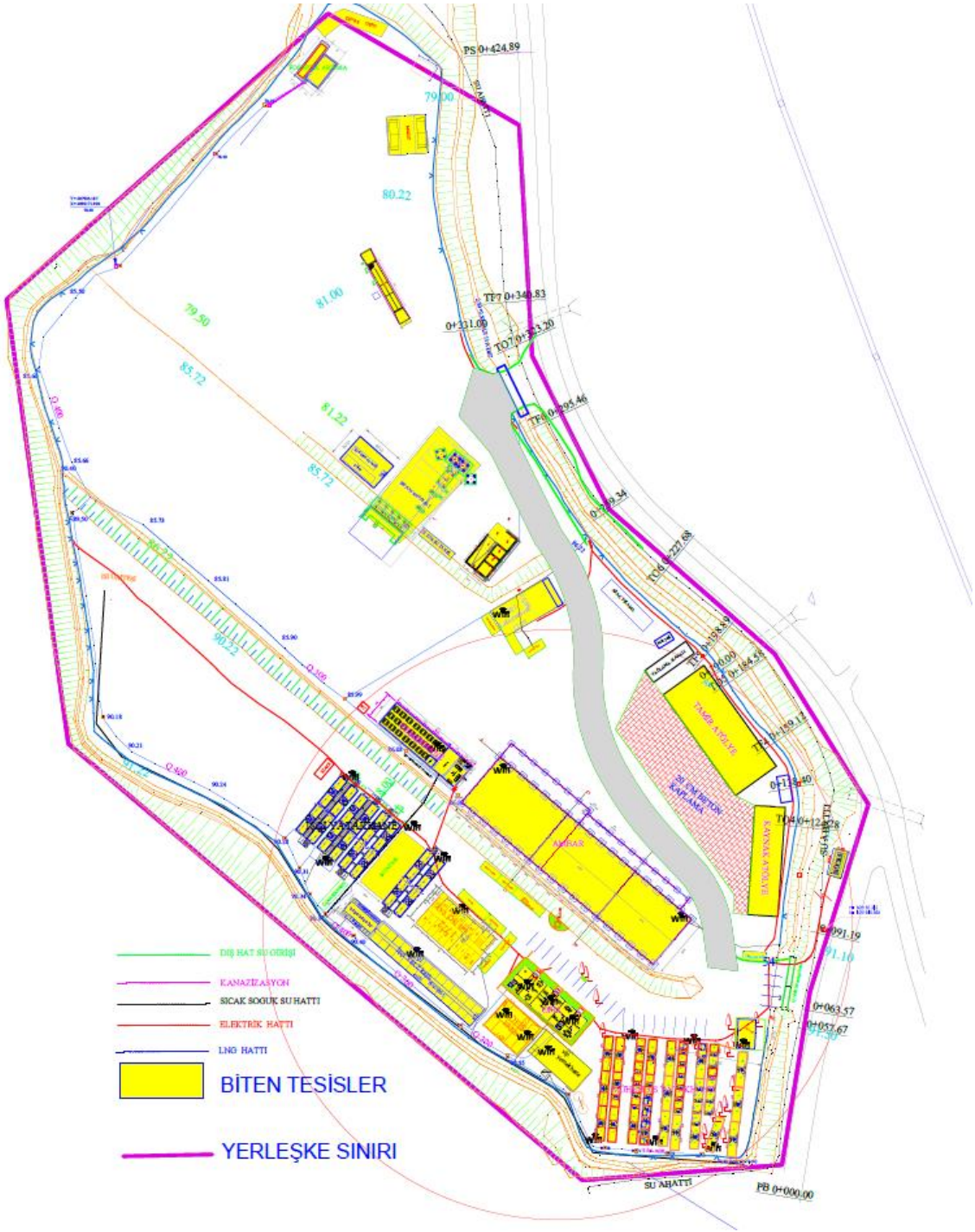
Based on the monitoring results, necessary corrective and preventive actions will be identified and required changes will be reflected to this Plan. Training program will also be updated accordingly. Regular audits and visual inspections will be conducted in order to ensure all activities are being undertaken according to this Plan.

These monitoring results, along with data obtained through inspection and audit activities, will be consolidated under a dedicated section related to site management in the Environmental and Social Monitoring Reports, which are prepared on a quarterly basis. All observed non-compliances, corrective actions taken, and recommended time-bound corrective measures will be documented and supported with relevant records, including photographs or other verifiable materials.

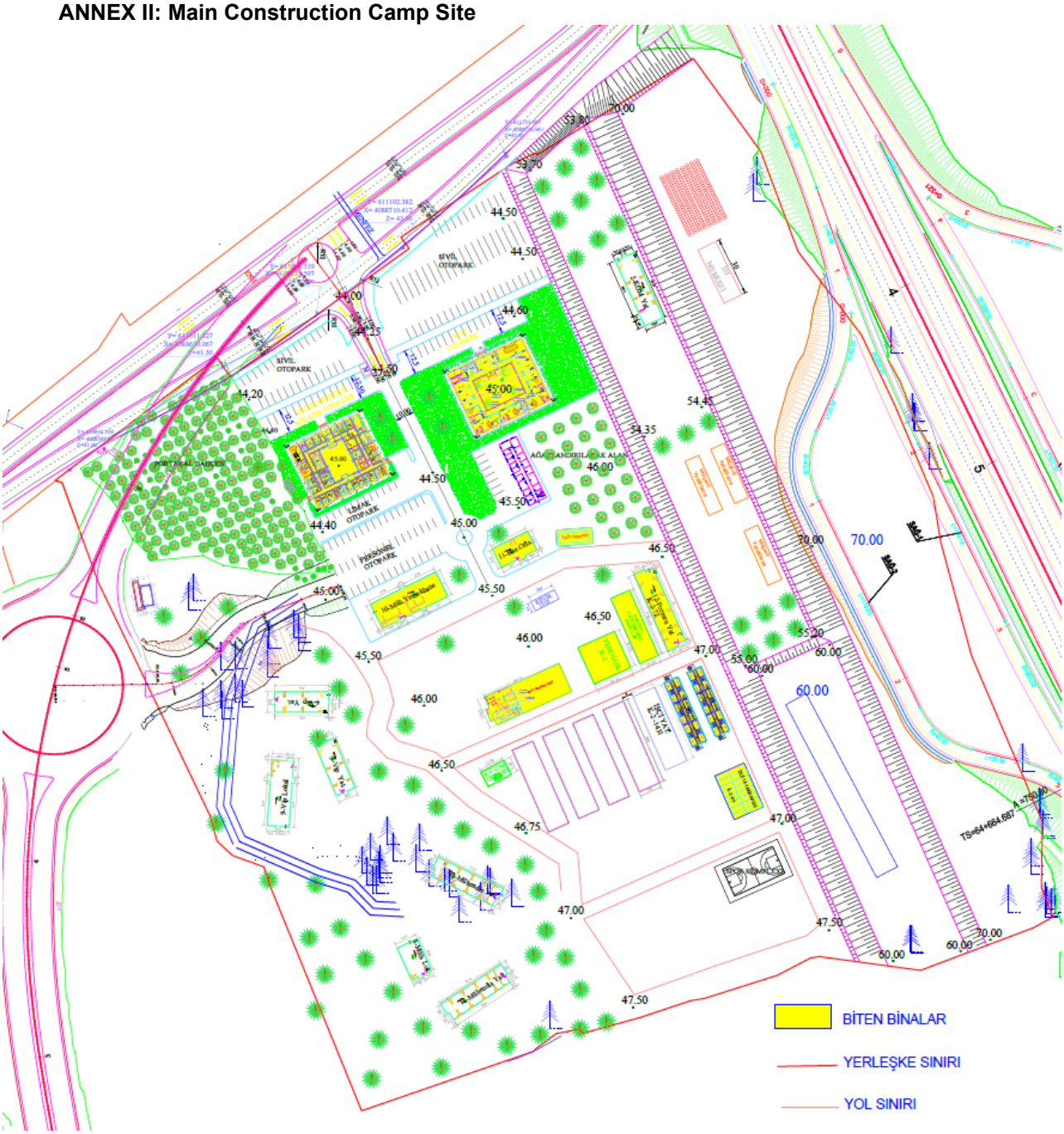
All personnel may submit concerns, suggestions, or complaints in accordance with the Project's Grievance Mechanism, by completing a grievance form. Communication channels available for submitting grievances are outlined in the Stakeholder Engagement Plan (SEP).

This Plan will be reviewed on a quarterly basis by the Environmental and Social Expert, following site audits or after any incident or significant change in site activities. Any updates to the Plan will be developed in coordination with the Site Manager and agreed upon accordingly.

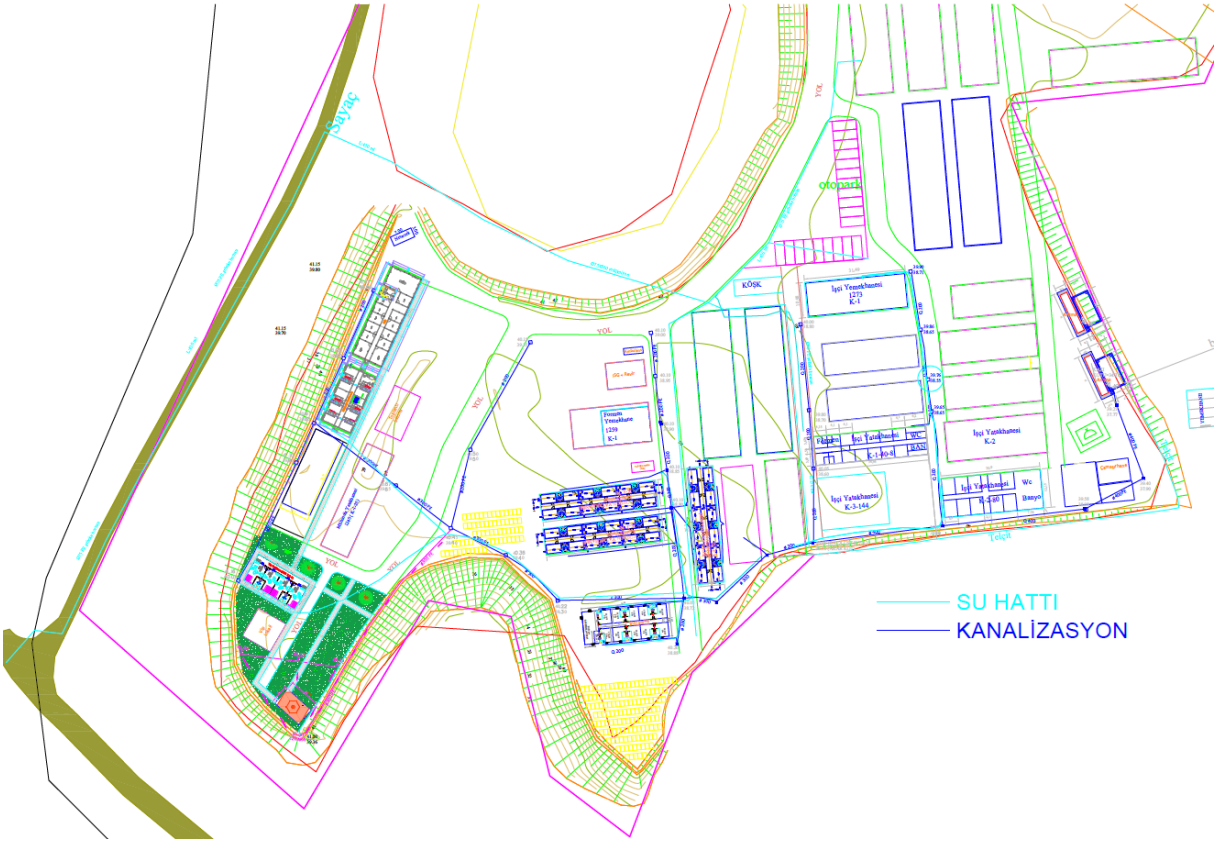
ANNEX I: Temporary Construction Camp Site



ANNEX II: Main Construction Camp Site



ANNEX III: Manavgat Construction Camp Site



ANNEX IV: CAMP SITE CHECKLIST

ANTALYA ALANYA MOTORWAY	**CAMP CONTROL FORM**	**Doc No**: **Rev:** **Publication Date:**

No.	Control Parameters	Compliance			Comments
		Yes	No	Not Relevant	
ASSESSMENT OF THE NEED FOR WORKERS' ACCOMMODATION					
1	Have mandatory provisions regarding worker accommodation been established?	☐	☐	☐	
2	Has an assessment been made regarding the suitability of workers living near the work site?	☐	☐	☐	
3	Has an assessment been made of the skills and competencies of the workforce in the work area and how these skills and competencies align with the project's needs?	☐	☐	☐	
4	Before constructing the mobilization facility, was a comprehensive assessment conducted of the different types of housing available in the surrounding communities?	☐	☐	☐	
5	Have measures been identified to mitigate negative impacts on the local housing market, and have they been included in the Environmental and Social Action Plan (ESAP) or other relevant action plans?	☐	☐	☐	
ASSESSMENT OF THE IMPACT OF WORKER ACCOMMODATION ON COMMUNITIES					
6	To reduce the negative impacts of workers' accommodation facilities on surrounding communities and enhance their positive impacts, was a community impact assessment conducted as part of the Environmental and Social Assessment of the overall project?	☐	☐	☐	
7	Were the positive and negative impacts of workers' accommodation facilities on infrastructure, services, and facilities included in the assessment?	☐	☐	☐	
8	Were the impacts on local businesses and local employment included in the assessment?	☐	☐	☐	
9	Have the overall effects of workers' accommodation facilities on community health (particularly the risks of increased traffic accidents and infectious diseases) and community social cohesion been included in the assessment?	☐	☐	☐	
10	Does the current assessment include appropriate mitigation measures to address the identified adverse impacts?	☐	☐	☐	
WORKERS' ACCOMMODATION STANDARDS					
11	National/local standards Have the relevant national/local regulations been established and implemented?	☐	☐	☐	
GENERAL LIVING FACILITIES					

No.	Control Parameters	Compliance			Comments
		Yes	No	Not Relevant	
12	Are the facilities designed to avoid flooding and other natural hazards?	☐	☐	☐	
13	Are the living facilities located at a reasonable distance from the work site?	☐	☐	☐	
14	Is transportation to/from the work site safe and free?	☐	☐	☐	
15	Are the living facilities constructed using appropriate materials, in good condition, and kept clean and free of trash and other waste?	☐	☐	☐	
16	Is proper drainage provided on site?	☐	☐	☐	
HEATING, AIR CONDITIONING, VENTILATION, AND LIGHTING					
17	Depending on the climate, are adequate heating, ventilation, air conditioning, and lighting systems, including emergency lighting, provided for the accommodation facilities?	☐	☐	☐	
WATER					
18	Do workers have easy access to sufficient quantities of clean/potable water?	☐	☐	☐	
19	Is the quality of the water in compliance with national/local requirements or WHO standards?	☐	☐	☐	
20	Are the tanks used for storing drinking water constructed and sealed in a way that prevents contamination or cross-contamination of the stored water?	☐	☐	☐	
21	Is the quality of drinking water monitored regularly?	☐	☐	☐	
WASTEWATER AND SOLID WASTE					
22	Is wastewater, sewage, food waste, and other waste materials being disposed of appropriately in accordance with local or World Bank standards and without causing significant impact on camp residents, the environment, or surrounding communities?	☐	☐	☐	
23	Are special containers provided for waste collection, and are these containers emptied regularly?	☐	☐	☐	
24	Are pest control and disinfection practices carried out throughout the living facilities?	☐	☐	☐	
ROOM/DORMITORY FACILITIES					
25	Are the rooms in good physical condition? Is there any damage?	☐	☐	☐	
26	Is sufficient space provided for residents?				
27	Is there adequate natural lighting in the rooms? (Window area should not be less than 5%-10% of the room's size)	☐	☐	☐	
28	Are the rooms/dormitories ventilated and cleaned at regular intervals? (Air volume per person: 10 m³)	☐	☐	☐	
29	Are the rooms constructed with floor materials that are easy to clean?	☐	☐	☐	

No.	Control Parameters	Compliance			Comments
		Yes	No	Not Relevant	
30	Are the rooms and washbasins/showers located within the same buildings?	☐	☐	☐	
31	Is sufficient space provided for room occupants? (4 m² per person)	☐	☐	☐	
32	Is the ceiling height sufficient? (2.4 m)	☐	☐	☐	
33	Has the number of workers sharing the room/dormitory been reduced to a minimum? (There must be a minimum of 1 m between beds)	☐	☐	☐	
34	Can the doors and windows be locked?	☐	☐	☐	
35	Are there curtains or doors in the shower and other private areas?	☐	☐	☐	
BED ARRANGEMENTS AND STORAGE FACILITIES					
36	Is a separate bed provided for each worker?	☐	☐	☐	
37	Is the practice of "shared beds" prohibited?	☐	☐	☐	
38	Is there a minimum 1-meter gap between beds?	☐	☐	☐	
39	Has the use of bunk beds been minimized?	☐	☐	☐	
40	When using bunk beds, is there sufficient space between the lower and upper bunks? (They should be avoided as much as possible in case of potential emergencies. When their use is unavoidable, the distance between beds (the height between two beds should be 0.7-1.1 m)	☐	☐	☐	
41	Is the use of triple-decker bunk beds prohibited? (Their use should be prohibited.)	☐	☐	☐	
42	Are workers provided with comfortable beds, pillows, and clean bedding?	☐	☐	☐	
43	Are bed sheets washed frequently?	☐	☐	☐	
44	Are adequate facilities provided for storing personal belongings? (475-liter lockers suitable for personal use are recommended.)	☐	☐	☐	
45	Are there separate storage areas for work clothes and PPE, and drying/ventilation areas as needed?	☐	☐	☐	
SANITARY FACILITIES					
46	Are the toilets constructed from materials that are easy to clean?	☐	☐	☐	
47	Are the toilets cleaned frequently and kept in constant working order?	☐	☐	☐	
48	Are the restrooms designed to provide workers with adequate privacy, including partitions from ceiling to floor and lockable doors?	☐	☐	☐	
TOILET FACILITIES					
49	Are there enough toilets and urinals? (Minimum 1 facility for every 6 to 15 workers)	☐	☐	☐	
50	Are the toilet facilities appropriately located and easily accessible? (The distance between rooms and facilities should be within accessible limits, such as 30-60 m.)	☐	☐	☐	

No.	Control Parameters	Compliance			Comments
		Yes	No	Not Relevant	
SHOWERS/BATHROOMS AND OTHER SANITARY FACILITIES					
51	Is the shower floor made of non-slip, hard, washable materials?	☐	☐	☐	
52	Are there enough handwashing sinks and shower/bath facilities? (1 toilet, 1 sink, 1 urinal, and 1 row of baths for every 6 to 15 workers).	☐	☐	☐	
53	Are the bathrooms easily accessible? (The distance between rooms and facilities should be within accessible limits, such as 30-60 meters.)	☐	☐	☐	
54	Is there an adequate supply of cold and hot water in the shower facilities?	☐	☐	☐	
55	Are separate sanitary and toilet facilities provided for men and women?	☐	☐	☐	
CAFETERIA, KITCHEN, AND LAUNDRY FACILITIES					
56	Are the canteen, cooking, and laundry facilities constructed using appropriate and easy-to-clean materials ( )?	☐	☐	☐	
57	Are the cafeteria, cooking, and laundry facilities clean and hygienic?	☐	☐	☐	
LAUNDRY FACILITIES					
58	Are adequate facilities provided for washing and drying clothes?	☐	☐	☐	
CAFETERIA AND FOOD PREPARATION FACILITIES					
59	Is there sufficient space provided for employees in the cafeteria/dining hall? (1-1.5 m² per person)	☐	☐	☐	
60	Are facilities provided to ensure adequate personal hygiene in kitchens?	☐	☐	☐	
61	Are kitchens adequately ventilated and properly equipped?	☐	☐	☐	
62	Are kitchen floors, ceilings, and wall surfaces adjacent to or above food preparation and cooking areas made of non-absorbent, durable, non-toxic, non-flammable, and easy-to-clean materials?	☐	☐	☐	
63	Are the wall surfaces adjacent to cooking areas made of fire-resistant materials, and are food preparation tables covered with a smooth, durable, non-abrasive, non-toxic, washable surface?	☐	☐	☐	
64	Are adequate facilities provided for cleaning, disinfecting, and storing kitchen utensils and equipment?	☐	☐	☐	
65	Are there sufficient leak-proof containers available for collecting food waste and other garbage? Is garbage removed from the kitchen frequently to prevent accumulation?	☐	☐	☐	
NUTRITION AND FOOD SAFETY STANDARDS					

No.	Control Parameters	Compliance			Comments
		Yes	No	Not Relevant	
66	Is a special process similar to the WHO's "5 steps to food safety" applied in relation to food safety? (WHO 5 Points: Pay attention to cleanliness, keep cooked and raw foods separate, cook thoroughly, store food at the correct temperature, use clean water and clean equipment)	☐	☐	☐	
67	Do the served foods contain appropriate nutritional value?	☐	☐	☐	
68	Does the food served take into account the religious/cultural backgrounds of the employees?	☐	☐	☐	
MEDICAL FACILITIES					
69	Are there enough first aid kits available?	☐	☐	☐	
70	Are first aid kits adequately stocked?	☐	☐	☐	
71	Is there a sufficient number of personnel/workers trained to provide first aid?	☐	☐	☐	
72	Are other medical facilities/services available at the construction site? (Infirmary services)	☐	☐	☐	
RECREATION, SOCIAL, AND TELECOMMUNICATIONS FACILITIES					
73	Are basic communal social areas and adequate recreational areas provided for workers?	☐	☐	☐	
74	Are separate areas provided for workers to perform their religious worship?	☐	☐	☐	
75	Are workers provided with access to internet facilities?	☐	☐	☐	
MANAGEMENT OF WORKERS' ACCOMMODATION					
76	Is there staff responsible for managing social areas? (Administrative staff)	☐	☐	☐	
77	Are there carefully designed worker camp management plans and policies in place, particularly regarding health and safety (including emergency response), security, worker rights, and community relations?	☐	☐	☐	
78	Is the person appointed to manage the accommodation facility qualified for the role in terms of background, competence, and experience, and have they been given sufficient responsibility and authority for this management?	☐	☐	☐	
79	Is there sufficient staff to ensure that accommodation standards (particularly cleanliness, food preparation, and safety) are adequately implemented?	☐	☐	☐	
80	Were the facility personnel hired from the settlements surrounding the project?	☐	☐	☐	
81	Did the facility personnel receive basic health and safety training?	☐	☐	☐	
82	Are the persons responsible for the kitchen trained in nutrition and food processing and adequately supervised? Do kitchen workers have hygiene certificates?	☐	☐	☐	
CHARGING FOR ACCOMMODATION AND SERVICES					
83	Is the accommodation arrangement for subcontractor personnel managed by competent personnel assigned by the subcontractor?	☐	☐	☐	
84	Is sufficient information provided about payments made to workers? Are camp conditions communicated?	☐	☐	☐	

No.	Control Parameters	Compliance			Comments
		Yes	No	Not Relevant	
85	Is it prohibited to charge workers for accommodation and services? (Are workers charged?)	☐	☐	☐	
HEALTH AND SAFETY ON THE CONSTRUCTION SITE					
86	Have health and safety management plans covering electrical, mechanical, structural, and food safety been designed and implemented?	☐	☐	☐	
87	Is the person responsible for managing social facilities knowledgeable about organizing for situations such as potential infectious diseases or food poisoning?	☐	☐	☐	
88	Is there an adequate number of staff/workers trained in providing first aid?	☐	☐	☐	
89	Has a specific and adequate fire safety management plan been designed and implemented?	☐	☐	☐	
90	Are workers provided with guidance on activities related to alcohol, drugs, HIV/AIDS, and other health risks?	☐	☐	☐	
91	Do workers have easy access to medical facilities?	☐	☐	☐	
92	Have emergency plans been prepared for health and fire safety?	☐	☐	☐	
93	Have special emergency plans (earthquake, flood, tornado) been prepared depending on the conditions?	☐	☐	☐	
WORKER ACCOMMODATION FACILITY SAFETY					
94	Is a security plan containing clear measures to protect employees against theft and assault prepared and implemented?	☐	☐	☐	
95	Has a security plan containing provisions related to violence been designed and implemented?	☐	☐	☐	
96	Have the backgrounds of security personnel been checked for previous crimes or misconduct?	☐	☐	☐	
97	Has the hiring of security personnel from both genders been considered?	☐	☐	☐	
98	Has the security personnel received clear instructions regarding their duties and responsibilities?	☐	☐	☐	
99	Has security personnel been properly trained in combating domestic violence and the use of force?	☐	☐	☐	
100	Are body searches only conducted in exceptional circumstances by specially trained security personnel of both genders?	☐	☐	☐	
101	Do security personnel have a good understanding of the importance of respecting workers' rights and the rights of surrounding communities, and do they adopt appropriate behavior?	☐	☐	☐	
102	Do workers and communities have specific methods to voice their concerns about security regulations and personnel?	☐	☐	☐	
WORKERS' RIGHTS, RULES, AND REGULATIONS REGARDING WORKER ACCOMMODATION FACILITIES					

No.	Control Parameters	Compliance			Comments
		Yes	No	Not Relevant	
103	Are restrictions on workers' freedom of movement limited and justified?	☐	☐	☐	
104	Is an appropriate and adequate transportation system provided for nearby residential areas?	☐	☐	☐	
105	Is it illegal to withhold workers' identity documents?	☐	☐	☐	
106	Is freedom of association clearly respected?	☐	☐	☐	
107	Is respect shown for workers' religious, cultural, and social backgrounds?	☐	☐	☐	
108	Are employees informed about their rights and obligations, and are copies of company rules, procedures, and enforcement mechanisms regarding workers' accommodation provided?	☐	☐	☐	
109	Is discrimination prevented?	☐	☐	☐	
110	Are regulations regarding alcohol, tobacco, and third-party access to the camp clear and communicated to workers?	☐	☐	☐	
111	Has a fair and non-discriminatory procedure been established to implement disciplinary procedures, including the right of workers to defend themselves?	☐	☐	☐	
CONSULTATION AND COMPLAINT MECHANISMS					
112	Are mechanisms designed and implemented for workers to consult or file complaints?	☐	☐	☐	
113	Are processes and mechanisms provided for employees to voice their complaints in accordance with the PS2/PR2 document?	☐	☐	☐	
114	Are workers subject to disciplinary proceedings due to their behavior in the accommodation facility able to appeal the decision and have access to a fair and transparent hearing?	☐	☐	☐	
115	Are fair dispute resolution mechanisms in place?	☐	☐	☐	
116	Are there mechanisms in place to ensure full cooperation with police authorities in cases of serious crimes?	☐	☐	☐	
MANAGEMENT OF COMMUNITY RELATIONS					
117	Have community relations management plans addressing social development, community needs, community health and safety, and the social and cultural cohesion of the community been designed and implemented?	☐	☐	☐	
118	Do public health and safety management plans include the establishment of communication mechanisms to ensure continuous information exchange and consultation with surrounding communities?	☐	☐	☐	
119	Is there a manager responsible for implementing the Community Health and Safety management plan?	☐	☐	☐	
120	Is there a manager responsible for liaising with local communities? (Chief Legal Officer - CLO)	☐	☐	☐	
121	Are the impacts of worker housing periodically reviewed, mitigated, or improved?	☐	☐	☐	
122	Are easy methods provided for community representatives to express their views and file complaints?	☐	☐	☐	

No.	Control Parameters	Compliance			Comments
		Yes	No	Not Relevant	
123	Is there a transparent and effective process in place to address community complaints in accordance with creditor standards?	☐	☐	☐	

Auditor:	Date:	Location:	Signature:

CONSTRUCTION CAMP SITE MANAGEMENT PLAN

EMERGENCY PREPAREDNESS AND RESPONSE MANAGEMENT PLAN

REVISION STATUS		
Revision Date	**Rev. No**	**Explanation**
01.03.2025	00	This plan is prepared according to TS EN ISO/IEC 9001:2015, TS EN ISO/IEC ISO 14001:2015, TS EN ISO/IEC 45001:2018 and IFC Performance Standards
23.05.2025	01	Revision
16.06.2025	02	Revision as per revision made under ESDD submitted by the Lender consultant
08.09.2025	03	Revision as per revision made under ESDD submitted by the Lender consultant.

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DEFINITIONS AND ABBREVIATIONS

Terms, definitions and abbreviations used in this document are listed below:

ERP	Emergency Response Plan
ERT	Emergency Response Team
Project	Antalya Alanya Motorway Project
IFC	International Finance Corporation
PS	Performance Standard
AAOİAŞ	Antalya-Alanya Otoyolu İnşaat Yatırım ve İşletme A.Ş. (“SPV”)
EIA	Environmental Impact Assessment
ESIA	Environmental and Social Impact Assessment
EHS	Environment, Health and Safety
HSE	Health & Safety and Environment
ESMP	Environmental and Social Management Plan
EHS-MS	Environmental, Health and Safety – Management Plans
SEP	Stakeholder Engagement Plan
EU	European Union
OHS	Occupational Health and Safety
CLO	Community Liaison Officer

1. INTRODUCTION

Ministry of Transport, and Infrastructure (former Ministry of Transport, Maritime Affairs and Communications), General Directorate of Highways ("KGM" or "the Administration"), as the owner of the Antalya-Alanya Motorway Project, has tendered for a contract in accordance with the Law on Implementation of Some of the Investments and Services in the Framework of Build, Operate and Transfer Model (Law No: 3996). Following the tendering process, KGM has awarded Antalya-Alanya Otoyolu İnşaat Yatırım ve İşletme A.Ş. (AAOİAŞ or the Project Sponsor) with a Build, Operate and Transfer (BOT) contract for the implementation of the Project. Accordingly, AAOİAŞ will be referred as Project Sponsor[1] in the scope of this report. The main contractor for the Project has been designated as Limak and will henceforth be referred to as the Contractor (or EPC).

The project is designed to connect the districts of Serik and Alanya via the Manavgat district of Antalya province. The Project will enhance the existing transportation network services with its surrounding provinces: Burdur, Muğla, Konya, Isparta, Karaman and Mersin. Various environmental, social, and technical studies have been conducted along the initial route of the Project tendered by the KGM. Based on these studies, the route was optimized, incorporating engineering practices and addressing environmental and social considerations, particularly issues of involuntary and economic resettlement, before being finalized. According to the most current design, the total length of the Motorway, which will be a dual carriageway of mostly 3 and partially 2 lanes (3x2 and 2x2) in each direction, is 117.8 kilometers including the main carriageway and the access roads[2].

This Emergency Preparedness and Response Management Plan ("Plan") has been prepared by Antalya-Alanya Highway Construction Investment and Operation Inc. ("AAOİAŞ" or "SPV") for the Antalya-Alanya Highway Project ("Project") in accordance with national legislation, the Equator Principles ("EP"), the International Finance Corporation ("IFC") Performance Standards ("PSs"), and the international standards that reference the relevant legislative sections. The Plan covers the construction phase of the Project.

1.1. Project Description

The Project starts at Serik Interchange (Km: 52+000) and then proceeds eastward, following the corridor at the foothills of the Taurus Mountains within the boundaries of Serik and Manavgat districts, ending at north of Konaklı neighborhood of Alanya District (Km: 136+000). From this point onwards, the route turns southward with a 2x2 lane connection road and connects to the D400 state road at the Alanya West Interchange. As of April 2025, the current Project design includes a total of 117.8 kilometers of road, comprising 84 kilometers of main road (motorway) and 33.8 kilometers of access roads.

The map showing the construction components and road route within the scope of the Project's construction activities is provided in *Figure I-1.*

[1] The BOT Contract uses the term "Appointed Company" to refer Project Sponsor

[2] It should be noted that the environmental and social baseline characterization, maps and scoping assessments provided in this report are based on the most current design

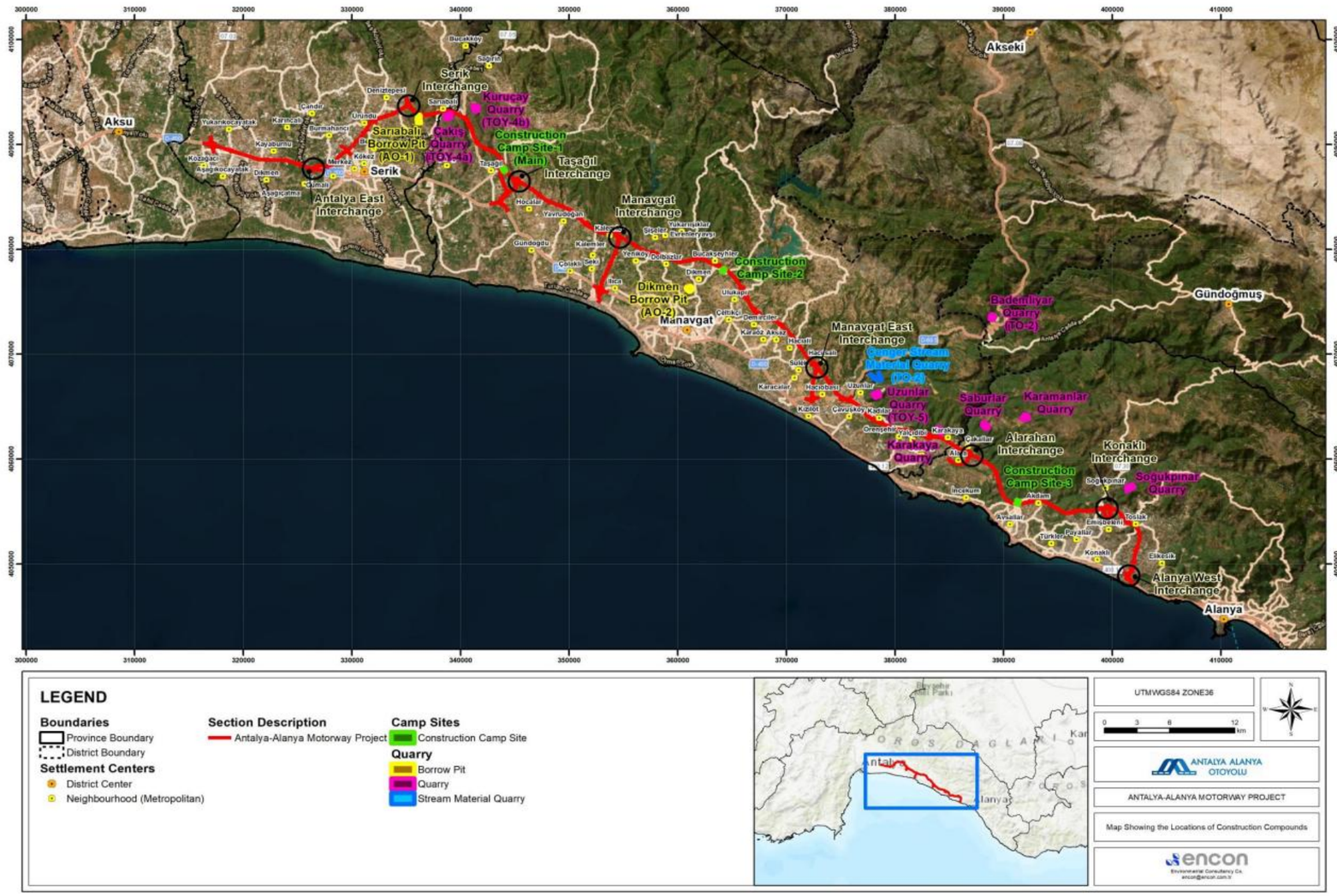


Figure 1.1-1.Map Showing the Locations of Construction Compounds

1.2. Purpose

Ministry of Transport, and Infrastructure (former Ministry of Transport, Maritime Affairs and Communications), General Directorate of Highways ("KGM" or "the Administration"), as the owner of the Antalya-Alanya Motorway Project ("The Project"), has tendered for a contract in accordance with the Law on Implementation of Some of the Investments and Services in the Framework of Build, Operate and Transfer Model (Law No: 3996). Following the tendering process, KGM has awarded Antalya-Alanya Otoyolu İnşaat Yatırım ve İşletme A.Ş. (AAOİAŞ or the Project Sponsor) with a Build, Operate and Transfer (BOT) contract for the implementation of the Project. Accordingly, AAOİAŞ will be referred as Project Sponsor[3] in the scope of this report. The main contractor for the Project has been designated as Limak and will henceforth be referred to as the Contractor (or EPC).

The Project is designed to connect the districts of Serik and Alanya via the Manavgat district of Antalya province. The Project will enhance the existing transportation network services with its surrounding provinces: Burdur, Muğla, Konya, Isparta, Karaman and Mersin. Various environmental, social, and technical studies have been conducted along the initial route of the Project tendered by the KGM. Based on these studies, the route was optimized, incorporating engineering practices and addressing environmental and social considerations, particularly issues of involuntary and economic resettlement, before being finalized. According to the most current design, the total length of the Motorway, which will be a dual carriageway of mostly 3 and partially 2 lanes (3x2 and 2x2) in each direction, is 117.8 kilometers including the main carriageway and the access roads.

The Project is anticipated to deliver benefits including relieving congestion on the Akdeniz Region's existing road network and building capacity for future traffic, providing better access to employment, markets, education, healthcare and cultural and tourism facilities and improved emergency response times, and creating social and local economic benefits through job creation and local and regional development.

- Motorway (84 km);
- Access roads (33.8 km);
- Viaducts (16);
- Bridges (22);
- Culverts (305);
- Interchanges (25);
- Overpasses (56);
- Underpasses (43); and
- Tunnels (5).

Facilities to be constructed for use during operation include toll collection areas, service areas and a maintenance and operations area. During construction, temporary facilities required including three temporary construction camps with facilities, borrow pits/quarries (11 identified sites according to the draft Environmental and Social Impact Assessment (ESIA), June 2025), and storage sites (22 identified).

The Project starts at Serik Interchange (Km: 52+000) and then proceeds eastward, following the corridor at the foothills of the Taurus Mountains within the boundaries of Serik and Manavgat districts, ending at

[3] The BOT Contract uses the term "Appointed Company" to refer Project Sponsor

north of Konaklı neighborhood of Alanya District (Km: 136+000). From this point onwards, the route turns southward with a 2x2 lane connection road and connects to the D400 state road at the Alanya West Interchange. As of April 2025, the current Project design includes a total of 117.8 kilometers of road, comprising 84 kilometers of main road (motorway) and 33.8 kilometers of access roads[4].

The purpose of the Emergency Preparedness and Response Plan (EPRP) is to define the actions and measures necessary for the overall management of and response to emergencies within the Antalya Alanya Motorway Project specific activity area of influence. The Plan aims to:

- Outline the applicable legislation and standards relevant to this Plan;
- Define roles and responsibilities;
- Incorporate the requirements of the Regulatory Environmental Impact Assessment (EIA) findings, the Environmental and Social Impact Assessment (ESIA), international standards, Turkish legislation, Lenders requirements and any Project specific permits: and
- Provide procedures of action for foreseeable emergency scenarios
- Define the lines of communication to be followed during emergencies.

This management plan is a living document developed with the best available information and will be reviewed and revised as necessary due to the nature of the construction and progress.

1.3. Scope and Validity

The present ERP scope covers the construction phase of the Antalya Alanya Motorway Project only and applies to all AAOİAŞ and its subcontractors' activities (including third party subcontracted sites (quarries, borrow pits etc.). The area of influence is therefore limited to all Project activities related to the motorway construction process. The ERP will be further updated one month before slope-earth cut excavation activities), which can be assumed as the beginning of the Motorway Construction. The updated ERP scope will take into account all of the Project Area of influence and all motorway construction activities.

The Plan incorporates the requirements of the Antalya Alanya Motorway Turkish EIA Report findings, the Antalya Alanya Motorway ESIA Report findings, IFC Performance Standard 1: Assessment and Management of Environmental and Social Risks and Impacts, IFC Performance Standard 4: Community Health, Safety and Security, Turkish Legislation, Project Lenders requirements and any Project specific permits.

This Emergency Preparedness and Response Management Plan ("EPRMP" or "Plan") has been prepared by Antalya-Alanya Highway Construction Investment and Operation Inc. ("AAOİAŞ" or "SPV") for the Antalya-Alanya Highway Project ("Project").

This Plan should be applied by all parties involved in the construction phase, including the Project Sponsor, Antalya-Alanya Otoyolu İnşaat Yatırım ve İşletme A.Ş. (AAOİAŞ or SPV), the Main Contractor (EPC or Limak), and all subcontractors. The EPRMP will be updated following the start of slope excavation works, which can be considered the beginning of motorway construction. The following Worksites are defined , as below to deliver the Project component described in the previous section:

[4] It should be noted that the environmental and social baseline characterization, maps and scoping assessments provided in this report are based on the most current design

- Motorway
- Access roads
- Viaducts
- Bridges
- Culverts
- Interchanges
- Overpasses
- Underpasses and
- Tunnels

In addition to the main worksites defined above, temporary worksites and all access roads, borrow pits, quarries, stream material quarries, labour camp sites, and social areas are considered within the scope of this Plan.

2. LEGISLATIONS AND STANDARDS

ISO 45001:2081, ISO 14001:2015, Applicable IFC standards include, IFC Performance Standard (PS) 1: Assessment and Management of Environmental and Social Risks and Impacts IFC Performance Standard (PS) 4: Community Health, Safety and Security, IFC General Environmental Health and Safety (EHS) Guidelines and IFC EHS Guidelines for Toll Roads which sets out a range of recommendations with regards to emergency management. EPC will comply with these requirements when implementing the Project. Key requirements of these standards include:

- Establishment of an Emergency Response System so that the EPC, in collaboration with appropriate and relevant third parties, will be prepared to respond to accidental and emergency situations associated with the project in a manner appropriate, to prevent and mitigate any harm to people and/or the environment.
- Where applicable, EPC will also assist and collaborate with the potentially Affected Communities and the local government agencies in their preparations to respond effectively to emergency situations, especially when their participation and collaboration are necessary to ensure effective response. If local government agencies have little or no capacity to respond effectively, the EPC will play an active role in preparing for and responding to emergencies associated with the project.

In addition to the above, the following impact assessment reports prepared for the Project will be used as reference documents:

- Antalya Alanya Motorway Project ESIA Report;
- Antalya Alanya Motorway Project EIA Report; and

The requirements of the Turkish laws and regulations with regards to emergencies in accordance with the Project design and construction will be implemented including the following regulations:

- Regulation on Emergencies in Worksites
- Regulation on Structures to be Built in Disaster Areas
- Regulation on Buildings to be Built in Earthquake Areas

The following AAOİAŞ plans, procedures and policies related to engagement with emergencies will also be used as reference documents:

- Solid Waste Management Plan
- Hazardous Material Management Plan
- Environmental Accident and Spill Response Management Plan
- Community Health and Safety Management Plan
- Construction Camp Site Management Plan
- Air Pollution and Emission Management Plan
- Water Quality, Wastewater and Storm Water Management Plan
- Noise and Vibration Management Plan
- Change Management Plan
- Emergency Response and Management Plan
- Human Resources and Labour Management Plan
- Security Management Plan
- Subcontractor Management Plan
- Training and Communication Management Plan
- Resource Efficiency Management Plan
- Excavated Material Management Plan
- Soil Management and Erosion Control Plan
- Stakeholder Engagement Plan
- Employment Policy
- Project HSE Policy

To ensure responsible operations, AIIB adheres to policies addressing environmental and social impacts as outlined in its Environmental and Social Framework (“ESF”) document. Updated in June 2024, the ESF reflects AIIB's commitment to international standards and sustainable development practices.

In addition to above following international requirements and standards, and Good International Industrial Practice (GIIP) regarding occupational health and safety.

- ISO 45001:2018 Occupational Health and Safety Management Systems
- IFC Performance Standards (2012), specifically:

o Performance Standard 1: Assessment and Management of Environmental and Social Risks and Impacts

o Performance Standard 2: Labor and Working Conditions

o Performance Standard 4: Community Health, Safety, and Security

- Worker' accommodation: process and standards. A guidance note by IFC and the EBRD, 2009
- IFC Environmental, Health and Safety (EHS) General Guidelines (2007)
- IFC Guidance Notes (2012)
- Equator Principles IV (2020)
- European Union Road Safety Policy Guidelines and Directives=
- European Bank for Reconstruction and Development's (EBRD's) Performance Requirement (PR) 4 – Health, Safety, and Security (2019)
- Addressing Gender-Based Violence and Harassment – Good Practice Note for the Private Sector, December 2019 – Emerging Good Practice for Private Sector
- Addressing Gender-Based Violence and Harassment – Emerging Good Practice for Private Sector
- Asian Infrastructure Investment Bank's (AIIB's) Environmental and Social Framework (2021)
- Worker' accommodation: process and standards. A guidance note by IFC and the EBRD, 2009
- International Finance Corporation's (IFC's) Sustainability Framework (2012) and associated applicable Performance Standard (PS) 2 - Labour and Working Conditions
- Approved Code of Practice and guidance on regulations L8 (Fourth edition)
- The Lifting Operations and Lifting Equipment Regulations 1998 (LOLER)
- OSHA 1926.651 Specific Excavation Requirements
- OSHA 1910.252 Welding, Cutting and Brazing (Hot Works)
- ILO Safety and Health in Building and Engineering Work
- ILO Safety and Health in Construction, 1992Health and Safety in Construction, HSG150, 2006
- Health and Safety at Work etc. Act 1974

It should be noted here that; where two or more of the identified standards are inconsistent or contradictory, unless otherwise justified, the EPC will adopt the more stringent.

3. ENVIRONMENTAL HEALTH AND SAFETY-MANAMENT SYSTEMS (EHS-MS) INTERACTION

The ERP forms part of the Project EHS-MS and therefore should be read in conjunction with the related EHS-MS elements. These elements include the overarching ESMP and individual EHS Management Plans and Procedures. The ERP will therefore be implemented together with the related plans and procedures in order to manage emergencies. The plans and procedures which are relevant to ERP include:

- Occupational, Health, Safety and Environment Plan
- Stakeholder Engagement Plan – Grievance Mechanism
- Hazardous Materials Management Plan
- Traffic Management Plan
- Biodiversity Action Plan
- Community Health and Safety Management Plan
- Environmental Accident and Spill Response Management Plan
- Environmental and Social Management Plan (ESMP) of the Antalya Alanya Motorway Project together with the Commitments Register (See Annex A for commitments on emergency response together with how the commitments will be implemented)

4. GENERAL ROLES AND RESPONSIBILITIES

Antalya Alanya Otoyol İnşaat Yatırım ve İşletme A.Ş. (SPV) as the Project Sponsor and Limak (EPC) as the main contractor of the Project will be responsible for the following:

- Ensure sufficient resources are allocated on an ongoing basis to meet the requirements of this ERP,
- Describe the resources allocated to and responsible for the execution of each task and requirement contained therein,
- Describe how roles and responsibilities are communicated to relevant personnel,
- Ensure all subcontractors and relevant third parties are bound by this plan and briefed on its content
- Regularly review the implementation and effectiveness of this plan and make adjustments where necessary
- Ensure that all personnel responsible for the execution of the tasks and requirements contained within this plan are competent on the basis of education, training and experience, and
- Undertake the training and awareness requirements necessary for the effective implementation of ERP.

SPV General Manager

- Oversee the financial, legal, and operational compliance of the SPV, including emergency preparedness obligations, in line with local laws, environmental regulations, corporate governance, and international standards/lender requirements.
- Ensure necessary resources (financial, human, and technical) are allocated for the effective implementation of emergency preparedness and response (EPR) measures.
- Promote a culture of safety, environmental, and social responsibility across SPV and stakeholders.
- Support the SPV H&S Manager in the development, dissemination, and execution of the EPRMP.

- Ensure corrective and preventive actions are taken in case of emergency-related non-compliance.
- Monitor the performance of EPC contractors in relation to EPRMP implementation and report to stakeholders.

SPV Health and Safety Manager

- Ensure the preparation, revision, and implementation of emergency-related procedures in compliance with ESIA/EIA, corporate policies, and lender requirements.
- Supervise EPC and subcontractors' emergency preparedness activities, including drills, training, and method statements.
- Ensure proper investigation and root cause analysis of emergency incidents and implement corrective actions.
- Coordinate with authorities and stakeholders regarding emergency notifications, inspections, and compliance.
- Track EPR performance indicators (e.g., incident response times, near misses, TRIR).
- Report emergency preparedness status and non-compliances to the SPV General Manager.

SPV HSE Specialist

- Support the SPV H&S Manager in monitoring EPC's and subcontractors' implementation of EPRMP measures.
- Conduct site inspections focusing on emergency equipment, signage, drills, and hazard identification.
- Maintain emergency-related documentation (drill records, training logs, incident reports).
- Support accident/incident investigations and communicate lessons learned.
- Assist in resolving complaints regarding occupational, site, or community safety linked to emergencies.

EPC Project Director

- Has overall accountability for ensuring EPC's compliance with the EPRMP.
- Allocate adequate resources (competent staff, emergency equipment, PPE, budget) to implement emergency risk mitigation measures.
- Approve emergency and HSE-related management plans.
- Ensure effective corrective actions are taken in response to emergency-related incidents.
- Maintain transparent communication with SPV, subcontractors, regulators, and communities regarding emergency issues.
- Oversee risk management and mitigation strategies, including emergency preparedness for technical, health, safety, environmental, and community safety aspects.

EPC Construction Manager

- Ensure construction works integrate required emergency precautions.

- Verify that emergency access routes are available and properly maintained.
- Ensure work teams have job-specific emergency plans, equipment, and PPE.
- Incorporate lessons learned from drills or incidents into work practices.

EPC Line Managers

- Prepare job-specific method statements that include emergency response measures.
- Ensure emergency risks are assessed and mitigation measures are in place before activities begin.
- Collaborate with ES&H teams to correct nonconformities identified during inspections.
- Support accident/incident investigations and corrective action processes.
- Ensure staff participation in emergency trainings and drills.

EPC Health and Safety Manager

- Lead the preparation, revision, and implementation of EPC's EPR procedures.
- Integrate emergency controls into daily operations, work permits, and toolbox talks.
- Supervise emergency drills, inspections, and audits.
- Maintain the site-specific risk register for hazards and emergencies.
- Coordinate with authorities and SPV on emergency incidents, notifications, and verifications.
- Report on EPC's EPR performance and key risks to the EPC Project Director.
- Foster a proactive safety and emergency culture.

EPC HSE Chief

- Support EPC H&S Manager in implementing site emergency preparedness.
- Ensure compliance of contractors with emergency procedures.
- Conduct emergency training, toolbox talks, and safety briefings.
- Maintain risk registers and track hazards related to emergencies.
- Participate in accident/incident/near-miss investigations and ensure corrective actions are followed.
- Provide reports to EPC H&S Manager on emergency preparedness status.

EPC HSE Engineer

- Support EPC HSE Chief in implementing emergency plans and monitoring compliance.
- Conduct site-level emergency inspections and hazard assessments.
- Ensure proper implementation of behaviour protocols and community safety guidelines.
- Support incident investigations and ensure corrective measures are documented and implemented.
- Address emergency-related complaints in coordination with supervisors.

EPC HSE Technician

- Conduct daily field-level hazard identification and inspections.
- Ensure workers comply with PPE and emergency signage/barrier requirements.
- Support documentation of emergency drills, incidents, and near misses.
- Escalate observed deficiencies to HSE Engineer/Chief.

EPC HSE Worker

- Conduct basic emergency checks on-site (e.g., PPE, housekeeping, fire extinguishers).
- Report unsafe conditions, emergencies, or near misses.
- Support emergency drills and evacuation activities.
- Assist in implementing emergency signage and access controls.

EPC Trainer and Document Controller

- Develop and deliver EPC emergency preparedness training (induction, refresher, drills).
- Maintain training and drill records.
- Ensure EPR-related documentation is archived and traceable.
- Support audits by providing emergency preparedness records.

Site Doctor

- Provide first aid, emergency care, and health monitoring.
- Maintain emergency medical records and health surveillance.
- Identify occupational health risks and integrate into emergency procedures.
- Ensure readiness of emergency medical equipment.
- Coordinate with hospitals and authorities during medical emergencies.

Paramedic

- Provide immediate on-site medical response and stabilization.
- Support emergency evacuation of patients.
- Monitor and restock emergency medical supplies.
- Participate in drills and support incident investigations.

Other Stakeholders

Workers, Subcontractors, and Suppliers

- Follow emergency training and drills.
- Report unsafe conditions, emergencies, and near misses immediately.
- Comply with emergency signage, PPE, and site safety requirements.

Visitors and Consultants

- Receive general emergency induction before site access.
- Always be accompanied by trained site personnel.
- Comply with site-specific emergency instructions

5. EMERGENCY ROLES AND RESPONSIBILITIES

In addition to broad roles and responsibilities in accordance with this Plan, which are outlined in Section 4; roles and responsibilities in the event of any emergency are detailed below. Names and other details of the personnel who are appointed for these roles and responsibilities are presented in Annex B. This contact list will be reviewed monthly by the HSE Manager. Access to internal contact information will be restricted to authorized personnel only. Updated versions will be redistributed after any personnel changes. Contact details of external authorities / agencies are submitted in Annex C.

5.1. Emergency Controllers

Leading responsible employees (2 persons working together or may split according to situation) on the site regarding emergency situations. Take control of the emergency situation and direct the emergency response team, sub-contractors, supervisors, visitors and all other personal. Arrange relevant management and emergency services to be contacted. Direct and liaise with the emergency services. Additionally, are responsible for initiating an evacuation process if needed, and securing a practical perimeter around the incident location. Emergency Controllers have responsibility for reporting relevant developments to the Project Manager.

5.2. Administrative Assistant

Mainly responsible for communicating with and informing the Project Manager and Emergency Services (fire department, police, ambulance, etc.). Also assists the Emergency Controller. The Administrative Assistant has responsibility for reporting relevant developments to the Emergency Controllers.

5.3. Emergency Response Team

They are the first personnel to respond to the emergency before any emergency services arrive at the site. They conduct basic emergency response actions such as fire-fighting, rescue and hazardous material mitigation under the command of the Emergency Controller. Assist in emergency notification and public protective actions, accounting for personnel outside the hazard zone or implementing In-Place Protection (IPP) within the workplace, and assist the emergency services (fire department, police, etc.) on arrival to the site. The Emergency Response Team has responsibility for reporting relevant developments to the Emergency Controllers

5.4. First Aid Personnel

Provide first aid treatment to casualties. Liaise with and assist ambulance service on arrival on site. First Aid Personnel have responsibility to report relevant developments to site doctor.

Paramedics/ambulance staff shall be stationed at designated locations within the Project (near the infirmary), and shall be responsible for the following:

- Providing first aid treatment to workers, local community members, or site visitors in case of an emergency, when needed,

- Conducting routine site patrols within the Project,
- Referring the worker to the nearest hospital or infirmary after administering the necessary first aid treatment, if deemed necessary,
- Performing 24-hour checks to ensure that all medical equipment in the on-site ambulance is complete and reporting any missing items to the H&S team,
- Reaching the incident site in the shortest possible time by using the designated route after the emergency is reported,
- Conducting daily patrols on site and maintaining familiarity with the traffic plan on open road.

Sufficient number of certificated first aid personnel will be employed according to the total personnel number during the construction phase

5.5. Security

In case of an emergency controls the traffic, directs vehicle away from the incident area and escorts emergency vehicles. Security has responsibility to report relevant developments to Emergency Response Team

5.6. Environmental Engineer

Assess extent of environmental threat and/or contamination and liaise with Emergency Controller to minimize effects. Informs Provincial Directorate of Environment and Urbanisation / Fisheries Authorities. Environmental Engineer has responsibility to report relevant developments to Emergency Controllers

5.7. Emergency Wardens

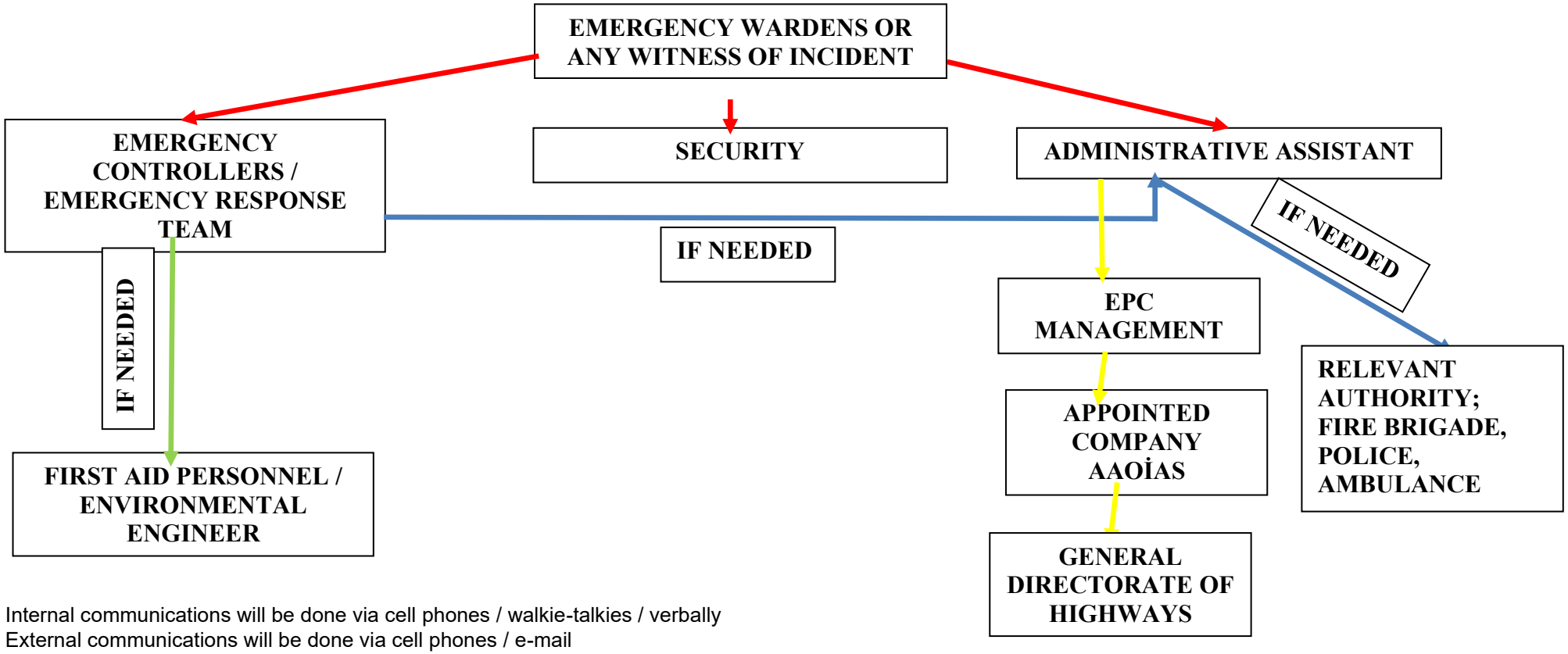
They will be chosen by the Emergency Controller and will be present in every work area. The Emergency Wardens will evaluate the emergency and evacuate the work area if needed. They will conduct a head count at Assembly Points, and account for all personnel, subcontractors and visitors. Reports personnel and visitors who are missing to the Emergency Response Team and H&S Manager. Restricts entry into affected areas to emergency personnel only. Assists the Emergency Controller as needed. Emergency Wardens have responsibility for reporting relevant developments to the Emergency Response Team.

5.8. Site Doctor

Administers relevant treatment to patients and follows the Emergency Controller’s and Emergency Response Team’s instructions on other issues.

6. COMMUNICATION

In any emergency, communication flow presented below will be followed:



- Internal communications will be done via cell phones / walkie-talkies / verbally
- External communications will be done via cell phones / e-mail

7. RISK ASSESSMENT

Relevant Health & Safety risk assessment studies have been conducted already for Motorway construction. Risks assessments have been conducted in accordance with the method submitted in Occupational Health and Safety Plan. Main topics and findings of onshore risk assessment studies are:

Site excavation works risk assessment

Main consequences of hazards of site excavation works are:

- Physical injury
- Environmental pollution – spills
- Overturn of equipment

Lifting risk assessment

Main consequences of hazards of lifting works are:

- Falling – physical injury
- Overturn of equipment

Jet grout risk assessment

Main consequences of jet grout works are:

- Chemical burns – physical injury
- Overturn of equipment
- Environmental pollution – spills

Based on site-specific risk assessments and operational configurations, the following zones within the Project are identified as high-risk areas requiring special control and emergency readiness measures:

- **Tunnel portals and interior segments** – due to limited egress, poor ventilation, and risk of collapse or equipment fire.
- **Fuel and chemical storage areas** – due to flammability, spill potential, and environmental contamination risks.
- **Bridge decks and viaducts under construction** – due to height-related hazards and fall risks.
- **Electrical distribution zones (e.g., transformer areas, substations)** – due to arc flash and electrocution risk.
- **Heavy equipment and crane operation zones** – risk of mechanical failure, struck-by incidents, and collapse.
- **Confined spaces (e.g., stormwater culverts, manholes)** – due to oxygen deficiency, toxic gases, and limited rescue options.
- **Excavation edges and unstable slopes** – due to fall or collapse hazard.

All high risks shall be clearly marked with hazard signage, physically restricted where possible (e.g., barriers, fencing), regularly monitored and reviewed by the H&S team and included in emergency response drills.

8. INCIDENT CLASSIFICATION

8.1. Level 1 Incident (High)

Level 1 incidents are incidents that cannot be managed using normal EPC resources; i.e. the capabilities of the EPC to respond are exceeded by the initial impacts of the event. This type of incident would necessitate a direct call to local emergency authorities by the administrative assistant under the supervision of the Emergency Controller and/or Project manager and initiation of evacuation procedures outlined in Annex E. A Level 1 incident will require significant resources and multiple operational periods until containment/control is achieved.

Examples of a Level 1 incident in the context of this Plan are:

- Terrorism
- Major fire or explosion – Catastrophic fire & explosion events which cannot be managed using normal EPC resources. Incidents which have possibility to spread all construction site quickly.
- Earthquake

8.2. Level 2 (Medium) and Level 3 (Low) Incident

Level 2 and Level 3 incidents require a response from EPC emergency responsible persons. In the event of a Level 2 incident additional resources and services from local emergency authorities will be needed but EPC emergency responsible persons have duties until local emergency authorities arrive.

Examples of a Level 2 & 3 incident in the context of this Plan are:

- Physical injuries
- Minor Fire or Explosion – Fire and/or explosion events which can be managed with EPC resources until local emergency authorities arrive. Incidents which can be confined in a specific area.
- Overturn of equipment

Level 3 incidents can be managed by EPC's emergency responsible persons only. Section 7 below outlines the response procedures for Level 2 and Level 3 incidents.

9. EMERGENCY RESPONSE PROCEDURES FOR LEVEL 2 AND LEVEL 3 INCIDENTS

Response procedures for Level 2 and 3 emergencies are outlined in this section. Material requirements (e.g. PPEs, adsorbents, walkie-talkies etc.) for emergencies are provided in ANNEX D. Evacuation procedures for relevant emergencies which can be distributed to relevant locations of construction site are submitted in ANNEX E.

9.1. Physical Injuries

Emergency Wardens or any witness to the incident can start the response procedure by alerting relevant responsible persons. Minor cuts and/or bruises can be treated by a ***First Aid Personnel*** or be taken along to the site medical clinic for treatment. In the event of a significantly injured individual on site at any time of day or night;

- Contact must be made with the ***Emergency Controller*** by ***Administrative Assistant***.
- ***First Aid Personnel*** will inform the site doctor
- ***Site doctor*** will assess the patient's situation:

  (i) If the patient should not be moved; an ambulance will directly be called by the ***Administrative Assistant*** and relevant treatment will be administered by the ***site doctor*** until an ambulance arrives.

  - ***Security*** will be informed by the ***Administrative Assistant*** on the issue
  - ***Security*** will direct the ambulance to the injured person

  (ii) If moving the patient does not have any risk; the patient will be treated until stable enough to travel and will then be transferred to the site medical clinic

  - ***Site doctor*** will assess the patient's condition and decide if they can be cared for at the site clinic or if they require transfer to the hospital.
  - Ambulance will be called by the ***Administrative Assistant*** or any witness
  - ***Security*** will be informed by the ***Administrative Assistant*** on the issue
  - ***Security*** will direct the ambulance to the injured person

9.2. Minor Fire or Explosion

Anybody who discovers indication of a fire such as smell, smoke, if it is not unsafe to respond, should try to extinguish the fire by using the nearest fire extinguisher – all employees shall be subject to training on the use of fire extinguishers-. In the event of any fire OR explosion;

- ***Emergency Wardens*** or the witness(es) will sound the alarm to alert all personnel
- ***Emergency Wardens*** will evacuate the area if needed and will direct personnel to the assembly point.
- ***Administrative Assistant*** will notify the fire brigade
- ***Emergency Controller*** and ***Emergency Response Team*** will eliminate flammable material (e.g. fuel) sources and will de-energize power supply if necessary
- Without endangering their safety; ***Emergency Controller*** and ***Emergency Response Team*** will try to control the fire until the fire brigade arrives the site.
- ***Security*** will be informed by ***Administrative Assistant*** on the issue
- ***Security*** will direct the fire brigade to the fire scene.
- Fire brigade on arrival will be in charge of fighting the fire.
- The process of response in relation to a physical injury **(see section 6.)** will be implemented for any causalities.

9.3. Collapse of Equipment / Structure / Excavation

In case of any collapse,

- The priority will be for the ***Emergency Controller*** to make the area safe.

- The damaged zone must be barricaded, and non-authorized access shall be prohibited by the ***Emergency Controller***. Response and rescue shall be implemented after evaluating all risks.
- ***Emergency Response Team*** will be directed to the area by ***Emergency Controller***
- ***Emergency Response Team*** and ***Emergency Controller*** will evaluate the situation and while doing that; they direct ***Security*** in order to set up an exclusion zone.
- ***Emergency Response Team*** will develop a rescue plan under the supervision of the ***Emergency Controller.***
- The final plan will be discussed with ***Emergency Controller*** for its approval
- Local Search and Rescue authority will be contacted by ***Administrative Assistant*** if needed. If Search and Rescue authority are called on to attend the scene:
    - ***Security*** will be informed by Administrative Assistant on the issue
    - ***Security*** will direct Search and Rescue authority to the scene.
    - Search and Rescue authority on arrival will be in charge
- If the rescue plan is considered as appropriate; it can be implemented by internal resources
    - All staff in the area of incident should be considered as trapped
    - Rescue plan will be implemented
- During this process; relevant flow of physical injury response (***See Section 7.1***) will be implemented for causalities.

9.4. Overturn of Equipment

It should be noted here that, in the event of equipment overturning outside of the construction site, the incident will be considered as “road traffic accident”. See Section 8.5 please.

- ***Emergency Wardens*** or any witness can inform the ***Emergency Controller*** about the incident
- ***Administrative Assistant*** will inform the ***Project Manager*** about the incident
- The stability of the equipment will be considered by the ***Emergency Controller*** together with experienced riggers and operators before the appropriate response is initiated
- The definite weight of the equipment and centre of the gravity will be checked from operator manual.
- Rescue operation will be supported by experienced riggers and operators
- To rescue any turned over equipment or vehicle, proper capacity crane and hoisting gears will be provided by Project Manager.
- Possible oil and/or fuel leakages will be considered, and necessary precautions will be taken.
- Smoking and the use of any open flames will be prohibited
- Around the equipment, a safety zone will be established, and the surrounding area will be barricaded for non-authorized access by ***Security***.

9.5. Road Traffic Accident

In case of a road traffic accident within the construction site boundaries; the relevant procedure(s) clarified in this Plan must be implemented. For instance; the procedure for physical injuries and/or the procedure for overturn of equipment may need to be followed.

In case of a road traffic accident outside of the construction site, the instruction for drivers is given below:

- Use caution exiting your vehicle. Other vehicles may still be trying to pass or come to a stop.
- Check to see if anyone is injured. If someone is injured, request medical assistance immediately. Perform first aid, if necessary, within the limits of your training and experience.
- Call the police immediately, even if the accident appears to be minor. And then notify your supervisor. During notifying your supervisor; briefly describe what has happened and state if you need assistance.
- Secure the site with warning signs.
- Put out safety cones in relevant locations in order to attract the attention of other drivers
- Do not speak with the media or other parties at the scene.
- Do not argue with the others involved, do not admit liability for the accident or do not make any comments on the causes of the accident with anyone except the police.
- Gather as much information about the accident as possible.
- If possible; write down the names, addresses and phone number of everyone involved.
- Get the automobile insurance company names and policy numbers of all vehicle owners.
- Write down the year, model and plate number of all vehicles
- Note the location and extent of all the damage to all vehicles.
- Write down the names, addresses and phone numbers of any witnesses.
- Note the location of the accident - street names, cross streets, landmarks, route or exit numbers.
- For each vehicle, note the direction of travel, road signs or signals, and the number of lanes.
- Note the time of day, weather conditions, and road conditions.
- If a camera is available, take a photo of the scene from four directions. Also, take a photo of the location of the damage of each vehicle.
- Write a brief description of the accident and sketch the scene if possible.
- Ask the police officer where and when you can get a copy of the report. Note the badge number and name of the officer, as well as the report number.
- Follow instructions given by the police.

9.6. Falling into the Water

- In the event of anybody falling into the water; The Medical Team should be notified immediately about the incident
- Emergency Wardens or any witness can throw the rescue wheel

- The person will be pulled to land or onto a vessel if it is safe to do so. If not you should wait for the Coast Guard to arrive.
- The physical injury response procedure (See Section 6.) will be implemented if necessary.

9.7. Confined Space Rescue

If a person in a confined space gets into trouble, the stand-by employee must inform the ***Emergency Controller*** so the necessary support can be sent. The stand-by employee must never enter the confined space to assist. When ***Emergency Controller*** and ***Emergency Response Team*** arrive;

- ***Emergency Controller*** and ***Emergency Response Team*** will check the atmosphere and ventilate the area as needed in accordance with Occupational Health and Safety Plan
- The possibility for collapsing will be considered
- Safety harnesses, lifeline tripods etc. will be used to access the confined space
- The safety of the ***Emergency Response Team*** must not be endangered
- ***First Aid Personnel*** will be informed by ***Administrative Assistant***
- The physical injury response procedure (***See Section 7.1***) will be implemented if necessary

9.8. Spills

In case of any spill incident; the ***Emergency Controller*** can be informed ***by Emergency Wardens*** or any witness.

- ***Emergency Controller*** and ***Emergency Response Team*** will assess the situation for the possibility of a fire breaking out, the location will be evacuated immediately, and the incident area will be isolated by ***Security.***
- Small spills will be cleaned immediately by the operator using absorbents, which will be disposed of as hazardous waste.
- Large or hazardous spills will be managed by the Emergency Response Team, who will assess severity, contain, and clean up.
- Local Communities will be alerted and informed by appropriate means including telephone, audible alarms and vehicle mounted speakers via supervision of CLOs.

As spill responses need different approaches according to the type of the material; instructions in accordance to the type of the material are submitted below sections:

9.1.1. Diesel Fuel and Gasoline Spills

- Avoid inhalation of any vapours by staying upwind. Use chemical-resistant personal protective equipment (gloves, boots and safety glasses) during clean-up activities,
- Gasoline and gasoline vapours are highly flammable. Remove sources of heat, sparks, flame, and electricity. Gasoline may create an explosive atmosphere,
- Stop the source of the spill/leak and contain (isolate) it as soon as possible; move leaking equipment away from drains and surface waters if needed,

- Apply absorbents (sheets or granular material). Dike the area with absorbent or soil if needed; prevent liquid from spreading and entering drains or surface waters. Allow time for the absorbent material to soak up the spilled material. Restrict access to the area,
- Once the spill is contained and free product is absorbed, put the used absorbent (contaminated absorbent) in a plastic bag, secure the bag with a metal tie, and place the bag in a labelled container with a secure lid,
- Shovel any contaminated soil into drums with secure lids. Pump any free product into a separate and secure drum or appropriate holding tank. Label containers/drums with the date, location of spill, name of product spilled, approximate quantity, and type of material recovered,
- Used absorbents and contaminated soils should be classified and treated as waste.
- Dispose of all free products as either hazardous waste or as material to be recycled,
- Environmental Engineer will supervise the process,
- Implement Environmental Accident and Spill Response Plan.

9.1.2. Hydraulic Fluid, Lubricant and Oil Spills

- Avoid inhalation of any vapours by staying upwind. Use chemical-resistant personal protective equipment (gloves, boots, and safety glasses) during clean-up activities. Restrict to use open flames close to the spill area,
- Stop the source of the spill/leak and contain (isolate) it as soon as possible; move leaking equipment away from drains and surface waters if needed,
- Apply absorbents (sheets or granular material). Dike the area with absorbent or soil if needed; prevent liquid from spreading and entering drains or surface waters. Allow time for the absorbent material to soak up the spilled material. Restrict access to the area,
- Once the spill is contained and free product is absorbed, drain absorbents of any free product and place them in a plastic bag, secure the bag with a metal tie, and place the bag in a labelled container with a secure lid. Shovel any contaminated soil into drums with secure lids. Pump any free product into a separate and secure drum or appropriate holding tank. Label containers/drums with the date, location of spill, name of product spilled, approximate quantity, and type of material recovered,
- Used absorbents and contaminated soils should be classified and treated as waste.
- Dispose of all free product as either hazardous waste or as material to be recycled,
- Environmental Engineer will supervise the process,
- Implement Environmental Accident and Spill Response Plan.

9.1.3. Chemical Spills (e.g. acid caustics)

- Avoid inhalation of any vapours by staying upwind. Use chemical-resistant personal protective equipment (gloves, boots, safety glasses) during clean-up activities. Restrict open flames from the spill area.
- Stop the source of the spill/leak and contain (isolate) it as soon as safely possible.

- Refer to Material Safety Data Sheets (MSDS) for any special hazards and clean up procedures associated with the spilled chemical, especially for reactivity with other substances in the spilled area,
- Apply absorbents. Dike the area with absorbent or soil if needed; prevent liquid from spreading and entering drains or surface waters.
- Once the spill is contained and free product is absorbed, drain absorbents of any free product and place them in a plastic bag, secure the bag with a metal tie, and place the bag in a labelled container with a secure lid. Shovel any contaminated soil into drums with secure lids. Pump any free product into a separate and secure drum or appropriate holding tank. Label containers/drums with the date, location of spill, name of product spilled, approximate quantity, and type of material recovered,
- Used absorbents and contaminated soils should be classified and treated as waste.
- Determine if free product that cannot be used must be classified as hazardous waste. Similarly, determine if used absorbents are hazardous waste. Dispose of hazardous and non-hazardous waste, separately, offsite using a licensed disposal company and to a licensed landfill,
- Environmental Engineer will supervise the process,
- Implement Environmental Accident and Spill Response Plan.

9.9. Flooding

During a flood incident;

- Emergency Wardens or any witness can start evacuation for all personnel who are not involved in flood emergency situations
- If necessary and safe to do so; Emergency Controller and Emergency Response Team will arrange de-energizing any electrical equipment and outlets in the affected areas. Relevant electricians will supervise the process
- Emergency Controller and Emergency Response Team will take measures to stop the flow of water through the buildings by using diver pumps
- If safe to do so; any equipment or supply will be relocated to an unaffected area of the site

9.10. Earthquake

In case of an earthquake, everybody must follow the instructions listed in the “Evacuation Procedure in the Event of Earthquake” which is included as ANNEX E to this Plan. After the shaking stops the Emergency Controller will brief the below mentioned instructions/reminders to personnel at the Assembly point:

- Do not use matches/lighters or other sources of ignition
- Power outages may occur; fire alarms and sprinkler systems may be activated
- If possible, provide assistance to individuals with disabilities who may need it or alert emergency responders to their location
- Do not enter any building that has been deemed or appears to be unsafe
- Leave the area if you smell gas or chemical fumes
- Be prepared for aftershocks

- If you are properly trained and able, provide first aid to victims
- Do not move the seriously injured unless they are in immediate danger of further injury
- Open doors carefully
- Watch for falling objects
- Use radios for internal communications where possible and avoid using telephones except where necessary, e.g. to contact the emergency services.

9.11. Adverse Weather and Storm Preparedness

To ensure preparedness for adverse weather conditions and climate-related events, the following preventive and response measures will be implemented across all construction sites under the Project;

- Meteorological alerts issued by the Turkish State Meteorological Service (MGM) will be continuously monitored and used to trigger site-level emergency notifications.
- Work at height, crane operations, and tunnel activities will be temporarily suspended when wind speeds exceed 70 km/h or lightning is observed within a 5 km radius of the construction site. All personnel will be promptly notified through internal communication channels.
- Drainage systems will be designed and maintained to prevent flooding and erosion.
- Sump pumps and sandbags will be used to prevent water accumulation during rain.
- Hazardous material storage areas will be sealed.
- During storm-prone seasons (e.g., late summer, early winter), high-risk activities such as lifting operations, material transport, or exposed electrical works will be scheduled for early morning or low-risk weather windows.
- Backup power generators will be made available at key operation centres in anticipation of grid outages due to storms.
- All personnel working in exposed outdoor areas will be directed to designated shelter locations in the event of a storm. These shelters will be adequately equipped and maintained to accommodate emergency situations.
- Post-storm clean-up will involve safe collection and separation of debris (metal sheets, cables, etc.) to prevent further hazards or environmental contamination.
- Following any storm event, a detailed inspection of the site will be conducted to assess physical damage, environmental impacts, and structural integrity. Work will only resume after safety conditions are verified and documented.
- A table top exercise and field practice with a storm/emergency weather scenario will be conducted. All personnel will be informed in accordance with these scenarios.

This Emergency Preparedness and Response Management Plan will be updated after each adverse weather incident, as necessary.

In addition to the preventive measures listed above, the Project's emergency planning considers recovery and continuation of operations following climate-related incidents. This includes:

- Controlled shutdown of operations in the event of site-wide safety risks due to extreme weather conditions.
- Safe evacuation of personnel from affected zones using pre-identified muster points and evacuation routes.
- Rapid assessment and reactivation of essential systems and access roads to enable phased return to normal operations.

9.12. Terrorism and Security Threat

- In the event of an armed conflict, or suspected terrorist activity, the following actions shall be taken:
- Emergency Wardens or any witness shall immediately inform the Emergency Controllers of the suspected threat.
- Emergency Controllers will assess the situation and activate the evacuation plan if deemed necessary.
- Evacuation will be carried out under the coordination of Security personnel and in close communication with the Gendarmerie or Police authorities.
- All personnel shall follow the instructions of Emergency Controllers and shall not attempt to intervene under any circumstances.
- The Administrative Assistant will notify relevant external authorities (Police, Gendarmerie) and inform the Project Director.
- Internal communication will be restricted to authorized personnel to avoid misinformation or panic.
- Security personnel will secure the area, restrict access to the threat zone, and support emergency services upon arrival.
- The Emergency Response Team will be on standby to assist with evacuation and first aid if required.
- Assembly Points will be used as temporary gathering areas until the threat is fully cleared by security authorities.
- No personnel shall return to the workplace until official clearance is given by law enforcement and confirmed by the Emergency Controller.

9.13. Site-Type Specific Emergency Consideration

Emergency preparedness and response procedures must consider site-specific characteristics due to the varied nature of construction activities within the Project. The following principles shall guide site-type differentiated response planning:

➢ **Tunnel Areas:**

- Emergency exits, lighting and ventilation systems must be operational at all times.
- Tunnel-specific muster points shall be designated outside tunnel portals.
- Radios or communication lines must be redundant due to poor signal inside tunnels.
- Fire and smoke response must consider limited escape routes and toxic atmosphere risk

➢ **Construction Camps:**

- Evacuation maps must be posted in each sleeping and dining area.
- Emergency drills (especially fire) must be performed during both day and night shifts.
- Utility shut-off points (electricity, gas, water) must be clearly marked and accessible

➢ **Open Construction Sites:**

- Muster points should be identified for each working zone and updated as construction progresses.
- Overhead work, excavation, and equipment operation must have risk-specific emergency triggers (e.g. crane collapse, fall hazards).

➢ **Bridges, Viaducts, Elevated Structures:**

- Fall protection systems must include emergency descent devices.
- In case of structural instability, immediate clearance radius must be observed as per engineering advice.
- Emergency access must be available from both ends of the elevated structure

Annex F illustrates emergency assembly points, the location of the fire extinguishers, employee's rest areas and parking areas.

9.14. Emergency Infrastructure Controls

Emergency utility shut-off points will be provided to ensure timely and effective response to various emergency scenarios such as fire, electrical hazard, fuel spill or flooding.

- *Electrical Panels:* Marked with the symbol "E", all main power panels are labelled and equipped with lock-out capability to isolate circuits during fire, flooding, or electrical hazard scenarios.
- *Fuel Shut-Off Valves:* Located at diesel and fuel storage tanks, marked "F", these valves are accessible without requiring entry into the tank containment area and include visual signage in both Turkish and English.
- *Water Main Valves:* Marked "W", primary water supply shut-off points are located near accommodation blocks, canteens, and equipment washing areas.

To ensure rapid and effective emergency response, Project, site-wide emergency equipment and location information are shown in the tables below.

Detailed Emergency Equipment List

Equipment	Quantity	Maintenance Frequency

Tunnel Ventilation System	2 system per tunnel	Daily test, annual maintenance
Emergency Exit Guidance Lights	1 every 25 meters	Monthly inspection
Fire Cabinets and Hose Reels	1 every 50 meters	Monthly inspection, biannual maintenance
Smoke Detectors (Tunnel)	1 every 50 meters	Monthly functionality test
Emergency Alarm Buttons	1 every 100 meters	Monthly inspection
Vibration and Strain Sensors	1 set per viaduct	Test every 3 months
Wind Speed Measurement Device	1 per viaduct	Monthly inspection, annual calibration
Seismic Activity Sensor	1 per viaduct	Test every 6 months
Smoke Detectors (Accommodation)	1 per room, corridors, common areas	Monthly inspection
Fire Alarm System	1 system / camp	Monthly inspection
Emergency Lighting	1 system per building	Monthly inspection
First Aid Kits	1 per 20 people	Monthly stock check
Portable Fire Extinguishers	1 per 100 m²	Monthly inspection, annual maintenance
Emergency Communication Devices	1 per shift supervisor	Weekly test
Chemical Spill Kit	1 per storage unit	Inspection every 3 months
Eyewash and Emergency Shower Unit	1 per chemical area and tunnels	Weekly functionality test
Fire Detection and Alarm System	1 per facility/corridors	Monthly inspection
Personal Protective Equipment (PPE) Set	1 per worker	Daily user check/ Monthly stock check
Emergency Exit Signs	1 per Exit	Monthly inspection
Automated External Defibrillators (AEDs)	1 per 100 people	Monthly inspection

Location Information of Emergency Equipment

Equipment	Location
Portable Fire Extinguishers	Each accommodation block entrance and dining hall
Smoke Detectors	Each room, corridors, and common areas
First Aid Kits	1 per 20 workers, placed in visible common areas
Emergency Lighting & Exit Signs	Staircases and exits of all buildings
Automated External Defibrillators (AEDs)	Camp infirmary and ambulance
Fire Cabinets and Hoses	Every 50 m inside tunnel
Emergency Exit Guidance Lights	Every 25 m along tunnel base
Portable Gas Detectors (CO, CH4, O2)	Tunnel maintenance points and ventilation control rooms
Thermal Cameras	Tunnel entry points and ERT vehicles
Wind Speed Measurement Device	Midspan or tower locations
Vibration Sensors	Main structural columns
Portable Fire Extinguishers	Maintenance zones and bridge approaches
Chemical Spill Kits	Inside each chemical storage unit, tunnels and maintenance area at each camp sites

Equipment	Location
Eyewash and Emergency Shower Units	Next to hazardous material storage and one per chemical area
Gas Dispersal Equipment	Chemical handling rooms
Portable Lighting Units	Night shift work zones (excavation, paving)
Reflective Warning Signs	Road junctions and worksite boundaries
Mobile Barriers with Impact Absorbers	High-risk road segments

10. EMERGENCY DRILLS AND TRAINING &UPDATE

10.1. Drills

10.1.1. Fire Drill

Two times in a year, a fire drill will be conducted involving all employees. The scenario will be prepared and implemented by *Emergency Response Team*. Every employee including subcontractors' employees must have experience of using a fire extinguisher at least once. Fire Drills will be recorded, and the response time and effectiveness will be evaluated. Faults will be determined, and corrective actions will be planned, and related revisions will be done on this Plan.

10.1.2. Evacuation Drill

Two times in a year, an evacuation drill will be conducted, unannounced, to test the real response of the employees in case of an emergency. The duration times will be observed for the gathering of all employees at muster point and the full evacuation of the workplace. The gathered personnel will be listed, and the muster sheet compared with the normal working daily list. Faults will be determined, and corrective actions will be planned, and related revisions will be done on this Plan.

10.1.3. Environmental Accident Drill

To achieve the target of no harm to environment, including from any possible release of any hazardous material to environment, Emergency Response Team will conduct an environmental accident drill twice in a year to demonstrate how to use a spill kit effectively. The scenario will be prepared and implemented by the *Environmental Engineer*. The environmental accident drill will be recorded, and the response time and effectiveness will be evaluated. Faults will be determined, and corrective actions will be planned, and related revisions will be done on this Plan.

10.2. Training & Update

Necessities of the Training Program including, but not limited to:

- Firefighting, spill response, evacuation, rescue and internal radio usage for Emergency Response Team
- First Aid for First Aiders
- Training will be repeated two times in a year. Training exercises to allow personnel the opportunity to test emergency preparedness will be provided, including:
    - Desktop exercises with emergency responsible persons, where the contact lists are checked, and the facilities and communication assessed

- Drills (See Section 10.1) for testing of equipment and logistics

- Upon completion of a training exercise; Emergency Controller will review the effectiveness of the exercise to assess what worked well and what aspects require improvement
- This Emergency Response Plan will be updated as required after each exercise. Elements of the Plan subject to significant change (such as contact lists) will be replaced
- Training activities and outcomes of the training will be recorded
- Participation in drills is mandatory for all personnel present on-site during the scheduled activity.
- Attendance sheets and drill evaluation forms shall be completed for each event and archived by the HSE Document Controller.
- Drill outcomes shall be reviewed by the HSE Manager, and improvement actions shall be documented and followed up.

11. EMERGENCY REPORTING

Emergency reporting will be according to Accident and Event Reporting Procedure.

12. KEY PERFORMANCE INDICATORS

In order to check efficiency and implementation of emergency response activities and commitments listed in Annex A, determination of key performance indicators and relevant targets are needed. So, key performance indicators according to this procedure in general and targets are given in below table

ID	KPI	Target
KPI-1	Number of reported non-compliances with the requirements of this Procedure. This will be determined during drills for response capability of personnel and by daily site tours for equipment availability	Zero per three months
KPI-2	Number of non-compliances closed due to corrective actions being taken within the defined timeframe (set on a case by case basis).	100% of all non-conformities remedied within the defined timeframe
KPI-3	% of all relevant community who have received relevant community awareness training	100% compliance with training requirements
KPI-4	% of all staff who have received relevant and adequate training	100% compliance with training requirements
KPI-5	% of all staff who have participated emergency drills	100% compliance with drill requirements

ID	KPI	Target
KPI-6	Number of reports of near misses reviewed for root cause and a corrective action identified and shared across the Project construction sites within 48 hours to prevent future occurrence.	100% of near miss reports reviewed and shared
KPI-7	Success of training tests	Expected average 85%

It is not always possible to achieve relevant targets, but continuous improvement will be the major principle in accordance with KPIs.

13. MONITORING, REVIEW AND UPDATE

To ensure the continued relevance and effectiveness of the Emergency Preparedness and Response Plan (EPRP), the following measures shall be implemented:

- The EPRP shall be formally reviewed by the SPV in coordination with the EPC.
- Additional reviews shall be conducted following any major incident, regulatory change, or organizational restructuring that may affect emergency response capacity.
- All changes and updates shall be logged in a revision control table and archived by the HSE Document Controller.
- The updated version of the plan must be submitted for approval by the SPV H&S Manager before dissemination.
- A summary of key findings and improvements shall be documented and communicated during toolbox talks and safety briefings.

Table 1: Key Monitoring Activities

Parameter	Monitoring Station / Location	Monitoring Method	Monitoring Frequency	Responsible Parties
Number of drills conducted	Project office	-Document review	Semi-Annual	SPV EPC

ANNEX A COMMITMENT REGISTER IMPLEMENTATION

Commitment	Where the commitment will be implemented	When the commitment will be implemented	Who will implement the commitment	Monitoring and Assurance
Local emergency services will be alerted in event of emergency that risks collateral damage to the local communities. As part of the community engagement process, details regarding the nature of emergencies and their response plans (e.g. Emergency Prevention and Response Plan) will be shared with the local communities. Channels of communication will be established and agreed upon, and in event of emergency, the communities will be alerted and informed by appropriate means including telephone, audible alarms and vehicle mounted speakers, for example.	The Emergency Action Plan will be accessible through local village mukhtar offices and relevant municipalities – Alanya, Manavgat, Serik.	Start of construction and whenever the Emergency Action Plan is updated	• ***HSE Manager***	• HSE Manager and/or its representatives will control relevant locations monthly to check Emergency Action Plan is present or not.
Provisions of the Turkish 'Regulation on Structures to be Built in Disaster Areas and Turkish 'Regulation on Buildings to be Built in Earthquake Areas will be adhered to during construction.	Any structure to be built	During design and construction of any structure	• ***Project manager*** will enforce • ***HSE Manager*** will supervise	• HSE Manager will monitor design and construction
Provisions of the 'Disaster Regulation on Engineering Structures Along Highways' will be complied with. The Project will undertake consultation with the relevant authority before the design is finalised and request the input of the regulators who are responsible for the Disaster Regulation on Engineering Structures Along Highways.	Any structure to be built	During design and construction of any structure	• ***Project manager*** will enforce • ***HSE Manager*** will supervise	• HSE Manager will monitor design and construction
The Motorway and its structures will need to be designed to meet Turkish and international standards for design and operation to minimise the risks and provide appropriate response in the event of an incident occurring. With adoption of the AAO A.S. EPR Policy, AAO A.S. will commit to set-up and implement: (1) measures to prevent emergencies; (2) measures to respond to emergencies; and (3) measures to assess damages and recover after emergencies.	Any structure to be built	During design and construction of any structure	• ***Project manager*** will enforce • ***HSE Manager*** will supervise	• HSE Manager will monitor design and construction
Coordinate with emergency responders to ensure that appropriate first aid is provided in the event of accidents.	Location of accident	In the event of an accident	• ***Emergency Coordinator***	• Renewal of first aid certificates whenever needed • First aid drills
Project Sponsors will require all contractor and sub-contractor personnel to take necessary measures to avoid forest fires and immediately respond to any fire event that could not be avoided by measures taken, including - o Project personnel will be trained to immediately inform forestry authorities about the location and scale of any fire incident. o Fire fighting equipment will be provided at construction sites (as relevant for different types of fires), inspected regularly and staff trained to use the equipment.. o Proper fire extinguishers will be kept ready at site where hot/welding works will be performed. o Smoking will only be permitted in designated, safe areas. o Staff will be trained on fire protection awareness and response.	Location of the incident	In the event of an incident	• ***Emergency Coordinator***	• Emergency drills • HSE Manager will ensure relevant equipment and training is provided
The key mitigation to be implemented involves the adoption of road traffic management measures, including an effective spill containment and clean-up plan, as per the EPR Plan specified in the ESMP. The EPR Plan will be prepared for the construction stage, and then updated later to apply to Motorway and Bridge operations.	• Nearby schools - Alanya, Manavgat, Serik. • Construction sites	Starting from 2018	• ***CLOs will conduct the work*** • ***HSE Manager will supervise***	• CLOs will monitor communities and HSE manager will monitor workers

Commitment	Where the commitment will be implemented	When the commitment will be implemented	Who will implement the commitment	Monitoring and Assurance
Measures will be in place to prevent members of the local community, especially children, from unauthorised entry to Project-related sites/installations, thus prevent or lower the risks of accidents, as well to the AAO Project employees and contractors in order to prevent the spread of STDs and other cummunicable diseases in local communities. Such measures will include, e.g.: • Awareness training about construction site hazards to children/youths in nearby village schools; •training of health workers in disease treatment and the provision of health services for the workers •performing immunisation programmes for workers • Placement of fencing or other barricades around dangerous construction installations with warning signs of the hazards; • Use of professionally trained security guards at construction sites.	• Construction sites	Construction phase	• ***CLOs*** • ***H&S manager***	• CLOs will monitor communities and HSE manager will monitor workers

ANNEX B INTERNAL EMERGENCY CONTACT NUMBERS

SITE PERSONNEL ROLE	NAME	EXT	MOBILE	LOCATION
Emergency Controller	Selda GÜRSEL		0530 643 72 29	
Administrative Chief	Mehmet KOPAR		0532 711 87 44	
Environmental Engineer	Hüseyin YILDIRIM		0554 128 82 62	
ERT Member	Ekrem GÜMÜŞ		0533 531 56 70	
ERT Member	Emre ISTANBULLU		0534 867 53 65	
ERT Member	Kemal ÖZYİĞİT		0535 032 89 42	
ERT Member	Hasan ÖZKAN		0537 664 43 75	
ERT Member	Hüseyin BALIKÇI		0540 177 63 02	
ERT Member	Mehmet Ali ÖZER		0536 495 40 08	
ERT Member	Mehmet KEKİK		0536 034 71 75	
ERT Member	Reşit ÇELİK		0539 268 75 73	
ERT Member	Yaşar BOZKURT		0536 059 13 10	
ERT Member	M. Seçkin ADAM		0544 791 98 50	
Ambulance	Site Doctor		0505 669 67 68	
First Aid Personnel	Cemil ARSLAN		0538 032 25 03	
First Aid Personnel	Zekeriya YONCA		0546 549 31 39	
First Aid Personnel	M. Faruk AKYOL		0545 251 19 80	
First Aid Personnel	Yüksel BİLGİLİ		0535 956 33 48	
First Aid Personnel	İdris BALABAN		0544 556 23 88	
First Aid Personnel	Ümit Evren SEVİMLİ		0545 839 66 64	
First Aid Personnel	Fatih DERDİYOK		0532 056 95 08	
First Aid Personnel	Furkan İĞİT		0541 519 07 25	
Emergency Warden	Selda GÜRSEL		0530 643 72 29	
Emergency Warden	Murat TÜTÜNCÜ		0533 551 69 88	
Security Manager	Ali Osman AYDIN		0505 776 04 69	

ANNEX C EXTERNAL EMERGENCY CONTACT NUMBERS

CONTACT	TELEPHONE	SPEED DIAL MOBILE	FAX
Ambulance		112	
Fire Service		110	
Health & Safety Authority		112	
Environment Authority	0242 237 00 10		
Gendarme		156	
Police		155	
ASAT (Water)	0242 310 12 00	185	
AEDAŞ (Electricity)	0242 320 36 00		
Antalya Devlet Hastanesi	0242 455 53 53		
Antalya Eğitim ve Araştırma Hastanesi	0242 249 44 00		
Antalya Atatürk Devlet Hastanesi	0242 345 45 50		
Akdeniz Üniversitesi Tıp Fakültesi	0242 249 60 00		
Kepez Devlet Hastanesi	0242 339 11 00		
Serik Devlet Hastanesi	0242 722 13 40		
Manavgat Devlet Hastanesi	0242 746 11 17		
Alanya Eğitim ve Araştırma Hastanesi	0242 513 48 41		
AFAD Afet ve Acil Durum Yönetimi	0242 243 02 55		

ANNEX D EMERGENCY EQUIPMENTS

EQUIPMENT	TYPE	QUANTITY	KEPT IN
AMBULANCE	TRANSFER	1	MAIN CAMP SITE

ANNEX E EVACUATION PROCEDURES

EVACUATION PROCEDURE IN THE EVENT OF EARTHQUAKE

In case of the earthquake, EVERYBODY SHALL;

- **<u>If in the slip platform and on the top of the legs</u>**;
  - ✓ Only wait for the shaking stops!
  - ✓ **<u>DO NOT MAKE PANIC</u>**!!!
  - ✓ Do not jump!
  - ✓ Hold the guardrails!
  - ✓ Do not use elevator!
- **<u>If indoors during an earthquake;</u>**
  - ✓ Drop to the ground!
  - ✓ TAKE COVER by moving under a sturdy table or other piece of furniture. HOLD ON until shaking stops!
  - ✓ If you cannot take cover under a piece of furniture, tuck your head into your knees and cover your head with your arms!
  - ✓ Evacuate only after shaking has stopped and it is safe to do so!
- **<u>If outdoors during an earthquake;</u>**
  - ✓ Remain outdoor; DO NOT enter a container!
  - ✓ Move away from buildings, trees, streetlights and utility wires!
  - ✓ Drop to your knees and into fetal position, close your eyes, and cross your arms over the back of your neck for protection!
  - ✓ Remain in this position until shaking stops!
  - ✓ Stay in an open area!
- **<u>If in a vehicle during an earthquake;</u>**
  - ✓ Stop as quickly as safety permits and stay in the vehicle!
  - ✓ Avoid stopping near or under buildings, trees, overpasses, and utility wires!
  - ✓ Proceed cautiously once shaking has stopped!
  - ✓ Avoid roads, bridges, or ramps that might have been damaged by the earthquake!
- **<u>After shaking stops;</u>**
  - ✓ Go to designated **"Assembly Point"** within the site compound!
  - ✓ Remain at **"Assembly Point"** until all clear is given by the **Emergency Controller** to return to the workplace!

EVACUATION PROCEDURE IN THE EVENT OF FIRE OR EXPLOSION

If you discover an emergency (*e.g. fire*) and you are the first on the scene, carry out the following procedure:

- Shout out a warning and alert people in immediate area!
- **Contact Emergency Controller** by phone on **Ext**. … or **MOBILE** …… or **using internal radio system** to advise them of the situation.
- If you consider that you can without endangering yourself or others, contain / control the emergency you should:
    - ***Take necessary steps to control emergency***

      (e.g. Use appropriate fire extinguisher, contain leak or spillage.)
- **Leave** by nearest exit, close doors behind you.
- **Go** to designated Assembly Point within site compound.
- **Remain** at **"Assembly Point"** until all clear is given by the **Emergency Controller** to return to the workplace.

EVACUATION PROCEDURE IN THE EVENT OF NON–FIRE/EXPLOSION

If you discover an emergency other than fire or explosion (*e.g.* ***Spill or Flood***) and you are the first on the scene, carry out the following procedure:

- Shout out a warning and alert people in immediate area!
- **Contact Site Emergency Controller** by phone on **Ext**. … or **MOBILE** …… or **using internal radio system** to advise them of the situation.
- If you consider that you can without endangering yourself or others, contain / control the emergency you should:
    - ***Take necessary steps to control emergency***

      (e.g. Use appropriate fire extinguisher, contain leak or spillage, use pumps.)
- **Leave** by nearest exit, close doors behind you.
- **Go** to designated Assembly Point within site compound.
- **Remain** at **"Assembly Point"** until all clear is given by the **Emergency Controller** to return to the workplace.

EVACUATION PROCEDURE IN THE EVENT OF TERRORISM

If you discover an emergency (e.g. terrorism) and you are to carry out the following procedure:

- Keep Calm down!
- **Contact Emergency Controller** by phone on **Ext**. …or **MOBILE** ……. or **using internal radio system** to advise them of the situation.

EVACUATION PROCEDURE IN THE EVENT OF FIRE – WORKER CAMP / ACCOMMODATION

If you discover a fire within the camp facility (sleeping quarters, dining hall, etc.):

- Shout out a warning and activate the nearest fire alarm.
- **Contact Emergency Controller** by phone on **Ext**. …or **MOBILE** ……. immediately.
- Attempt to extinguish small fires using a nearby extinguisher only if safe to do so.
- Do not stop to collect personal items.
- Evacuate using marked exit doors and follow escape route signage.
- Proceed to the Camp Muster Point (outside the main dining facility).
- Camp personnel must not return until declared safe by the Emergency Controller and/or Fire Brigade.

EVACUATION PROCEDURE IN THE EVENT OF EMERGENCY – TUNNEL WORK AREA

If an emergency (e.g. fire, gas leak, collapse) occurs in a tunnel area, follow the steps below:

- Shout out a warning and alert all personnel in the tunnel.
- Immediately inform the Emergency Controller via radio or internal communication system.
- Do NOT use any electrical equipment unless instructed.
- Use designated tunnel escape routes (as marked) and proceed on foot to the tunnel portal.
- If available, activate emergency lighting and ventilation systems.
- Assist any injured person only if safe to do so.
- Exit through the nearest safe egress point.
- Once outside the tunnel, proceed to the designated Tunnel Assembly Point located near the portal entrance.
- Remain at the Assembly Point until clearance is given by the Emergency Controller.

EVACUATION PROCEDURE IN THE EVENT OF STRUCTURAL INCIDENT – BRIDGES OR ELEVATED WORK ZONES

In case of suspected collapse, movement, or instability on a bridge, viaduct or similar structure:

- Evacuate immediately using access ladders or ramps if available.
- Do NOT attempt to retrieve tools or materials.
- Alert others verbally and notify the Emergency Controller by radio.
- Emergency personnel will restrict entry until structural stability is confirmed.
- Assemble at the nearest safe open area as defined in bridge-specific signage plans.
- Follow instructions from Emergency Controllers and avoid returning to the structure until professionally inspected.

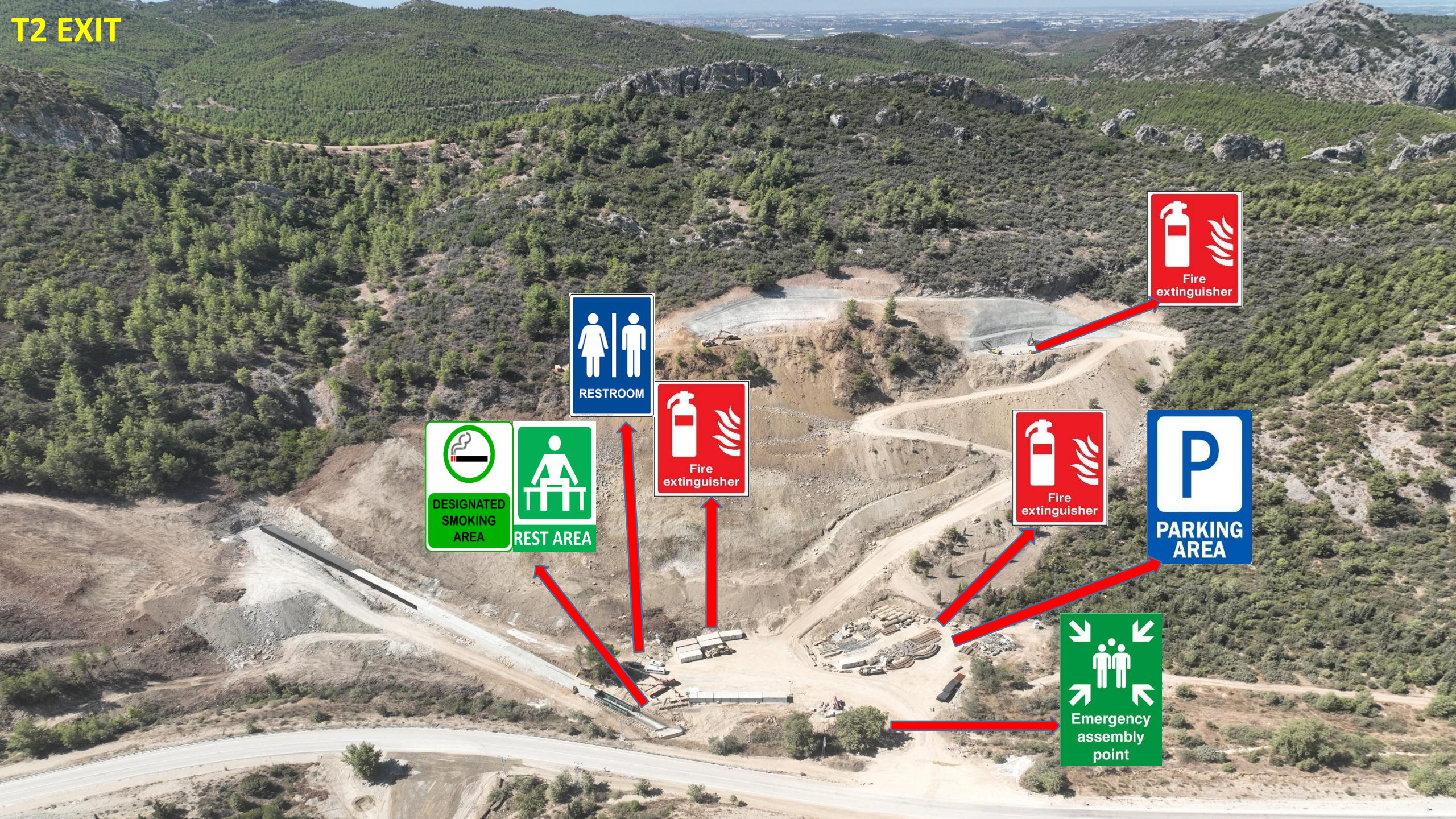
EVACUATION PROCEDURE IN THE EVENT OF GENERAL SITE INCIDENT – OPEN CONSTRUCTION AREA

If a hazardous incident occurs in the general construction site (e.g. heavy equipment failure, fuel spill, explosion):

- Warn surrounding workers loudly and clearly.
- Leave the immediate area using the safest path, avoiding machinery and excavation zones.
- Notify Emergency Controllers or Emergency Wardens.
- Do not block access routes for emergency responders.
- Proceed to the designated General Site Muster Point.
- Wait at the Assembly Point and do not return to the site unless authorized.

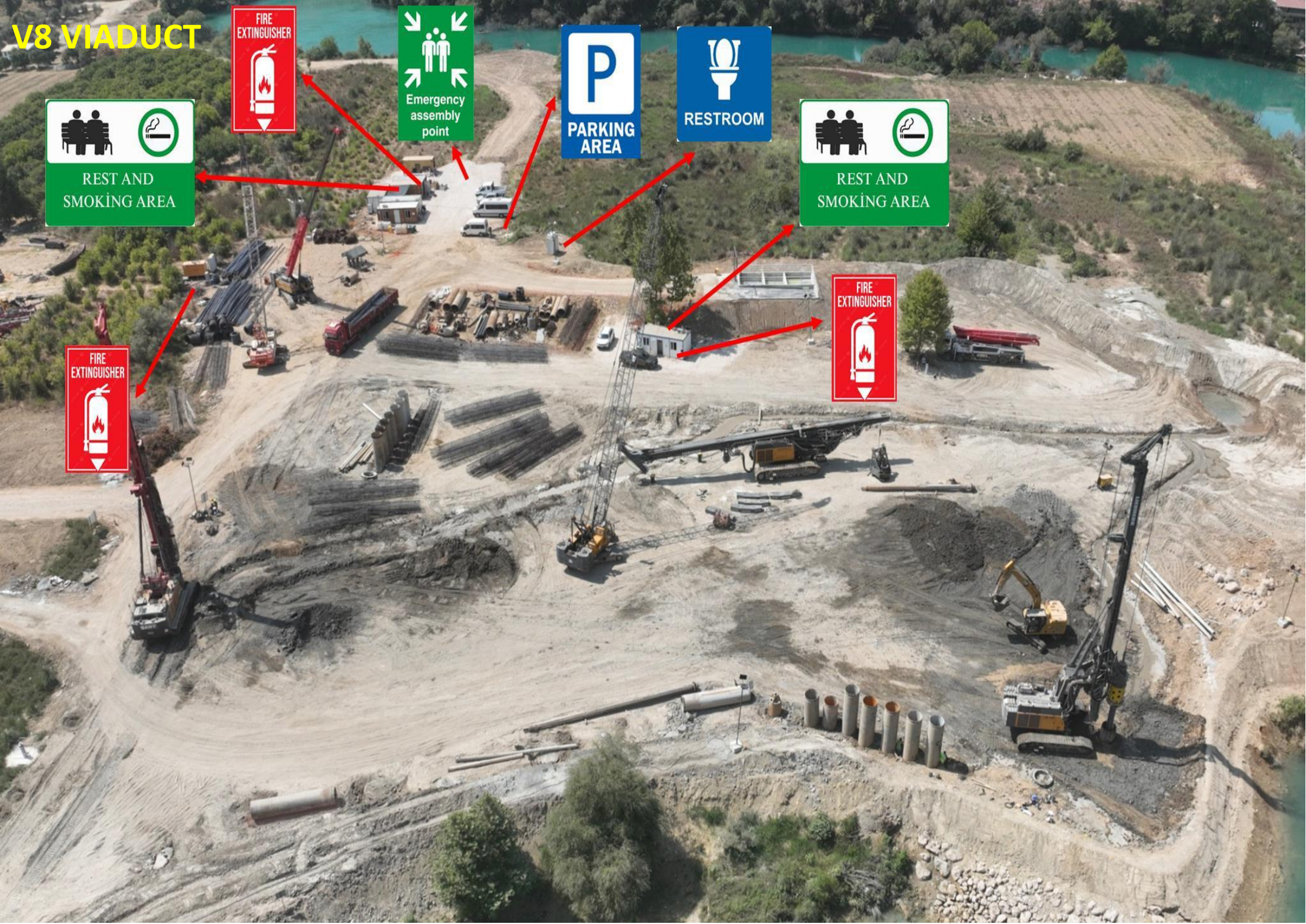
ANNEX F ANNOTATED CONSTRUCTION SITE PHOTOS

TAŞAĞIL
TEMPORARY
CAMP SITE
RESTROOM
Fire extinguisher
RESTROOM
REST AREA
DESIGNATED SMOKING AREA
Emergency assembly point
Emergency assembly point
Fire extinguisher
Fire extinguisher
Fire extinguisher
Fire extinguisher
Fire extinguisher
Fire extinguisher
P
PARKING AREA
P
PARKING AREA


T2 EXIT
RESTROOM
Fire extinguisher
Fire extinguisher
Fire extinguisher
DESIGNATED SMOKING AREA
REST AREA
P
PARKING AREA
Emergency assembly point

T3 ENTRANCE
Fire extinguisher
Fire extinguisher
RESTROOM
DESIGNATED SMOKING AREA
REST AREA
Emergency assembly point
Fire extinguisher

V4 VIADUCT
P
PARKING AREA
Emergency assembly point
DESIGNATED SMOKING AREA
REST AREA
Fire extinguisher
DESIGNATED SMOKING AREA
REST AREA
Fire extinguisher
Fire extinguisher
RESTROOM


V8 VIADUCT
FIRE EXTINGUISHER
Emergency assembly point
P
PARKING AREA
RESTROOM
REST AND SMOKİNG AREA
REST AND SMOKİNG AREA
FIRE EXTINGUISHER
FIRE EXTINGUISHER

V11 VIADUCT
FIRE EXTINGUISHER
REST AND SMOKİNG AREA
Emergency assembly point
P
PARKING AREA
REST AND SMOKİNG AREA
FIRE EXTINGUISHER
RESTROOM

V12 VIADUCT
FIRE EXTINGUISHER
FIRE EXTINGUISHER
REST AND SMOKİNG AREA
REST AND SMOKİNG AREA
P
PARKING AREA
RESTROOM
Emergency assembly point

T5 ENTRY
FIRE EXTINGUISHER
FIRE EXTINGUISHER
FIRE EXTINGUISHER
FIRE EXTINGUISHER
P
PARKING AREA
REST AND SMOKİNG AREA
Emergency assembly point
RESTROOM

HUMAN RESOURCES AND LABOR MANAGEMENT PLAN

REVISION STATUS		
Revision Date	**Rev. No**	**Explanation**
01.04.2025	00	This plan is prepared according to TS EN ISO/IEC 9001:2015, TS EN ISO/IEC ISO 14001:2015, TS EN ISO/IEC 45001:2018 and IFC Performance Standards
23.05.2025	01	Revision
16.06.2025	02	Revision as per revision made under ESDD submitted by the Lender consultant
08.09.2025	03	Revision as per revision made under ESDD submitted by the Lender consultant

HUMAN RESOURCES AND LABOR MANAGEMENT PLAN

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LIST OF ABBREVIATIONS

AAOİAŞ	Antalya-Alanya Otoyolu İnşaat Yatırım ve İşletme A.Ş.
CLO	Community Liaison Officer
CSOs	Civil Society Organizations
E&S	Environmental and Social
EHS	Environmental, Health, and Safety
ESIA	Environmental and Social Impact Assessment
ESMMP	Environmental and Social Management and Monitoring Plan
ESMS	Environmental and Social Management System
GBVH	Gender-Based Violence and Harassment
HR	Human Resources
IFC	International Finance Corporation
KPIs	Key Performance Indicators
Limak	Limak İnşaat Şanayi ve Tic. A.Ş.
OHS	Occupational Health and Safety
RCA	Root Cause Analysis
SEP	Stakeholder Engagement Plan
WHO	World Health Organization

HUMAN RESOURCES AND LABOR MANAGEMENT PLAN

I. INTRODUCTION

Ministry of Transport, and Infrastructure (former Ministry of Transport, Maritime Affairs and Communications), General Directorate of Highways ("KGM" or "the Administration"), as the owner of the Antalya-Alanya Motorway Project, has tendered for a contract in accordance with the Law on Implementation of Some of the Investments and Services in the Framework of Build, Operate and Transfer Model (Law No: 3996). Following the tendering process, KGM has awarded Antalya-Alanya Otoyolu İnşaat Yatırım ve İşletme A.Ş. (AAOİAŞ or the Project Sponsor) with a Build, Operate and Transfer (BOT) contract for the implementation of the Project. Accordingly, AAOİAŞ will be referred as Project Sponsor in the scope of this report. The main contractor for the Project has been designated as Limak and will henceforth be referred to as the Contractor (or EPC).

The project is designed to connect the districts of Serik and Alanya via the Manavgat district of Antalya province. The Project will enhance the existing transportation network services with its surrounding provinces: Burdur, Muğla, Konya, Isparta, Karaman and Mersin. Various environmental, social, and technical studies have been conducted along the initial route of the Project tendered by the KGM. Based on these studies, the route was optimized, incorporating engineering practices and addressing environmental and social considerations, particularly issues of involuntary and economic resettlement, before being finalized. According to the most current design, the total length of the Motorway, which will be a dual carriageway of mostly 3 and partially 2 lanes (3x2 and 2x2) in each direction, is 117.8 kilometers including the main carriageway and the access roads.

This Human Resources and Labor Management Management Plan ("Plan") has been prepared by Antalya-Alanya Highway Construction Investment and Operation Inc. ("AAOİAŞ" or "SPV") for the Antalya-Alanya Highway Project ("Project") in accordance with national legislation, the Equator Principles ("EP"), the International Finance Corporation ("IFC") Performance Standards ("PSs"), and the international standards that reference the relevant legislative sections. The Plan covers the construction phase of the Project.

I.1 Project Description

The Project starts at Serik Interchange (Km: 52+000) and then proceeds eastward, following the corridor at the foothills of the Taurus Mountains within the boundaries of Serik and Manavgat districts, ending at north of Konaklı neighborhood of Alanya District (Km: 136+000). From this point onwards, the route turns southward with a 2x2 lane connection road and connects to the D400 state road at the Alanya West Interchange. As of April 2025, the current Project design includes a total of 117.8 kilometers of road, comprising 84 kilometers of main road (motorway) and 33.8 kilometers of access roads.

The map showing the construction components and road route within the scope of the Project's construction activities is provided in Figure I-1.

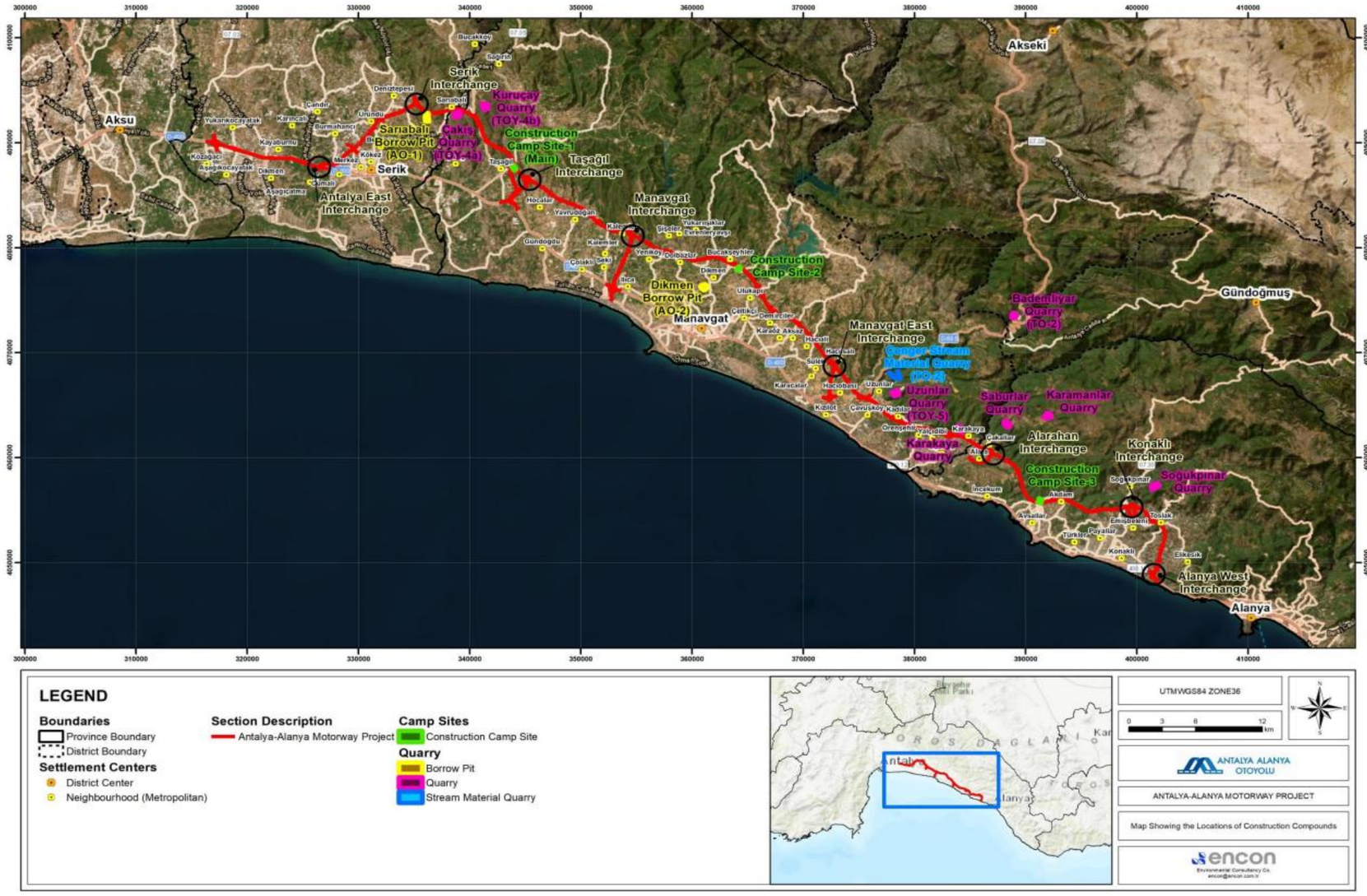

Figure I-1. Map Showing the Locations of Construction Compounds

II. PURPOSE AND SCOPE

This Human Resources and Labor Management Plan ("the Plan" or "HR-LMP") has been prepared for the Antalya-Alanya Motorway Project ("the Project").

The purpose of this Plan is to identify labor-related risks and outline mitigation, control, and monitoring measures to minimize adverse social impacts and ensure fair and compliant workforce management during the construction phase.

This management plan is a living document developed with the best available information and will be reviewed and revised as necessary due to the nature of the construction and progress.

The Plan has been developed in alignment with applicable national labor legislation and relevant international standards, including the requirements of international financial institutions. It outlines actions that should be done to manage recruitment, employment conditions, worker welfare, and labor rights effectively across construction-related activities and facilities. This Plan will provide mitigation alternatives and a monitoring schedule in accordance with Turkish labor law and international labor standards.

This Plan should be applied by all parties involved in the construction phase, including the Project Sponsor, Antalya-Alanya Otoyolu İnşaat Yatırım ve İşletme A.Ş. (AAOİAŞ), the Main Contractor (Limak), and all subcontractors. Responsibilities for the implementation, monitoring, and reporting of labor-related practices should be clearly assigned. Necessary updates to the Plan should be considered in case of changes in workforce structure, construction methodology, or regulatory requirements.

III. LEGISLATIVE FRAMEWORK AND REFERENCE STANDARDS

This Plan has been developed to align with both Turkish legislation and international standards that govern labor rights, occupational health and safety, and overall workforce management. The references below should be used to guide the implementation and ensure that the Plan meets all required obligations during the construction phase.

III.1 National Requirements

The following primary regulations form the legal basis for labor management in Türkiye:

- Labor Law (No. 4857)
- Social Insurance and General Health Insurance Law
- Occupational Health and Safety Law
- International Labor Force Law
- Regulation on Annual Paid Leave
- Regulation on Working Hours under the Labor Law
- Regulation on Minimum Wage
- Communiqué on National Occupational Standards
- Regulation on the Procedures for Determining Loss of Working Ability and Occupational Earning Capacity
- Communiqué on Short-Time Working and Short-Time Working Allowance Pursuant to Article 65 of Labor Law No. 4857
- Regulation on the Implementation of the Law on Identity Notification

- Regulation on Workplace Physician Work Approval by the Turkish Medical Association

Compliance with these regulations is mandatory, and ongoing monitoring and reporting should be conducted to verify adherence throughout the construction phase.

III.2 International Standards and Conventions

In addition to national regulations, the Plan relies on internationally recognized standards to ensure comprehensive labor management and protection of workers' rights.

AIIB is a multilateral development bank established to promote sustainable economic growth and improve infrastructure connectivity. According to the Articles of Agreement, AIIB aims to invest in infrastructure and productive sectors while fostering regional cooperation through partnerships with other development institutions. To ensure responsible operations, AIIB adheres to policies that address environmental and social impacts, outlined in its Environmental and Social Framework (ESF).

Also, the following international standards and reference frameworks should be used to align Project practices with international lender requirements and good practice environmental and social management:

- IFC Performance Standards (2012), specifically:
  - Performance Standard 2: Labor and Working Conditions
  - Performance Standard 4: Community Health, Safety, and Security
- IFC Environmental, Health and Safety (EHS) General Guidelines (2007)
- Equator Principles IV (2020)
- Promotional Framework for Occupational Safety and Health Convention (2006)
- Worst Forms of Child Labor Convention (1999)
- Safety and Health in Mines Convention (1995)
- Safety and Health in Construction Convention (1988)
- Health Services Convention (1985)
- Termination of Employment Convention (1982)
- Occupational Safety and Health and the Working Environment Convention (1981)
- Tripartite Consultation (International Labor Standards) Convention (1976)
- Human Resources Development Convention (1975)
- Minimum Age Convention (1973)
- Workers' Representatives Convention (1971)
- Equality of Treatment (Social Security) Convention (1962)
- Discrimination (Employment and Occupation) Convention (1958)
- Abolition of Forced Labor Convention (1957)
- Social Security (Minimum Standards) Convention (1952)
- Equal Remuneration Convention (1951)
- Right to Organize and Collective Bargaining Convention (1949)
- Labor Clauses (Public Contracts) Convention (1949)
- Protection of Wages Convention (1949)
- Minimum Age (Industry) Convention (Revised) (1937)
- Forced Labor Convention (1930)

These references will be used to guide the implementation, monitoring, and performance evaluation of labor practices across the construction phase of the Project, ensuring compliance with international labor rights, occupational standards, and ethical employment principles.

IV. LINKAGE WITH OTHER PROJECT PLANS AND PROCEDURES

This Plan is supported by other management plans and procedures developed under the Environmental and Social Management System (ESMS) of the Project. The following plans and procedures are particularly relevant and should be implemented in coordination with the Human Resources and Labor Management Plan:

- Occupational Health and Safety Management Plan
- Community Health and Safety Management Plan
- Subcontractor Management Plan
- Traffic Management Plan
- Construction Campsite Management Plan
- Environmental Accident and Spill Response Management Plan
- Security Management Plan
- Environmental and Social Management and Monitoring Plan (ESMMP)
- Stakeholder Engagement Plan (SEP)

The effective integration of these plans should be ensured to maintain compliance with national regulations and international standards and to minimize the cumulative environmental and social impacts of construction activities.

V. ROLES AND RESPONSIBILITIES

Antalya Alanya Otoyol İnşaat Yatırım ve İşletme A.Ş. (SPV) as the Project Sponsor and Limak (EPC) as the main contractor of the Project will be responsible for the following:

EPC Project Director :

The EPC Project Director has the overall responsibility and accountability for the Project including delivery of the construction activities in line with applicable national and international standards. He/She ensures relevant activities are carried out in accordance with this Plan.

The EPC Project Manager has the ultimate responsibility for ensuring the health, safety and wellbeing of all project personnel, sub-contractors, suppliers, visitors and members of the public that may be affected by the works that are being performed. He/She will also ensure the implementation of required corrective actions in response to identified nonconformities regarding to this Plan. He/she ensures periodical review of the HR-LMP effectiveness.

- Ensure that all project activities comply with local laws, human rights and labor regulations, corporate governance policies, and international best practices and lender requirements.
- Promote a culture of social responsibility across the EPC and its stakeholders.
- Define and implement the overall business strategy and direction of the EPC in alignment with SPV and stakeholder expectations.

- Ensure the provision of necessary resources and organizational support for the implementation of all plans.
- Supervise and coordinate subcontractors to ensure proper execution of construction and commissioning phase.
- Support the HR Chief and Line Managers in preparing, disseminating, and implementing this plan.In case of non-compliance, ensure correct and preventive actions are taken in collaboration with the SPV and other responsible parties.
- Make executive decisions on project budgeting, resource allocation including employee, and capital management to support project execution and H&S compliance.
- Ensure the monitoring social and financial performance, reporting, and risk exposure of the SPV, ensuring transparency and accountability to all stakeholders, including EPC, stakeholders and other related parties.
- Approval of project management plans (HSE,HR, E&S, QA/QC, etc.) in line with company policies, legal frameworks, international standards, SPV and lender requirements.
- Ensure that all employees comply with the obligations specified in the project's management plans during activities.
- Serve as the primary EPC representative to the SPV, client, and key stakeholders.
- Maintain communication channels with SPV, subcontractors, and vendors to ensure alignment and compliance.
- Coordinate with regulatory authorities, community representatives, and auditors as required.
- Address stakeholder concerns proactively and transparently, particularly those related to safety, environmental, and social matters.
- Oversee risk management and mitigation strategies related to technical, health, safety, community safety, environmental, and social aspects.
- Supervise the preparation and approval of documentation related to claims, variations, and commercial issues.

HR Chief:

- Ensure the preparation, revision, and implementation of this Plan and documents, policies in accordance with the Project ESIA and EIA, SPV's corporate policies, regulatory obligations, international standards and lender requirements and are implemented by EPC.
- Conduct periodic audits, inspections, and spot checks for subcontractor to ensure alignment with Project requirements.
- Ensure and monitor that all project activities comply with local laws, human rights and labor regulations, corporate governance policies, and international best practices and lender requirements.
- Support a culture of social responsibility across the EPC and its stakeholders.
- Coordinate E&S and H&S departments and all other department managers to prepare site and job-specific annual training plan according to the Project and regulation requirements and implement through activities.
- Support and implement the overall business strategy and direction of the EPC in alignment with SPV and stakeholder expectations.
- Monitor the provision of necessary resources and organizational support for the implementation of all plans.
- Supervise and coordinate subcontractors to ensure proper execution of construction and commissioning phase.

- Coordinate the Line Managers in implementing this plan.In case of non-compliance, ensure correct and preventive actions are taken in collaboration with the SPV and other responsible parties.
- Monitor resource allocation, including employee and financial, to support project execution and human resource and labour management compliance.
- Ensure that all employees comply with the obligations specified in the project's management plans during activities.
- Maintain communication channels with subcontractors to ensure alignment and compliance.
- Coordinate with regulatory authorities as required.
- Address stakeholder concerns proactively and transparently, particularly those related to safety and social matters.

VI. HUMAN RESOURCES AND LABOR MANAGEMENT APPROACH

The effective management of human resources during the construction phase of the Project is critical to ensuring fair labor practices, the protection of workers' rights, and the promotion of safe, equitable, and respectful working conditions in alignment with both national labor legislation and IFC Performance Standard 2 requirements. The construction workforce will include both directly employed personnel and subcontracted workers, who will be engaged in diverse activities such as earthworks, material handling, structural installation, and operations at supporting facilities including camps, administrative units, and batching plants.

Key labor-related risks anticipated during the construction phase include non-transparent or unfair recruitment practices, as through unauthorized agencies or lack of proper contracts, insufficient clarity regarding terms of employment, limited occupational health and safety protections, discriminatory practices, and the potential for forced or child labor, particularly in contexts where subcontractors are engaged. Additionally, restricted access to effective grievance mechanisms and the absence of collective bargaining provisions may further exacerbate vulnerabilities among the workforce particularly in subcontractor-led employment contexts

Additionally, since the construction activities will be completed in 3 years, retrenchment will be an issue at the end of the construction phase that needs proper management and will require compliance with Turkish Labor Law regarding notification, severance, and fair dismissal practices. To minimize the adverse socioeconomic impacts of workforce downsizing following the completion of the construction phase, a Retrenchment Plan will be prepared in line with IFC Performance Standard 2.

To address these risks, the human resources and labor management approach for the Project will be grounded in full compliance with applicable Turkish labor legislation and aligned with international standards, particularly the International Finance Corporation (IFC) Performance Standards—most notably, Performance Standard 2 on Labor and Working Conditions. This approach aims to ensure transparent hiring processes through job announcements, documented eligibility, and objective interviews, equal treatment and non-discrimination in recruitment, wages, and promotion decisions, the prohibition of forced and child labor including strict monitoring of subcontractor practices and zero tolerance for ID retention, the provision of fair wages, regulated working hours and leave entitlements with overtime hours and payment monitored to remain within national legal limits and reported monthly, and the maintenance of safe and healthy working conditions in line with OHS planning, PPE provision, and risk-based training. It also includes the protection of workers' rights to freedom of association and collective bargaining recognized for both directly hired and subcontracted personnel and access to functional and confidential grievance mechanisms supported by worker training and anonymous reporting channels.

All parties involved in construction activities—including the Project Sponsor (AAOİAŞ), the Main Contractor (Limak), and all subcontractors—are expected to incorporate these principles into their labor management systems and ensure their practical implementation in the field through site-specific procedures, performance monitoring, and regular internal audits. Labor-related risks and impacts will be prevented or minimized through proactive planning, regular monitoring, and timely corrective actions where necessary including contractor non-compliance escalation procedures.

It is important to note that this Plan has been specifically developed for the construction phase of the Project. Labor-related issues associated with the operational phase fall outside the scope of this Plan.

The AAOİAS has published its human resources policy on its website and will implement the Human Resources Policy as outlined below. Within the scope of the project, the EPC contractor Limak and its subcontractors will work in accordance with this policy ensuring full horizontal and vertical alignment across all entities responsible for labor and workforce management.

“The Human Resources Policy” of Antalya Alanya Otoyolu İnşaat Yatırım ve İşletme A.Ş adopts a participatory and value-creating Human Resources Management approach based on the principles of change and transformation within the scope of the vision, mission, competencies and ethical values of Limak Group of Companies.

In the light of the Corporate Equality Policy, it is aimed to raise awareness in every employee through providing a fair, transparent, efficient, healthy and development-oriented work environment supporting gender equality this includes gender-sensitive hiring, inclusive communication, and promotion of women into leadership roles. Within the framework of the principles of equality and inclusion, we are completely against to discriminatory factors based on all individual characteristics such as gender, age, marital status, religion, language, ethnicity, pregnancy status or pregnancy possibility and disciplinary practices which all attitudes and behaviors that may harm human dignity such as corporal punishment, physical/psychological pressure, insults and ill-treatment in our entire practices starting from the recruitment process to training, promotion, performance management, career management and remuneration all aligned with IFC PS2 expectations regarding fair treatment and non-discrimination. An egalitarian and inclusive communication language which the skills and competencies are supported is used for all written and verbal communication within and outside of the company.

Antalya Alanya Otoyolu İnşaat Yatırım ve İşletme A.Ş acts with the awareness of social responsibility in preventing the employment of persons under the age of 18 and/or child labor in accordance with laws, legislations and regulations this includes age verification practices, ID checks, and zero tolerance for informal recruitment pathways. Due to its working principles, it pays attention not to exceed the working hours stipulated in the legal legislation, excluding short term extraordinary business conditions with overtime monitoring integrated into monthly subcontractor reports. In recruitment processes, we prioritize female candidates among female and male candidates with equal qualifications. Positive approaches and practices such as providing positions to female employees with a decision-making authority in middle and senior management, encouraging female employees to return to work after childbirth and preventing potential losses in their career development, representation of women in jobs, professions and sectors traditionally dominated by men and involving more men in jobs, professions and sectors traditionally dominated by women, ensuring a balance between the professional and private life and encouraging the sharing of the unpaid workload in the house equally between women and men, including childcare and involved fatherhood (fathers as parents take an active role/responsibility in childcare and development) are fully supported in alignment with international gender equality standards

Based on the positions at the organizational level and the competencies of the employees, we pay regard to a fair remuneration system which is compatible with competition and market conditions, fair and sensitive to the principles of equality including the principle of equal pay for work of equal value

as defined under Turkish labor law and IFC PS2. The entire rights of the employees are protected in accordance with the principle of equal pay for the work of equal value. By applying a fair, transparent, inclusive and egalitarian performance evaluation system that measures the knowledge, experience, effort and behavior, system outputs are ensured to form the basis of development and promotion processes. The career paths of all employees are managed with the development-oriented principle and the employees are encouraged to participate in personal, technical and vocational training programs in accordance with their development requirements supported by structured and documented training programs outlined in this Plan. Internship programs are provided to students in order to motivate them to gain experience in their professional development processes.

"Zero Tolerance Policy" is adopted against violence, domestic violence and/or violation of sexual inviolability among employees, between employees and stakeholders and/or among stakeholders at the work environment and in possible cases, all the sanctions related to the Zero Tolerance Policy are put into practice this includes cases of sexual harassment, GBVH, and workplace retaliation and ensures clear disciplinary enforcement mechanisms. Incentives are provided to increase the motivation of the employees and to strengthen the organizational commitment in accordance with the findings obtained from the practices aimed at increasing employee satisfaction throughout the group companies. It is important to establish the balance between the private and professional lives of the employees through the effective implementation of policies and procedures within the scope of work life balance which includes psychosocial risk mitigation and staff retention."

VII. MITIGATION MEASURES FOR LABOR-RELATED RISKS AND IMPACTS

The following measures will be implemented across all Project sites to prevent or minimize labor-related risks and ensure fair, safe, and compliant workforce management throughout the construction phase:

Recruitment and Hiring Procedures

- Workforce requirements for unskilled, semi-skilled, and skilled positions will be forecasted systematically and in a timely manner during the planning stage of each project unit. Sufficient time and internal resources will be allocated to identify suitable local and regional candidates.
- A standardized recruitment process will be followed, including the identification of staffing needs, development and approval of job descriptions, and definition of qualifications and competencies required for each position. These steps will ensure consistency, transparency, and fairness across all hiring practices.
- Job descriptions will be developed based on a standard template and finalized by the relevant unit managers, reflecting competency-based criteria. This process will help define roles clearly and align them with project requirements.
- Recruitment advertisements will be posted after obtaining the necessary internal approvals from the Project Sponsor (AAOİAŞ) and will be announced by the Contractor (Limak) and all subcontractors. Advertisements will include application procedures and employment conditions.
- Job vacancies will be announced through accessible channels, including local newspapers, online job portals, municipal and community boards, and in coordination with local leaders (e.g., village heads or muhtars) to reach residents in nearby settlements. For specialized roles, professional recruitment firms will be engaged as needed.
- All applicants will be required to submit a completed application form and/or a résumé summarizing their relevant experience and qualifications. As a minimum eligibility requirement, all candidates must be at least 18 years old at the time of employment and pass a health examination in accordance with applicable occupational health standards.
- The recruitment process will be open, fair, and non-discriminatory, and will be free from bias based on ethnicity, gender, age, disability, sexual orientation, or religious and political beliefs.

All Project participants—including the Project Sponsor, the Contractor, and subcontractors—will be required to comply with these principles.

- If labor intermediaries or recruitment agencies are used, they will be required to ensure fair and transparent practices, including the prohibition of recruitment fees and adherence to this Plan's standards. Reasonable efforts will be made to verify their compliance with these requirements.
- Information about workers' rights will be provided to all new hires at the time of onboarding. All employment will be conducted in accordance with Turkish Labor Law and relevant international labor standards.
- Where accommodation or worker camps are provided, these facilities will be managed in line with national legislation and international standards for worker welfare and living conditions. The management of such facilities will be overseen by the Contractor in coordination with the Project Sponsor.
- The Project will ensure equal employment opportunities for women and men. If qualifications are met, female candidates will be given preference in hiring, and wage structures will be based on the principle of equal pay for work of equal value.
- Specific measures will be implemented by subcontractors to enhance employment access for vulnerable groups, including women and youth. These measures may include gender quotas in candidate pools, use of inclusive language in job postings, and collaboration with local employment agencies.
- Priority will be given to applicants residing in directly affected settlements or the nearby project area, in line with the local employment commitment of the Project. Employment opportunities will be accessible to all eligible persons regardless of their background.
- A phased recruitment approach will be adopted to prioritize candidates from directly affected settlements during the initial hiring process. If the required qualifications or experience cannot be met locally, the search will be extended to the regional and national labor markets.
- During the hiring process, the Project Sponsor (AAOİAŞ), the Contractor (Limak), and subcontractors will ensure that local communities are informed about job opportunities and application procedures in a timely and transparent manner. Public announcements will be made using accessible communication channels such as village heads (muhtars), bulletin boards in common gathering places, and other appropriate methods.
- A functioning grievance mechanism will be made available to all workers to raise concerns related to recruitment, employment conditions, or discrimination. The system will allow anonymous submissions and will be responsive, confidential, and free from retaliation.
- A Stakeholder Engagement Plan (SEP) will be implemented to ensure open and transparent communication with all project stakeholders, including local communities. Stakeholders will be encouraged to share their feedback, concerns, and expectations regarding employment through the Project's Grievance Mechanism.
- To maximize local capacity building, knowledge transfer, and workforce development, formal training programs will be designed. On-the-job training will be institutionalized wherever possible, with defined learning objectives and performance monitoring criteria.
- No child labor will be used in any phase or assignment of the project, and the minimum working age will be 18.
- Within the scope of the project, sectoral and regional labor force planning will be carried out according to labor demand.
- Labor recruitment from the region will be kept at the highest possible level.
- The demographic structure of the region for workers coming from outside Antalya to work within the scope of the project will not disrupt the socio-economic structure.

Employment Conditions

- All employees will be hired under written employment contracts, whether for a fixed or indefinite duration. These contracts will clearly state all terms of employment, including working hours, leave entitlements, and other relevant conditions, in accordance with national labor legislation and the Project's human resources policies.
- If the Project Sponsor, the Contractor, or any subcontractor becomes party to a collective bargaining agreement with a recognized labor organization, the provisions of that agreement will be honored. In the absence of such an agreement, or where working conditions are not specified, the Project will ensure reasonable and fair working conditions are established and maintained.
- All applicable leave entitlements—including annual leave, sick leave, and other statutory or contractual leave types—will be explicitly included in individual employment agreements. Leave policies will comply with the Turkish Labor Law and will be communicated to all personnel at the time of hiring.
- In cases where accommodation is provided for workers, the Project will implement specific worker camp management plans to ensure safe, adequate, and hygienic living conditions. These plans will be aligned with national requirements and international standards on worker welfare.
- Accommodation services will be managed in accordance with the principles of non-discrimination and equal opportunity. The provision of housing will not restrict the freedom of movement, privacy, or freedom of association of employees.
- Transportation between accommodation sites and work locations will be arranged and provided by the Project Sponsor to ensure safe and reliable commuting for all workers. These services will be provided at no cost to employees.
- Salaries and wages paid to direct employees and subcontractor personnel will be consistent with the Company's human resources policies and compliant with national labor laws. Wages will be aligned with prevailing market rates and designed to ensure a living wage that meets the cost of living in the region.
- All personnel will be covered under the national social security system, including health insurance, workers' compensation, disability, and unemployment insurance schemes. These entitlements will be reflected in the written employment contracts and administered in compliance with the requirements of the Turkish Social Security Institution.

In line with Turkish Labor Law and IFC Performance Standard 2, the Project will ensure that overtime is performed on a voluntary basis and compensated in accordance with legal provisions. A system will be implemented to monitor overtime hours and payment on a monthly and annual basis to ensure that national legal limits are not exceeded. Overtime will be carried out on a voluntary basis, and the annual legal limit of 270 hours will be strictly observed. All contractors and subcontractors will be required to submit disaggregated overtime records as part of monthly labor performance reports. Workers shall not be coerced into working overtime, and overtime arrangements will be reviewed regularly to assess potential risks to worker health, safety, and well-being.

Procedures for Termination and Workforce Reduction

- All dismissals and contract terminations will be carried out in full compliance with Turkish Labor Law and the internal human resources policies of the Project Sponsor (AAOİAŞ), the Main Contractor (Limak), and all subcontractors. The rights and entitlements of affected employees will be respected throughout the termination process.

- Employment terms, including duration of employment, dismissal procedures, and demobilization conditions, will be clearly communicated to all employees at the time of hiring. These conditions will be explicitly stated in individual employment contracts.
- In the event of demobilization at the completion of the construction phase or workforce downsizing due to unforeseen circumstances, termination procedures will be implemented with transparency and fairness. The Human Resources Unit will be responsible for overseeing and further developing these procedures where necessary.
- Project scheduling and potential demobilizations, especially for temporary construction roles, will be regularly discussed with worker representatives during meetings organized by the Human Resources Unit. This will ensure workers are adequately informed in advance and prepared for planned employment transitions.
- The Project will make all reasonable efforts to avoid mass dismissals. Where unavoidable, such as in cases of workforce demobilization or restructuring, a formal downsizing and dismissal plan will be prepared and implemented to mitigate negative social and economic impacts.
- Prior to any collective dismissal, the Project will explore alternative options to reduce the need for job losses. If no viable alternatives are identified, a termination plan will be developed in line with national legislation and international good practice.
- The collective dismissal plan will include provisions to ensure compliance with non-discrimination principles, reflect consultations held with labor unions or worker representatives, and adhere to any existing collective bargaining agreements.
- If collective dismissal becomes necessary, a 30-day prior notice will be submitted to İŞKUR. Consultations will be held with unions or, if absent, elected worker representatives to review dismissal reasons, scheduling, compensation, and mitigation of social impacts.
- Legal obligations regarding notifications to authorities, consultations with stakeholders, and provision of accurate information to workers will be fulfilled. This includes advance notice to unions or representatives and timely reporting to formal government institutions such as İŞKUR.
- Severance pay will be provided in accordance with the requirements of Turkish Labor Law or as agreed with labor unions or representatives. As a minimum, employees will receive severance equivalent to one month’s base wage per year of service.
- All unpaid dues, including delayed salary payments, social security contributions, and retirement entitlements, will be settled on or before the termination date. Payments will be made directly to the employees or to relevant institutions in line with legal requirements or collective agreements.
- Transparent and objective criteria will be used in determining employees subject to dismissal. These criteria will include length of service, technical skills, performance evaluations, disciplinary records, and attendance history.
- A formal dismissal plan will be prepared and communicated to affected employees, including key information such as reasons for dismissal, the timeline of implementation, selection criteria, severance calculation methods, and possible support for re-employment or retraining.
- The termination process will be designed to avoid gender bias and ensure equal treatment for all employees. Fair consultation and grievance mechanisms will be made available throughout the process to address worker concerns promptly and effectively.
- The implementation of all dismissal-related actions will be closely monitored to ensure compliance with legal requirements, Project standards, and resolution of any grievances submitted by affected employees.

Freedom of Association and Collective Bargaining Rights

- All workers will be treated fairly and respectfully, regardless of their union membership status. The Project Sponsor (AAOİAŞ), the Main Contractor (Limak), and all subcontractors will act in accordance with Turkish labor law and international standards to ensure non-discriminatory and equitable behavior toward all personnel.
- Workers will be granted the right to freely associate and to form or join labor unions of their choice without interference, intimidation, or retaliation. The freedom to organize will be protected, and no punitive actions will be taken against workers who exercise this right.
- Collective bargaining rights will be respected, whether exercised through registered unions or elected worker representatives where unions are not present. Representatives will be selected through transparent, democratic processes, and their roles will be formally acknowledged across project worksites.
- In cases where a collective bargaining agreement exists or is negotiated during the Project, its terms will be implemented without exception. Renegotiation processes will be conducted in accordance with the Turkish Labor Law, with sufficient notice provided to representatives before initiating formal discussions.
- The Project will establish cooperation with local municipalities, civil society organizations (CSOs), labor associations, and local employment offices to promote and support workers' rights, including the right to organize and bargain collectively.
- Under no circumstances will the Project obstruct, discourage, or restrict the rights to freedom of association or collective bargaining. A culture of open dialogue and constructive engagement between management and workers will be promoted across all Project sites.

Internal Worker Grievance and Suggestion System

- A dedicated Grievance and Suggestion Mechanism will be established and made available to all workers to express their concerns, requests, suggestions, or complaints related to workplace conditions. The system will be formally introduced to employees and its accessibility will be ensured throughout the construction phase.
- Contractors and subcontractors will also be required to implement similar internal communication mechanisms for their workforce. Alignment with the Project's overarching grievance procedures will be monitored to ensure consistency and fairness across all levels of the workforce.
- During onboarding, all employees will be informed about the Grievance and Suggestion Mechanism, including how to access it and submit feedback. Continuous awareness-raising will be conducted to ensure that all workers understand the purpose and functionality of the mechanism.
- The mechanism will follow a transparent, fair, and accessible process for all employees. Every submission will be reviewed in detail, and necessary actions will be taken to ensure that comprehensive investigations and appropriate resolutions are provided in a timely manner.
- Relevant departments and designated management representatives will be involved in the resolution process, depending on the nature and scope of the issue. All grievances will be addressed promptly, and feedback will be shared with the submitters without fear of retaliation.
- Confidentiality will be strictly maintained where required, especially in cases involving sensitive or personal issues. Anonymous submissions will also be accepted and treated with equal seriousness and commitment to resolution.
- The Grievance and Suggestion Mechanism will not replace or restrict access to legal remedies under applicable national legislation, nor will it override any provisions established under

collective bargaining agreements. Instead, it will function as a complementary internal tool to address workplace concerns effectively and proactively.

Safeguarding Labor Rights

- Forced Labor and Modern Slavery will not be tolerated in any form throughout the Project. All labor will be freely chosen, and workers will not be subject to coercion, bonded labor, trafficking, or the withholding of personal documents. Employment terms will be clearly communicated in writing, recruitment fees will not be charged to workers, and subcontractors will be monitored and contractually obligated to comply with national laws and international labor standards.
- The prohibition of forced labor, modern slavery, and coercive employment practices, the Project is developed a Code of Conduct (CoC) document applicable to all EPC and subcontractor personnel. This document will outline behavior expectations, reporting responsibilities, and a zero-tolerance stance on retaliation, harassment, and discrimination. A specific training module on the CoC will be incorporated into the onboarding process for all new hires and reinforced through annual refresher sessions. Signed acknowledgments from workers will be collected and retained on site to ensure traceability and compliance.

- Child Labor will be strictly prohibited across all Project activities, in full compliance with Turkish legislation and international standards. No individual under the age of 18 will be employed by the Project Sponsor (AAOİAŞ), the Main Contractor (Limak), or any subcontractor. Age verification through official documentation (e.g., national ID, passport, birth certificate) will be mandatory, and if underage employment is identified, immediate and responsible termination of the employment will be done in the best interest of the child.
- Occupational Health and Safety (OHS) measures will be implemented to ensure a safe and healthy working environment for all Project personnel, with specific attention to industry-specific and gender-related risks. All foreseeable hazards will be assessed and mitigated, and an Emergency Preparedness and Response Plan will be enforced in line with national regulations and international best practices. The Project will take all reasonable steps to prevent work-related accidents, injuries, and illnesses during construction activities.

Oversight of Subcontractor and Supplier Labor Practices

- All subcontractors working within Project sites will be required to comply with the labor, health, safety, environmental, and social standards defined in this Plan and relevant contractual documents. Where necessary, subcontractors will be required to develop their own labor management procedures or systems in line with the Project's standards.
- Subcontractors will prioritize the hiring of local labor wherever possible. In cases where external labor is used, accommodations will be provided near the Project area to help support the local economy. All working and living conditions will comply with applicable Turkish legislation and international standards adopted by the Project.
- The working conditions of subcontractors and their employees will be monitored monthly by Human Resources, Procurement–Technical Office, and Environmental and Social Units. Monitoring will focus on compliance with labor laws, occupational health and safety (OHS), and human rights standards.
- All subcontractor and supplier contracts will explicitly reference compliance with Turkish labor law, ILO conventions, and IFC Performance Standards, and this Plan R-LMP commitments are included also provisions on freedom of association, non-discrimination, and the prohibition of child labor and forced labor. Contracts will also state the consequences of non-compliance and the Project's right to audit and enforce corrective measures.

- The Project Sponsor (AAOİAŞ), Main Contractor (Limak), and subcontractors will be required to commit to responsible sourcing and anti-corruption principles. Subcontractors will be asked to sign declarations affirming adherence to these standards.
- Prior to onboarding any new subcontractor, the Human Resources Department will assess the subcontractor's past performance in labor and OHS management. The subcontractor will be required to provide labor policies, procedures, and evidence of internal systems that comply with this Labor Management Plan.
- A formalized screening procedure shall be implemented specifically for labor intermediary agencies (e.g., recruitment firms, manpower suppliers) engaged by EPC contractors or subcontractors.
- Pre-engagement verification of licenses, registrations, and certifications in accordance with Turkish labor legislation will be conducted.
- Public record and media screening to identify any past human rights violations or reputational risks will be performed.
- Mandatory commitment from intermediaries not to retain workers' identification documents, in alignment with the prohibition of forced labor will be obtained.
- Standardized compliance checklist covering requirements under Turkish Labor Law and IFC Performance Standard 2, prior to contract finalization will be completed.
- Subcontractors will be required to submit records, including employment contracts, grievance resolution logs, and OHS audit reports, records of training and certifications, and documentation of social security payments. These records will be reviewed by the Human Resources (HR) and OHS departments and will serve as the basis for compliance verification.
- Subcontractors will be subject to periodic audits, inspections, and spot checks by the Project's HR Chief to ensure alignment with Project requirements. Labor audits will also be conducted quarterly and documented for transparency and continuous improvement.
- The Procurement and Technical Office will verify subcontractors' previous contracts and licenses and ensure that IFC PS2-compliant clauses are included in agreements. Suppliers' qualifications, registrations, and relevant permits will also be reviewed prior to contract approval.
- If forced labor or child labor risks are identified in the primary supply chain or reported in lower-tier suppliers, appropriate corrective actions will be taken in line with IFC Performance Standard 2. Where resolution is not feasible, suppliers may be replaced to ensure compliance with international labor standards.
- Subcontractors will be expected to provide evidence that their workforce management systems include policies on non-discrimination, human rights, OHS, and freedom of association. They will also be responsible for ensuring their workers have valid certifications or permits for performing technical tasks.
- Subcontractors must ensure their workers have full access to grievance mechanisms, and all complaints—including those related to GBVH (gender-based violence and harassment)—must be recorded and addressed appropriately. Compliance with grievance protocols will be reviewed as part of the monthly labor performance evaluation.
- To ensure consistent ethical standards across the workforce, the CoC will be made binding for all EPC and subcontractor employees. Signed acknowledgments will be collected and stored at site level and included in subcontractor audit reviews.

Capacity Building and Employee Development

- The training needs of Project employees will be accurately assessed to support the development of both personal and technical competencies. Suitable training programs and qualified trainers will be identified, and the effectiveness of training will be objectively measured to support continuous performance improvement.

- Training plans will be developed by individual departments in accordance with the Project's Communication and Training Plan. These plans will be reviewed and implemented on an annual basis to ensure their alignment with the evolving needs of the construction phase.
- The Project will aim to ensure that employees are equipped to perform their tasks with maximum efficiency and satisfaction. Through structured training opportunities, workers will be supported in developing the skills and motivation necessary for high performance.
- All training records will be securely maintained by the Human Resources Department and/or the Environmental and Social Interaction Department. Proper documentation will support monitoring, internal tracking, and compliance with external reporting requirements.
- Training programs will be designed to enhance the personal and technical competencies of Project personnel, with a focus on continuous performance improvement. The accurate assessment of training needs, selection of appropriate trainers, and measurement of outcomes will be prioritized to ensure meaningful capacity development.
- Training planning will be developed by individual departments and implemented annually, in accordance with the Communication and Training Plan. This approach will ensure that training activities are tailored to evolving site-specific requirements and performance feedback.
- The Project aims to ensure that employees not only perform their duties effectively but also remain motivated and engaged through relevant and high-quality training. Training will contribute to a culture of professional growth and job satisfaction.
- All training records will be maintained by the Human Resources Department and/or the Environmental and Social Interaction Department. Proper documentation of training will support internal monitoring and external reporting obligations.
- In collaboration with local authorities and organizations, training opportunities targeting local communities and potential workers will be identified and promoted. These efforts will help improve local capacity and expand the pool of qualified candidates for Project-related employment.
- Prior to the commencement of construction, and following the selection of main contractors, targeted training sessions will be delivered to contractors and subcontractors. These trainings will cover the Project's environmental and social (E&S) requirements, including occupational health and safety (OHS), gender equality, GBVH (gender-based violence and harassment), socioeconomic policy awareness, and worker welfare standards.
- Recruitment and orientation programs will include essential information about the Project's health and safety systems, gender-specific occupational risks, and expected conduct on and off duty. This will support the internalization of E&S culture and ensure a consistent understanding of safety and behavior protocols.
- To promote the participation of women in the workforce, targeted training will be provided where necessary, along with measures such as flexible work arrangements or job-sharing options for women with childcare responsibilities. The Project Sponsor (AAOİAŞ) and the Main Contractor (Limak) will require subcontractors to adopt measures such as gender quotas, collaboration with local employment institutions, and the use of inclusive language in job advertisements to enhance access to employment for women and vulnerable groups.
- A dedicated gender training program will be implemented for team leaders and gender focal points to support the operationalization of the Gender Strategy. These sessions will ensure gender-sensitive leadership and inclusive team management across the Project.
- A GBVH policy will be enforced, and all Project workers will be informed of the expected standards of behavior, both during and outside working hours, through onboarding and awareness sessions. Disciplinary procedures, including termination in cases of unacceptable behavior, will also be clearly communicated.
- Occupational health and safety (OHS) training programs will include not only standard safety protocols but also behavior expectations and discipline procedures. The training content will

align with the requirements of the Project's OHS plans and procedures, covering all personnel involved in construction works.

- All personnel involved in grievance management will receive specialized training, which will include key concepts related to gender (such as gender sensitivity, GBVH, and inclusive terminology), procedures for managing worker complaints, referral pathways, defined roles and responsibilities, and monitoring and reporting obligations. This will ensure that grievance cases—especially those involving sensitive issues—are handled effectively and respectfully.

VIII. TRAINING

Upon hiring, all personnel will be provided with structured training to ensure they are fully informed about the Project's labor standards, expectations, and procedures. Trainings will include key topics such as labor rights, workplace responsibilities, grievance mechanisms, acceptable conduct, and occupational health and safety. These sessions will help ensure that all employees understand their rights and obligations under Turkish labor law and international labor standards.

In accordance with the Communication and Training Plan, training programs will be implemented to support the effective application of the Human Resources and Labor Management Plan. At a minimum, these will cover the purpose, scope, and content of the Plan, implementation procedures, responsible parties, worker rights, and fundamental human rights. Additional training will also address gender equality, non-discrimination, freedom of association, prevention of child and forced labor, and codes of conduct related to workplace behavior, including off-duty expectations.

Refresher trainings will be conducted periodically to reinforce key messages and address updates in legislation or internal procedures. All training activities will be designed to support continuous improvement, raise awareness, and strengthen the overall performance of workforce management systems. Training records will be maintained systematically by the Human Resources Department and/or the Environmental and Social Interaction Departments for verification, monitoring, and reporting purposes.

Level 1 Training

Level 1 Training, which will last at least 2 hours, is also called "OHS Initial Training" and is given by the EPC's H&S Manager/Chief/Expert to cover all Antalya-Alanya Motorway Project, subcontractor and supplier employees. Those who have not received this training are not allowed to enter the construction site or work in the field. The content of the training and revisions are subject to the approval of the H&S Manager/Chief.

The topics covered in this training are as follows:

- Integrated Management System Policy
- OHS and Environmental Principles
- OHS and Environmental standards, rules and practices
- Risk assessment
- Emergency preparedness and response
- Any special hazards associated with activities
- Incident/accident management, near-misses
- Traffic safety
- Environmental awareness
- Pollution prevention
- Waste management

- Proper use and maintenance of personal protective equipment (PPE)
- Proper use of machinery and electrical equipment
- Brief description of the project and Project subject works
- Basic legal requirements related to OHS
- Legal rights and responsibilities of employees
- OHS rules of the Antalya-Alanya Motorway Project
- Project OHS Plan
- Project OHS rules and responsibilities of employees
- Project emergency management practices

For short-term visitors who will not be working on the construction site, OHS This training program is subject to the short version (initial briefing) given by the Manager/Chief/Expert. Visitors who do not attend this briefing session cannot enter the construction site.

Level 2 Training

Level 2 Training programs are also called “job specific OSH training” and are provided due to the risks associated with the work to be performed. Subcontractors and suppliers are responsible for providing these training programs for their own employees and training records will be submitted to the H&S Manager of EPC.

Level 3 Training

Level 3 Training includes “advanced OSH training programmes” that are required for advanced qualifications or are specific to the task to be performed (first aid personnel or emergency management team member training, and similar training).

Annual Training Program covers all the above mentioned trainings under the Annual OHS Training Plan. . Similarly, the same Annual OHS Training and Annual TrainingProgram will be requested from all subcontractors. The OHS Annual Training Program is identified under the Occupational Health and Safety Management Plan.

In order to receive feedback from the participants, a training evaluation form will be used for half-day or longer programs. Subsequent activities will be followed up by the OHS Manager/Chief after analyzing this feedback. Following the training programs, relevant tests will be applied to measure the understanding level of the participants.

Competency Assessment

To ensure that relevant training programs are effective and that workers have the skills, experience, abilities and knowledge required to perform their jobs safely, their competence should be assessed. Methods for this assessment include:

- Training Tests: Following all training, tests will be distributed to assess participants’ understanding and knowledge. The main topics of the tests will be:
  - What the hazards are
  - The range of hazards and how they can affect people
  - How to assess risks and decide on appropriate controls
  - Key elements of this plan
  - How occupational health and safety legislation applies to the workplace

● Daily Field Observations: The H&S Manager and representatives will conduct daily field observations. While conducting these observations, they will check whether the employees are performing their duties in accordance with the occupational health and safety rules and measures. If a non-conformity is detected, they will warn the employee and may also instruct the relevant training to be given again. In addition, they will randomly ask questions to the employees about the occupational health and safety rules and measures and conduct interviews with them.

● Identified Hazards: Employees will be encouraged to report the hazards they detect during work. These hazards will be evaluated by the H&S Manager/ E&S Manager and representatives, and the quantitative and qualitative identification of the hazards will be an indicator of competence.

Toolbox Trainings

When a new job starts on site or when site conditions or hazards/risks change significantly; Site managers and supervisors or OHS and Environmental Manager/Engineer will conduct toolbox training to announce job-related information and instructions, job-specific hazards/risks and necessary control measures to eliminate/reduce these risks. Training is conducted among small groups of employees assigned to perform specific jobs and the content of the training covers the following:

● Hazards/risks associated with the jobs in question and necessary control measures to eliminate/reduce these risks
● Deficiencies or negligence detected in site OHS and environmental inspections
● Use of PPE
● Any past accidents/incidents and lessons learned
● General order and organization
● Acting in accordance with warning signs and cautionary signs/labels.

It is always preferred and encouraged for employees to share their past experiences related to the job.

Basic OHS and Environmental Training

It is mandatory to receive Basic OHS and Environmental Training before being assigned to any work site. Employees who do not attend these trainings, including subcontractor employees, will not be allowed to work on site. Basic OHS and Environmental Trainings will be renewed periodically in order to refresh the information.

Visitor Training will also be provided to visitors before they enter the site, which includes basic topics such as general field OHS and Environmental rules, emergency preparation, use of PPE on site, etc.

All OHS and Environmental trainings to be given to employees are planned and recorded in the Annual Training Plan. Each training conducted will be recorded and evaluated. All records will be kept by the OHS and Environment unit.

IX. MONITORING

A structured internal monitoring program will be implemented to assess the effectiveness of labor management and workforce-related mitigation measures outlined in this Plan during the

construction phase of the Project. The scope and frequency of monitoring activities will be periodically reviewed and revised where necessary, based on site-specific conditions, labor performance trends, stakeholder concerns, or changes in applicable labor legislation.

Monitoring activities will be coordinated by the Human Resources Department, in close collaboration with the Occupational Health and Safety (OHS), Environmental, and Construction Management teams. Key responsibilities will include verifying the implementation of recruitment procedures, monitoring working conditions and accommodations, evaluating compliance with labor rights and protections, and ensuring the consistent application of measures aimed at promoting fair employment practices and protecting vulnerable workers.

Regular labor monitoring will be conducted across all Project sites to evaluate compliance with national labor laws, IFC Performance Standards, and Project-specific employment requirements. This will include the review of key records such as employment contracts, social security registrations, wage and working hour records, training documentation, and grievance resolution logs.

The performance of contractors and subcontractors in implementing labor management requirements will be reviewed through human resources audits, site supervision reports, and field inspections. Any identified non-conformities will trigger timely corrective and preventive action plans. Monitoring will also include follow-up assessments to confirm the effectiveness of implemented measures and to ensure recurrence is prevented.

In addition to internal monitoring, inspections may be carried out by relevant public institutions, including the Ministry of Labor and Social Security, in accordance with Turkish legislation. The frequency and scope of these inspections will be determined by the authorities and may include review of employment records, on-site labor practices, and documentation of compliance with labor and social protection regulations.

Monitoring efforts will be guided by the framework provided in Table IX-1, which outlines the parameters to be monitored, the corresponding monitoring locations, frequency of monitoring, and responsible parties. These monitoring activities will be essential for evaluating the effectiveness of human resources and labor mitigation measures and ensuring full compliance with national regulations and Project standards.

Table IX-1 Key Monitoring Activities

Monitoring Parameter	Method	Frequency / Timing	Responsible Parties
Gender-disaggregated workforce records (female/male employment ratio)	Record review	Monthly Quarterly	EPC AAOİAŞ,
Local/regional workforce participation tracking	Record review	Quarterly	AAOİAŞ,
Employment Agreements	Record review	During the recruitment process	EPC AAOİAŞ,
Number and scope of trainings, number of participants, training hours per employee, training materials, and trainings provided to subcontractors	Project office	Monthly Quarterly	EPC AAOİAŞ,
Review of non-conformity records	Document review	Quarterly	AAOİAŞ,
Documentation of grievances under the Grievance Mechanism	Grievance log	EPC Quarterly	Weekly AAOİAŞ,

Number of work-related incidents, accidents, and near misses	Incident reporting	Weekly Monthly	EPC AAOİAŞ,
Number of personnel affected by infectious diseases	Health records	Weekly Monthly	EPC AAOİAŞ,
Source and quality of tap water in worker camps and offices	Lab Analysis Site inspections	Quarterly Quarterly	EPC AAOİAŞ,
All relevant licences and registrations required by national labour law are in place	Document review	Monthly	AAOİAŞ
Use of PPE	Site inspections	Daily Quarterly	EPC AAOİAŞ,
Health and Safety Signs	Site inspections	Daily Quarterly	EPC AAOİAŞ,

In cases of non-compliance identified through internal oversight or external audits, Antalya-Alanya Otoyolu İnşaat Yatırım ve İşletme A.Ş. (AAOİAŞ) will ensure that corrective and preventive measures are promptly implemented in coordination with the Contractor (Limak) and relevant subcontractors.

All labor-related findings, including non-compliance incidents, grievances, or issues related to employment terms and working conditions, will be documented in accordance with national labor legislation and Project procedures. In the event of serious violations—such as confirmed cases of child labor, forced labor, or discrimination—AAOİAŞ will ensure that the issue is reported to the competent authorities and that appropriate legal, contractual, and procedural actions are taken.

X. KEY PERFORMANCE INDICATORS

The following Key Performance Indicators (KPIs) will be monitored, verified, and evaluated.

Table X-1 Key Performance Indicators – Construction Phase KPIs

Monitoring Parameter / Performance Indicator	Target	Frequency	Responsible Party
Number of Trainings Conducted	All personnel to receive training	Quarterly	AAOİAŞ
Non-Conformities with Standards	Less than five	Monthly	AAOİAŞ,
Number of complaints received	Less than five	Monthly	AAOİAŞ

XI. AUDIT AND REVIEW

The implementation of this Plan should be regularly monitored and reviewed in accordance with the ESMMP. All labor-related incidents and non-conformities should be documented and reported as outlined in the Plan. Contractors and subcontractors should be subject to audits conducted by the Project Sponsor within the scope and schedule defined in the Contractor and Subcontractor Management Plan. These audits and the associated records should be managed in compliance with the Project's established human resources and labor-related procedures. Records to be reviewed during labor and workforce audits will include, but are not limited to, the external and internal grievance and suggestion tracking databases, records of labor-related training sessions, non-conformity and incident records, employment contracts, payroll and attendance records, and social security registration documents. Observations and deficiencies identified during audits should be recorded in formal audit

reports, and all findings requiring improvement should be registered under Corrective Actions. Project management should review audit outcomes and corrective action records, follow up on progress, and ensure that additional measures are implemented where necessary to ensure full compliance with labor legislation and international standards.

XII. REPORTING

Regular reporting should be conducted to ensure the effective implementation and continuous improvement of human resources and labor management activities throughout the construction phase of the Project. Reporting should be structured to address both internal monitoring and auditing outcomes, as well as external compliance obligations and stakeholder engagement requirements.

Based on monitoring results, necessary corrective and preventive actions should be identified and the required updates should be incorporated into this Plan. The training program will also be revised accordingly to address any observed gaps. Regular audits and inspections should be conducted to verify that all labor management practices are being implemented in accordance with the provisions of this Plan.

Reports should be prepared using data gathered through labor-related monitoring activities defined under this Plan. The results and supporting evidence of these monitoring activities (e.g., documentation, logs, training records, and photos) should be documented in detail within appropriate reporting formats. This section of the Plan outlines the instructions and requirements for implementing these reporting activities.

Reporting activities under this Plan mainly relate to labor data such as employment ratios (e.g., female and local employment), training participation records, grievance submissions and resolution rates, working hours, contract compliance, and occupational health and safety performance. In the event of serious labor-related incidents (e.g., child labor, forced labor, discrimination, major grievances), an incident report including root cause analysis (RCA), mitigation and compensation measures should be submitted to the relevant authorities in accordance with Turkish labor legislation.

All data, together with the results of inspections and audits, should be summarized in the dedicated human resources and labor management chapter of the Environmental and Social Monitoring Report prepared on a quarterly basis. This report will include any non-compliances identified, corrective actions taken, and any recommended time-bound corrective measures. These should be supported with documentary evidence such as photographs and official records.

All personnel are encouraged to raise concerns, suggestions, or complaints related to labor and employment practices through the established grievance mechanism by completing the grievance form. Grievances received from workers, subcontractor employees, or community members regarding labor issues should be addressed and followed up in a timely and transparent manner. The communication channels available for submitting grievances are outlined in the Stakeholder Engagement Plan.

ANTALYA-ALANYA MOTORWAY PROJECT

Revision No: 3 **Date:** 08.09.2025

SECURITY MANAGEMENT PLAN

REVISION STATUS		
Revision Date	**Rev. No**	**Explanation**
01.04.2025	00	This plan is prepared according to TS EN ISO/IEC 9001:2015, TS EN ISO/IEC ISO 14001:2015, TS EN ISO/IEC 45001:2018 and IFC Performance Standards
23.05.2025	01	Revision
16.06.2025	02	Revision as per revision made under ESDD submitted by the Lender consultant
08.09.2025	03	Revision as per revision made under ESDD submitted by the Lender consultant

SECURITY MANAGEMENT PLAN

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LIST OF ABBREVIATIONS

AAOİAŞ	Antalya-Alanya Otoyolu İnşaat Yatırım ve İşletme A.Ş.
CCTV	Closed-Circuit Television
CLO	Community Liaison Officer
E&S	Environmental and Social
EBRD	European Bank for Reconstruction and Development
EHS	Environmental, Health, and Safety
ESIA	Environmental and Social Impact Assessment
ESMMP	Environmental and Social Management and Monitoring Plan
ESMS	Environmental and Social Management System
IFC	International Finance Corporation
KGM	General Directorate of Highways
KPIs	Key Performance Indicators
OHS	Occupational Health and Safety
PPE	Personal Protective Equipment
SEP	Stakeholder Engagement Plan
UNGA	United Nations General Assembly
WHO	World Health Organization

I. INTRODUCTION

Ministry of Transport, and Infrastructure (former Ministry of Transport, Maritime Affairs and Communications), General Directorate of Highways ("KGM" or "the Administration"), as the owner of the Antalya-Alanya Motorway Project, has tendered for a contract in accordance with the Law on Implementation of Some of the Investments and Services in the Framework of Build, Operate and Transfer Model (Law No: 3996). Following the tendering process, KGM has awarded Antalya-Alanya Otoyolu İnşaat Yatırım ve İşletme A.Ş. (AAOİAŞ or the Project Sponsor) with a Build, Operate and Transfer (BOT) contract for the implementation of the Project. Accordingly, AAOİAŞ will be referred as Project Sponsor in the scope of this report. The main contractor for the Project has been designated as Limak and will henceforth be referred to as the Contractor (or EPC).

The project is designed to connect the districts of Serik and Alanya via the Manavgat district of Antalya province. The Project will enhance the existing transportation network services with its surrounding provinces: Burdur, Muğla, Konya, Isparta, Karaman and Mersin. Various environmental, social, and technical studies have been conducted along the initial route of the Project tendered by the KGM. Based on these studies, the route was optimized, incorporating engineering practices and addressing environmental and social considerations, particularly issues of involuntary and economic resettlement, before being finalized. According to the most current design, the total length of the Motorway, which will be a dual carriageway of mostly 3 and partially 2 lanes (3x2 and 2x2) in each direction, is 117.8 kilometers including the main carriageway and the access roads.

This Management Plan ("Plan") has been prepared by Antalya-Alanya Highway Construction Investment and Operation Inc. ("AAOİAŞ" or "SPV") for the Antalya-Alanya Highway Project ("Project") in accordance with national legislation, the Equator Principles ("EP"), the International Finance Corporation ("IFC") Performance Standards ("PSs"), and the international standards that reference the relevant legislative sections. The Plan covers the construction phase of the Project.

I.1 Project Description

The Project starts at Serik Interchange (Km: 52+000) and then proceeds eastward, following the corridor at the foothills of the Taurus Mountains within the boundaries of Serik and Manavgat districts, ending at north of Konaklı neighborhood of Alanya District (Km: 136+000). From this point onwards, the route turns southward with a 2x2 lane connection road and connects to the D400 state road at the Alanya West Interchange.

As of April 2025, the current Project design includes a total of 117.8 kilometers of road, comprising 84 kilometers of main road (motorway) and 33.8 kilometers of access roads. Other structures to be built as part of the project are as follows:

- 16 viaducts,
- 22 bridges,
- 305 culverts,
- 25 interchanges,
- 56 overpasses,
- 43 underpasses, and
- 5 tunnels

The map showing the construction components and road route within the scope of the Project's construction activities is provided in Figure I.1.

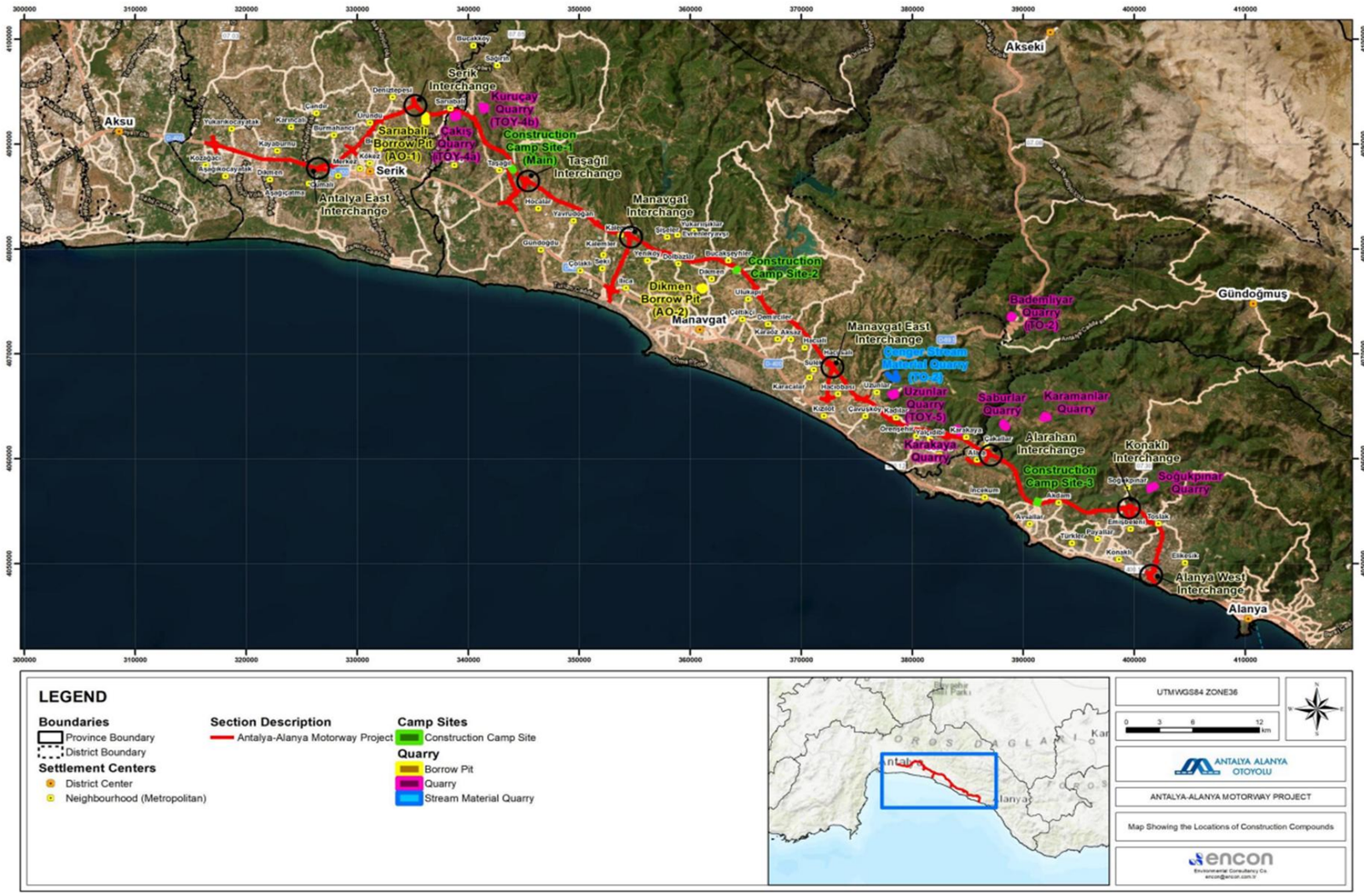

Figure I-1: Map Showing the Locations of Construction Compounds

II. PURPOSE AND SCOPE

This Security Management Plan ("the Plan") has been prepared for the Antalya–Alanya Motorway Project ("the Project").

The purpose of this Plan is to define the necessary measures, roles, and responsibilities for managing security risks and incidents during the construction phase of the Project. The Plan has been developed in accordance with applicable national legislation and the requirements of international financial institutions, including the Equator Principles, IFC Performance Standards and the Voluntary Principles on Security and Human Rights.

This management plan is a living document developed with the best available information and will be reviewed and revised as necessary due to the nature of the construction and progress.

The Plan outlines procedures that should be done to prevent, monitor, and respond to potential security risks associated with construction activities and facilities. It provides a framework for identifying and mitigating security-related threats that may impact project workers, subcontractors, local communities, and assets.

This Plan should be applied by all parties involved in the Project, including the Project Sponsor (Antalya-Alanya Otoyolu İnşaat Yatırım ve İşletme A.Ş. – AAOİAŞ), the Main Contractor (Limak), and all subcontractors. Responsibilities related to implementation, monitoring, incident reporting, and staff training should be clearly defined. Updates to this Plan should be undertaken in response to changes in site conditions, project design, regulatory requirements, or evolving security risks.

III. LEGISLATIVE FRAMEWORK AND REFERENCE STANDARDS

This Plan has been developed in line with national legislative requirements and international standards that establish protocols for managing security risks and ensuring the safety of workers, communities, and assets during the construction phase. The following regulations and frameworks should be used to guide implementation, monitoring, and compliance.

III.1 National Requirements

The national legislative framework for security management applicable to the Project includes the following laws and regulations:

- Law on Private Security Services (Law No. 5188; Official Gazette No. 25504, 26.06.2004)
- Labor Law (Law No. 4857; Official Gazette No. 25134, 10.06.2003)
- Regulation on the Implementation of the Law on Private Security Services (Official Gazette No. 25606, 07.10.2004)
- Tariff and Instruction on Private Security Liability Insurance (Official Gazette No. 26123, 29.03.2006)

These legal documents should be considered in the selection, employment, and oversight of security personnel during the construction phase.

III.2 International Standards and Conventions

In addition to national legislation, the following international frameworks and guidance documents should be considered to ensure consistency with best practices and compliance with international financing institutions:

- IFC Performance Standards (2012), specifically:
  - Performance Standard 1: Assessment and Management of Environmental and Social Risks and Impacts
  - Performance Standard 4: Community Health, Safety, and Security
- IFC Environmental, Health and Safety (EHS) General Guidelines (2007)
- IFC EHS Guidelines for Toll Roads (2007)
- IFC Guidance Notes (2012)
- IFC Good Practice Handbook on the Use of Security Forces
- Equator Principles IV (2020)
- UN Basic Principles on the Use of Force and Firearms by Law Enforcement Officials (1990)
- UN Code of Conduct for Law Enforcement Officials (UNGA Resolution 34/169, 17 December 1979)
- IFC and EBRD Guidance on Worker Accommodation (August 2009)

These references should be used to ensure that security risks are identified, assessed, and managed in a manner that protects the workforce and local communities, particularly vulnerable groups.

IV. LINKAGE WITH OTHER PROJECT PLANS AND PROCEDURES

This Plan is supported by other management plans and procedures developed under the Environmental and Social Management System (ESMS) of the Project. The following plans and procedures are particularly relevant and should be implemented in coordination with the Security Management Plan:

- Supply Chain Subcontractor Management Plan
- Environmental Accident and Spill Response Management Plan
- Community Health and Safety Management Plan
- Occupational Health and Safety Management Plan
- Traffic Management Plan
- Hazardous Material Management Plan
- Construction Camp Site Management Plan
- Environmental and Social Management and Monitoring Plan (ESMMP)
- Human Resources and Labor Management Plan

The effective integration of these plans should be ensured to maintain compliance with national regulations and international standards and to minimize the cumulative environmental and social impacts of construction activities.

V. ROLES AND RESPONSIBILITIES

Antalya Alanya Otoyol İnşaat Yatırım ve İşletme A.Ş. (SPV) as the Project Sponsor and Limak (EPC) as the main contractor of the Project will be responsible for the following:

Security Chief

EPC Contractor to appoint Security Chief and security personnel (per each work areas) to the intensity of the construction activities.

Security Chief will be responsible to control all site installation areas with regard to security issues and ensure that entry to site is under control. He/She will ensure that adequate security guards are provided to effectively manage security system. Security Manager will be in coordination with local

police and will ensure the Employer's requirements on all matters relating to security of the works are complied with.

Security Manager will be responsible for:

- Preparation and implementation of site-specific security management plan
- Carrying out to conduct spontaneous checks of security patrols, surveillance and reports on site,
- Deploying the guards effectively to maintain and evaluate the effectiveness of the security operations and the performance of security guards,
- Submission of the monthly Security Report, weekly meeting minutes and training records to the EPC Project Director,
- Being responsible for the day-to-day supervision of all security personnel, to ensure that plans, procedures, work practices, etc. are implemented effectively and satisfactorily at all levels with respect to the entire project site and the workers accommodation camps,
- Conducts spontaneous checks of security patrols, surveillance and reports on site,
- Investigating any security irregularities, or breaches, or incident and provide a written report without delay to the EPC Project Director within 24 hours and advise any necessary measures to be taken to prevent the recurrence of such events,
- Ensuring that all security personnel are competent, and provide additional training as necessary,
- Being first point of contact in the event of a security emergency situation, and
- Liaises with local Police Department when required.
- Obey the code of conduct outlined in this Plan

Security Supervisors

Responsibilities of Security Supervisors are:

- Reporting directly to the Security Chief,
- Being responsible for maintaining keys and locks to all buildings, ingress and egresses,
- Review daily logs submitted by Security Chief,
- Maintaining a calm and courteous manner in enforcing the security rules,
- Obey the code of conduct outlined in this Plan,
- Commanding with respect, thereby contributing to the public image of both the guards and also the organization, and
- Presenting themselves in clean and neat appearance and being competent to perform the duties described in this Plan.

VI. SECURITY MANAGEMENT APPROACH

Security risks associated with motorway construction projects primarily stem from the presence of large workforces, valuable equipment, materials, and machinery, as well as the geographical dispersion of construction sites. During the construction phase of the Project, potential security threats may include unauthorized site access, theft of assets or equipment, vandalism, conflict among workers or with local communities, and risks arising from interactions between private security personnel and the public. In high-risk areas or periods of heightened local tensions, there may also be elevated risks of civil unrest or deliberate sabotage.

A comprehensive security risk assessment will be conducted prior to mobilization, considering site-specific threats, socio-political dynamics, and risks to workers, communities, and assets.

Security-related incidents can have significant implications on worker safety, construction progress, community relations, and the Project's social license to operate. Therefore, a proactive and structured approach to security management should be adopted across all construction sites and associated facilities. Security measures should be preventive in nature, with an emphasis on de-escalation, respect for human rights, and the use of force only as a last resort and in accordance with national laws and international best practices.

The Project's security management approach should include clearly defined roles and responsibilities for security service providers, contractors, subcontractors, and Project personnel. Security staff should be appropriately vetted, licensed, and trained in line with national regulations and international frameworks such as the Voluntary Principles on Security and Human Rights, and the IFC Good Practice Handbook on the Use of Security Forces. If public security forces are engaged, roles and interaction protocols will be documented to ensure accountability and compliance with the Voluntary Principles on Security and Human Rights. All security arrangements should ensure that the dignity, safety, and rights of all individuals—particularly vulnerable groups—are respected. Security risks to vulnerable groups (e.g. women, children, elderly, minorities) shall be identified through targeted assessments and community consultations. These groups will be protected through the implementation of mitigation actions, including but not limited to the following measures:

- Gender-sensitive conflict de-escalation and response training will be mandatory for all security personnel.
- Confidential reporting mechanisms tailored to women and minors will be established with female grievance officers where feasible.
- Security patrols will be planned to avoid sensitive areas occupied by vulnerable populations, particularly during evening hours.
- Any incident involving vulnerable individuals will trigger an immediate independent review and corrective actions.

Key components of the security management approach should include access control systems, perimeter fencing and lighting, incident reporting mechanisms, and procedures for managing public protests, threats, or escalations. Coordination between private security personnel and local law enforcement should also be established, with clear protocols to guide engagement and response. In addition, grievance mechanisms should be made available to affected communities and workers to report security-related concerns.

Security risks will be continuously assessed and monitored throughout the construction phase to ensure the adequacy and effectiveness of measures. Site-specific security plans should be prepared where needed, based on evolving risk contexts and stakeholder dynamics.

While certain security risks may also arise during the operation phase, the scope of this Plan covers only the construction phase of the Project. Accordingly, all recommendations and mitigation measures presented herein are tailored exclusively to construction-phase activities and facilities.

Security for the project will be provided by EPC (Limak) using its own personnel. Certified personnel who have received special security training will be employed for this security, and the necessary permits will be obtained from the Antalya Governor's Office. Security personnel will be unarmed and will receive training in public relations, communication methods, emergency procedures, and communication effectiveness in addition to special security training.

All permits required under the Law on Private Security Services will be obtained by EPC, and a detailed security plan will be prepared and submitted to the Antalya Governor's Office.

However there will be three construction camp sites (Main Camp Site (Manavgat), Camp Site-2 (Manavgat) and Camp Site-3 (Alanya), temporary construction camp site in Taşağıl is in use. In addition to these areas, there will be usage land for mechanic and asphalt plant and concrete plant areas and quarries which are listed below (see Table VI.1). At least two security personnel will be present 24 hours a day in all of these areas.

Table VI.1 Locations of Borrow Pits / Quarries and Plants

Location	Province	District	Nearest Neighborhood	Description of the Site / Plant
Km 53+800	Antalya	Serik	Sarıabalı	Sarıabalı (AO-1) Borrow Pit
Km 55+450	Antalya	Serik	Sarıabalı	Concrete Plant-1
Km 56+500	Antalya	Manavgat	Çakış	Çakış (TOY4a) Quarry
Km 58+500	Antalya	Manavgat	Taşağıl	Kuruçay (TOY4b) Quarry
Km 59+400	Antalya	Manavgat	Taşağıl	Concrete Plant-2
				Mechanical Plant-1
				Asphalt Plant-1
Km 64+400	Antalya	Manavgat	Taşağıl	Construction Camp Site-1 (Main)
Km 80+400	Antalya	Manavgat	Yeniköy	Concrete Plant-3
Km 83+000	Antalya	Manavgat	Sarılar	Dikmen Borrow Pit
Km 87+500	Antalya	Manavgat	Bucakşeyhler	Construction Camp Site-2
Km 87+700	Antalya	Manavgat	Bucakşeyhler	Concrete Plant-4
				Mechanical Plant-2
				Asphalt Plant-2
Km 89+700	Antalya	Manavgat	Ulukapı	Concrete Plant-4a
Km 99+200	Antalya	Manavgat	Sülek	Concrete Plant-5
Km 104+750	Antalya	Manavgat	Gençler	Bademliyar (TO2) Quarry
Km 105+000	Antalya	Manavgat	Uzunlar	Çenger Stream Material Quarry
Km 106+000	Antalya	Manavgat	Uzunlar	Uzunlar (TOY5) Quarry
Km 114+200	Antalya	Manavgat	Karakaya	Karakaya Quarry
Km 117+000	Antalya	Alanya	Saburlar	Saburlar Quarry
Km 119+500	Antalya	Alanya	Karamanlar	Karamanlar Quarry

Location	Province	District	Nearest Neighborhood	Description of the Site / Plant
Km 124+300	Antalya	Alanya	İncekum	Construction Camp Site-3
				Concrete Plant-6
				Mechanical Plant-3
				Asphalt Plant-3
Km 134+000	Antalya	Alanya	Soğukpınar	Soğukpınar Quarry

VII. MITIGATION MEASURES FOR SECURITY-RELATED RISKS AND IMPACTS

The following mitigation measures will be implemented across all construction-phase work sites and associated facilities of the Project to prevent or reduce security-related risks and adverse impacts on workers, communities, assets, and operations.

Project Specific Security Management Plan

Project Specific Security Management Plan will be prepared after the assignment of the Security Chief. During the preparation of Project Specific Security Management Plan, EPC Contractor will follow the requirements of Voluntary Principles on Security and Human Rights.

The Project Specific Security Plan will be structured by considering the following content:

- Project organization
- Project description
- Roles and responsibilities for security management
- Voluntary principles on Human Rights
- Gender-Based Violence and Harassment
- Security Screening and Assessment
  - The following items shall be, but not limited to, considered during Security Assessment:
    - Violation of Human Rights
    - Gender-Based Violence and Harassment
    - Asset theft from construction sites and accommodations
    - Damage to Project assets
    - Vehicle/traffic security
    - Social unrest (local community)
    - Civil unrest (external activists/militants)
    - Unauthorized access to Site
    - Criminal conspiracy
    - Terrorism
    - Cyber-attack
    - Political unrest
    - Illegal gathering of fauna and flora
    - Kidnapping
    - Natural Hazards
    - Structures failures

- Security Management
  - Stakeholders' minimum responsibilities
  - Security Register and Response/Action Plans
  - Security Notification Levels (Alert States) and action triggers
  - Security Action Plans
  - Security Operative Centre (SOC)
  - Monitoring and reporting
  - Public relations (PR) and external communications
  - Training and awareness
  - Social unrest
- Standard Operation Procedures
  - Safe Driving Policy
  - Security Notification Levels
  - Security Operative Centre
  - Responsibilities of the Head of Project Security (HPS)
  - Security Emergency Equipment
- Emergency Response Plans
  - Road Traffic Accident
  - Response to injuries and/or casualties resulting from any working incident/accident on Site
  - Management of Illegal Actions
  - Direct response of employee(s) witness of social unrest Event
  - Response to injuries and/or casualties resulting from any security emergency Event
  - Partial or full Site evacuation
- Illegal Actions Management Plan
  - Purpose
  - Legal framework
  - Illegal Actions Management Plan framework
  - Cases for illegal actions on site
  - Illegal Action Management Plan Procedures
  - Roles and responsibilities of the Site Management Team
  - Flowchart for Illegal Actions Management Plan
- Geopolitical status in the region
  - Introduction
  - Intelligence and information
  - Travel Security arrangement
  - Evacuation Procedure
  - Security at Site
  - Community Relations
  - Training and Awareness
- General requirements for public and private security forces
- Security of Site and installations areas
-

Security Guard Operations and Duties

The security guard operations will consist of the following:

- Preventing unauthorized access / trespassing to project site by persons or vehicles,
- Preventing unauthorized removal of material(s) and/or equipment,
- Preventing entry of any contraband or prohibited items,
- Inspect vehicles entering and leaving the site for attached soil/mud/ weed propagules,
- Checking validity of project entry/exit passes,
- Preventing harassment or extortion on co-workers,
- Undertaking mobile patrols,
- Providing security monitoring, inspections and drills,
- Preventing any illegal activity on the Project site,
- Responding to emergency incidents,
- Reporting security incidents and infringements to the Security Chief,
- Receive training and be well versed in fire safety and fire extinguisher recognition,
- Being alert to fire risks and initiating actions, and being able to monitor and report during patrols, and
- Maintaining security log books.

The security guards will provide protection through patrols within the project area and along the project perimeter. Similar patrols will also be conducted 24/7 at the camp site and technical installation areas. The patrols will:

- Check the integrity of the fence line or the perimeter delimitation signs,
- Check all security lights around the fence line and core area perimeter,
- Check positioning, integrity and working function of any security systems on a regular basis,
- Ensure that all vehicles on site are parked in designated areas indicated for that purpose,
- Report any incidents immediately to the Security Main Guard House (SGMH),
- Maintain radio or other communication link with SGMH, and
- Other duties as directed.

Patrol routes will be continuously changed at the instruction of the Security Chief, to avoid them becoming known/routine. To prevent unauthorized access / trespassing to the project areas, the security guards will undertake the following duties:

- Check all visitor details,
- Check all materials leaving the site,
- Complete searches of individuals/vehicles as directed,
- Complete all logs, including visitors entry pass and materials,
- Check all authorized entry to site,
- Record authorized entry to site by use of photo ID Card,
- Complete handover reports to each shift on commencement of the new shift coming on duty,
- Sign off issued equipment, including torches and telephone/radio equipment,
- Perform regular checks in the vicinity of the access gate to the core area and campsites,
- Record any complaints or enquiries from individuals requiring site access,

- Prevent all parking near or within the vicinity of the gates,
- Assist with emergency response incidents as directed, and

Undertake other duties as directed.

Security Risk Assessment and Organization

A security risk assessment will be conducted prior to mobilization to identify potential threats, vulnerabilities, and risks to personnel (employees, subcontractors, suppliers, and visitors), equipment, and infrastructure. This assessment will consider national regulations, international standards, site-specific conditions, socio-political context, existing security arrangements, and past experiences in similar projects. Based on the findings, a security organization will be established, and the following measures will be implemented:

- A dedicated Security Chief will be assigned to oversee all security-related arrangements, identify emerging threats, verify compliance with legal and procedural requirements, and ensure the adequacy of implemented control measures.
- Security services will be provided on a 24/7 basis throughout the construction phase.
- All security personnel will be free of criminal records and will be subject to psychological evaluation prior to employment.
- Personnel will receive role-specific security training and refresher training, with records maintained and regularly reviewed by the Security Chief.
- Security personnel will be hired in accordance with national legislation and must fulfill all legal qualifications.
- The use of security personnel will be governed by relevant national laws and international good practices. Proportionality, legality, and accountability principles will be followed during all engagements.

Recruitment and Vetting of Security Personnel

As part of the recruitment process, all security personnel shall be subject to a structured due diligence procedure, which includes:

- Verification of national identification and legal work eligibility documents
- Submission of up-to-date criminal background clearance issued by relevant authorities
- Completion of a psychological evaluation conducted by a licensed mental health professional
- Employment history and reference checks with previous employers
- Screening for any prior involvement in human rights abuses, misconduct, or excessive use of force

Personnel records must include documentation of all vetting steps. These records will be available for audit by the Project's Environmental and Social (E&S) team. The employment of individuals with unresolved allegations or records of abuse is strictly prohibited and will be considered a non-conformance under this Plan.

EPC Contractor will use competent fully trained security guards, with the required qualifications and experience to fulfil their responsibilities. The security guards will have appropriate uniforms and all necessary equipment. EPC Contractor will ensure that appropriate number of female security guard will be recruited specifically for the management of GBVH issues.

The CV's and training records of all security guards will be supplied to the Security Chief who will monitor the guarding standards of staff under their control.

All security guards will be capable of carrying out their assigned duties. Training records will be available for consultation and maintained at the project office for the entire construction period. Training records will be revised during audits in order to confirm security guard's capabilities.

Zero-Tolerance Policy on Retaliation and Abuse

A strict zero-tolerance policy shall be enforced against any form of retaliation, intimidation, harassment, or abuse committed by security personnel towards community members, workers, or other stakeholders. This policy applies to both verbal and physical actions and includes acts such as threats, coercion, discriminatory behavior, and misuse of authority.

All security providers and their personnel must be informed of this policy during onboarding and training. A signed declaration of understanding and commitment to uphold this policy shall be included in the personnel file of each security employee.

Reports or complaints alleging misconduct, including retaliation by security personnel, shall be treated as serious incidents. Independent investigations will be initiated promptly by the E&S team in coordination with independent social experts. Proven violations will result in disciplinary measures including termination of employment, reporting to competent authorities, and, where applicable, contract termination with the security provider.

This zero-tolerance approach will be actively communicated to project workers and community members through trainings and the grievance mechanism.

Legal Compliance and Security Personnel Conduct

- Enforcement of access control measures such as screening individuals and inspecting personal belongings using metal detectors and X-ray scanners.
- Apprehension of individuals in accordance with the provisions of the Code of Criminal Procedure (e.g., Articles 90 and 168) and applicable civil and criminal law.
- Entry into workplaces and residences within the Project Area in emergency situations (e.g., fires, earthquakes) or when assistance is requested.
- Safekeeping of confiscated or abandoned items and the immediate reporting of criminal acts or suspicious activities to law enforcement authorities.
- Prohibition of unauthorized use of force, except where necessary and proportionate to neutralize a threat. Use of firearms will only be permitted under strictly defined legal circumstances.
- All security personnel will be required to review and sign a comprehensive Code of Conduct that reflects the Project's commitment to human rights, as outlined in the IFC Performance Standards and the Voluntary Principles on Security and Human Rights. This Code will define acceptable and prohibited behaviours, including respect for local communities, non-discrimination, proportional use of force, and engagement with grievance mechanisms. A signed copy will be maintained in each personnel file, and compliance will be monitored by the E&S team and independent social experts.

Roles and Responsibilities of the Project Sponsor (AAOİAŞ)

- Security personnel will be informed of AAOİAŞ policies and principles and trained in stakeholder engagement and the Project's grievance mechanism.
- Incidents involving the security team will be addressed promptly, and measures will be taken to resolve complaints in a timely and fair manner.

- A system will be established for the regular evaluation of security personnel performance, with emphasis on behavior, professionalism, and adherence to rules.
- Recruitment, training, equipment, and supervision of security staff will be conducted in compliance with national legislation, international standards, and best practices.
- Security personnel will receive training on appropriate conduct, proportional use of force, and interaction with workers and community members in line with human rights principles.
- No individual under the influence of alcohol or drugs, or in possession of firearms or explosives, will be permitted to enter the Project Area. Security personnel will have the authority to conduct drug and alcohol testing if required.

Resource and Equipment

The EPC Contractor will be responsible for providing the following security related equipment:

- Uniforms,
- Personal Protective Equipment (PPE),
- Sufficient communication equipment, including radios/walkie talkies,
- Transportation to enable mobile security patrols and react to incidents or accidents, if necessary,
- Sufficient lighting (Lux) at the gates,
- Sufficient personnel to provide 24 hours a day, 7 days a week, and 365 days a year security cover which includes relief,
- Full working schedules that will comply with the national legislation,
- Security cabins of a suitable size that will provide electricity, ablution facilities, etc.,
- Security identification passes (including personnel and visitor badges, and vehicle passes).

Access Control and Site Security Measures

- Security checkpoints will be established at all major access points, including camps, quarry ites, borrow areas, and material storage zones. A contracted EPC will manage access under the supervision of the Security Chief.
- Camp perimeters will be enclosed with fencing to prevent unauthorized entry, and security cameras will be installed to monitor sensitive areas.
- All personnel entering the site will be issued ID badges, and supplier/visitor identity verification will be required prior to entry.
- Vehicle access will be subject to a formal registration process. Entry and exit of equipment and materials will be permitted only after clearance from designated project personnel.
- Security personnel will collaborate with Procurement and EHS teams to verify hazardous material shipments and ensure proper offloading procedures. They will also direct transporters to final delivery points and coordinate with EHS during unloading operations.

Visitor Management

- All visitors will be recorded in a visitor logbook at checkpoints.
- Short-term visitors will receive orientation forms outlining workplace hazards, while long-term visitors will undergo full OHS training. Relevant training records will be maintained.
- After orientation and PPE distribution, visitors will be accompanied at all times by trained employees or security staff.

- Photography or video recording will require written permission from the H&S Manager or HR Chief.

Communication, Monitoring, and Incident Management

- Regular security patrols will be carried out, and any breaches or suspicious behavior will be reported to the Security Chief.
- Closed-circuit television (CCTV) systems will be operational 24/7, with periodic reviews of footage. Any threat or irregularity will be documented and escalated to relevant authorities as necessary.
- Community grievance mechanisms will be used to address complaints or concerns regarding security personnel. Awareness of this mechanism will be promoted among local communities.
- The Main Contractor (Limak) will be responsible for recording and investigating all security-related incidents and allegations of misconduct by security personnel.
- Any allegations of abuse or unlawful acts will be documented and reported to the competent authorities for further action, in accordance with legal and procedural standards.

Security Main Guard House (SMGH)

The EPC Contractor will manage the SMGH 24 hours a day, 7 days a week, and 365 days a year. The SMGH will be the designated area for all security requirements, and it will be located at the entrance of the construction site.

The roles and responsibilities of the SMGH staff will comprise of the following:

- Monitoring all security operations,
- Logging visitors' ingress and egress,
- Controlling mobile roving patrols for the Constructions Sites,
- Providing first instance response,
- Calling out emergency services,
- Completing daily records and archiving of data,
- Providing security to specific requests as directed, and
- Recording all calls and radio communications for emergency incidents.

Security Search

Any person or vehicle entering or leaving the construction sites shall be subject to a security search for prohibited items. The security guards will be responsible for carrying out the security searches.

The security team will have the authority to inspect lunch containers, packages, bundles, toolboxes and equipment at any time within the construction sites.

Contraband materials include, but are not limited to the following:

- Unauthorized alcohol,
- Illegal substances,
- Weapons,
- Explosives or pyrotechnics,
- Explicit materials, and
- Stolen tools or equipment.

If contraband materials are found, the security guards will inform immediately the Project Director. In addition, any vehicle entering the construction site shall be subject to a full internal and/or external search. A proper register will be kept of all contraband materials confiscated. Depending on the level of contraband, some may be reclaimed prior to leaving the construction site.

Use of Force

Use of force by the security team is only sanctioned when it is for preventive and defensive purposes in proportion to the nature and extent of the security threat and reiterates the need for proper training. Force shall be used only as a matter of last resort and in a manner that respects human rights.

Restraint and caution will be exercised consistent with international guidelines on the use of force; in particular, the Basic Principles on Use of Force include the following key elements:

- When force must be used to protect human life, it should be proportionate to the threat and should seek to minimize injury.
- Medical assistance should be provided as soon as safely possible.
- During employment checks it should be ensured by EPC Contractor Human Resources Chief to include police records and criminal litigation checks, as well as checks with former employers.

Whenever the lawful use of force is unavoidable, security team shall:

- Exercise restraint in such use and act in proportion to the seriousness of the offence and the legitimate objective to be achieved,
- Minimize damage and injury, and respect and preserve human life,
- Ensure that assistance and medical aid are rendered to any injured or affected persons at the earliest possible moment, and
- Ensure that relatives or close friends of the injured or affected person are notified at the earliest possible moment.

The use of force may need to be justified in any later hearing. EPC Contractor will have the responsibility in presenting this justification following any reportable incident.

EPC Contractor will not sanction any use of force except when used for preventive and defensive purposes in proportion to the nature and extent of the threat.

Local communities can raise grievances related to the conduct of the security team to any Project employee, including subcontractors. All grievances must be immediately managed in light with the Grievance Mechanism.

Code of Conduct

The following code of conduct will apply to the Security Chief and all security guards, who will:

- Not accept any gratuities at any time,
- Remain alert and observe all activity in areas under their control,
- Receive appropriate training to report all incidents or violations to the Security Manager,
- Have no conflict of interests or hold a criminal record of any kind,
- Not threaten, assault or coerce any other individuals in any way,
- Be motivated and willing to work in any weather conditions,
- Be physically fit and able to perform all duties, roles, functions of security activities, and
- Have excellent dress and deportment.

All security employee shall confirm to obey the Code of Conduct with signing documents upon hiring, and Code of Conduct trainings will be given annually. All documents will be documented and maintained by the Human Resources, E&S Departments.

VIII. TRAINING

All security personnel assigned to the construction phase of the Project will receive structured training upon hiring and annually. This training will cover Project-specific procedures, relevant legal and regulatory requirements, and mitigation measures outlined in this Plan.

The EPC Contractor will provide security employee training which will include, but will not be limited to the following:

- Knowledge of Project organization and structures,
- Knowledge of Project labor regulations,
- Fire prevention and fire extinguisher recognition,
- Communication skills,
- Emergency response procedures,
- Report writing,
- Use of security and safety equipment,
- Basic reaction skills,
- Radio skills,
- Conflict management,
- Human rights legislations, and
- Security Code of Conduct.

EPC Contractor will also ensure that GBVH training programs will be included alongside Human Rights training for all security personnel.

The training will be undertaken by an individual with the appropriate qualifications and will be to a level suitable and sufficient to permit the security guards to perform their role.

The training will also ensure alignment with international standards and best practices in security management. In addition to mandatory security training from certified private security agencies, training on protocol rules, stress management and effective communication, private security law, approaches to

suspicious individuals and vehicles, and security systems and devices will be provided to all security personnel.

Personnel will be trained on appropriate conduct in interactions with workers, subcontractors, visitors, and community members, with particular emphasis on conflict prevention, de-escalation techniques, and human rights. Specific topics will include communication with local communities, stakeholder engagement, cultural sensitivity, gender-sensitive approaches, and the cautious and proportionate use of force and voluntary principles on security and human rights. Training will also cover the contents and procedures of the Project's grievance mechanism, stakeholder engagement plan, and internal and external communication protocols.

Security staff will be informed of the importance of professional behavior, legal boundaries of their authority, and proper handling of potentially threatening or unlawful situations. Where applicable, training will include procedures for collaboration with law enforcement and emergency services.

Refresher trainings will be conducted at least twice per year, and immediately following any changes in project scope, security risks, or relevant legal frameworks. The effectiveness of the training program will be evaluated through performance monitoring, interviews, and feedback from community liaison personnel.

These trainings will also address emerging risks and reinforce the implementation of mitigation measures defined in this Plan.

All training activities and attendance records will be documented and maintained by the Human Resources, E&S Departments.

IX. MONITORING

A structured internal monitoring program will be implemented to assess the effectiveness of security management measures outlined in this Plan during the construction phase of the Project. The scope and frequency of monitoring activities will be periodically reviewed and revised where necessary, based on evolving site-specific risks, incident trends, stakeholder concerns, and changes in national security-related regulations or international standards.

Monitoring activities will be coordinated by the Security Chief in close collaboration with the Human Resources (HR), E&S departments. Core responsibilities will include verifying the implementation of access control procedures, reviewing security incident records, assessing the adequacy of on-site security infrastructure, and evaluating personnel compliance with recruitment and training requirements.

Monitoring measures will also include the continuous supervision of entry and exit points through established security checkpoints and Closed-Circuit Television (CCTV) systems. CCTV footage will be reviewed periodically to detect any unauthorized access or suspicious activity. Security incidents involving personnel, subcontractors, suppliers, visitors, or local community members will be logged, investigated, and analyzed to identify root causes and define corrective and preventive actions. Grievances related to the behavior or conduct of security personnel will be recorded through the Project's grievance mechanism and will be addressed in coordination with the Community Relations team.

Personnel files will be reviewed to verify that all employed security staff have undergone required background checks, psychological evaluations, and training in accordance with national regulations and Project requirements. Regular inspections will be conducted across Project sites to

ensure that all security measures—including perimeter fencing, lighting, ID badge protocols, and patrolling—are adequately implemented and maintained. Identified non-conformities or lapses will trigger the development and application of corrective actions.

In addition to internal oversight, inspections may also be carried out by relevant public authorities, including the Ministry of Labor and Social Security and law enforcement agencies, in accordance with Turkish legislation. The frequency and scope of these inspections will be defined by the respective institutions and may involve the review of security records, site conditions, and compliance documentation.

Monitoring activities will be carried out by AAOİAŞ and EPC.

E&S and H&S Managers will monitor security personnel shall possess demonstrable qualifications in social performance, human rights due diligence, and community engagement. To ensure credibility and impartiality, the expert(s) may be appointed under a transparent process, hold a formal mandate authorized by the Project Company, and retain access to grievance records, training attendance logs, and incident investigation files. The expert must also hold a written authorization or assignment letter granting access to project sites and security personnel for interview and compliance verification purposes.

Their responsibilities include verifying that all security personnel comply with human rights commitments, evaluating the effectiveness of grievance response mechanisms, monitoring community perceptions and concerns related to security behavior, and contributing to corrective actions in coordination with the E&S team.

The findings and observations of the social expert shall be documented in quarterly social monitoring reports, which will be reviewed jointly by the Project Sponsor and external stakeholders as needed.

Monitoring efforts will be guided by the framework presented in Table VIII.1, which outlines the key monitoring parameters, performance indicators, responsible parties, and documentation requirements. These activities are essential for evaluating the effectiveness of security management strategies and ensuring full alignment with both national legislation and international good practice.

Table IX.1 Key Monitoring Activities

Parameter	Monitoring Station / Location	Monitoring Method	Monitoring Frequency	Responsible Parties
Employment status and background checks of security personnel	Project Office / Camp Sites	Document review	Quarterly	AAOİAŞ,
Completion of required trainings by security personnel	Project Office / Camp Sites	Document review	Quarterly	AAOİAŞ,
Grievances related to security personnel acts and number of responses	Project Office / Camp Sites	Document review	Weekly	EPC AAOİAŞ,

In cases where non-compliance is identified—either through internal monitoring or external audits—Antalya-Alanya Otoyolu İnşaat Yatırım ve İşletme A.Ş. (AAOİAŞ) will ensure that corrective and preventive measures are promptly implemented in coordination with the Main Contractor (Limak) and all relevant subcontractors.

All security-related findings, including breaches, grievances, or complaints received from workers or surrounding communities, will be documented and managed in accordance with Project

procedures. In the event of serious incidents—such as misconduct or unlawful acts involving security personnel—AAOİAŞ will ensure that the matter is reported to the competent authorities and that appropriate procedural, disciplinary, and contractual responses are taken.

X. KEY PERFORMANCE INDICATORS

The following Key Performance Indicators (KPIs) will be monitored, verified, and evaluated.

Table X.1 Key Performance Indicators – Construction Phase KPIs

Monitoring Parameter / Performance Indicator	Target	Frequency	Responsible Party
Verification of criminal background for all security personnel	No personnel with criminal records employed	At recruitment / Annually	AAOİAŞ, EPC
Number of planned security trainings and completed trainings	100% completion of planned trainings	At recruitment / Annually	AAOİAŞ, EPC
Number of recorded security incidents involving Project personnel, subcontractors, or others	Less than five	Monthly	AAOİAŞ, EPC
Number of complaints related to security personnel and security practices	Less than five	Monthly	AAOİAŞ, EPC

XI. AUDIT AND REVIEW

The implementation of this Plan should be regularly monitored and reviewed in accordance with the ESMMP. All incidents and non-conformities should be documented and reported as outlined in the Plan. Contractors and subcontractors should be subject to audits conducted by the Project Sponsor within the scope and schedule defined in the Contractor and Subcontractor Management Plan. These audits and the associated records should be managed in compliance with the Project's established plans and procedures. Relevant records that should be reviewed during audits may include the external grievance and suggestion tracking database, internal grievance and suggestion tracking database, training records, and non-conformity records. Observations and deficiencies identified during audits should be recorded in formal audit reports, and all findings requiring improvement should be registered under Corrective Actions. Project management should review audit outcomes and corrective action records, follow up on progress, and ensure that additional measures are implemented where necessary.

XII. REPORTING

Regular reporting should be conducted to ensure the effective implementation and continuous improvement of security management activities throughout the construction phase of the Project. Reporting should be structured to address internal monitoring and audit outcomes, as well as external compliance obligations and stakeholder engagement requirements.

Serious incidents and the associated response actions will be summarized in a manner suitable for external disclosure, to promote transparency and accountability towards affected communities and stakeholders.

Based on monitoring results, necessary corrective and preventive actions should be identified, and required updates should be incorporated into this Plan. The security training program will also be revised as needed to address any identified gaps or emerging risks. Regular audits and site inspections should be conducted to verify that all security-related activities are being implemented in accordance with the provisions of this Plan.

Lessons learned from security incidents and grievance analysis will be used to improve the Security Management Plan and training content on a rolling basis.

Reports will be prepared using data collected through the security monitoring activities defined under this Plan. The results and supporting documentation (e.g., incident records, grievance logs, inspection checklists, and photographs) should be compiled in the appropriate reporting formats. This section of the Plan outlines the instructions and requirements for implementing these reporting activities.

All reported security incidents will be classified by severity (e.g., minor, major, critical) and reviewed by an internal committee that includes the E&S Manager and, where feasible, an independent social expert to ensure impartiality and adherence to human rights obligations.

Grievances specifically related to the behaviour of security personnel shall be disaggregated from general complaints and analysed for recurring patterns, to inform corrective measures and potential retraining needs.

Reporting activities under this Plan mainly relate to the number and nature of security incidents involving Project personnel, subcontractors, suppliers, visitors, and local communities; compliance with security staffing requirements; the training status of security personnel; and the handling and resolution of grievances related to security services. In the event of a serious security incident—such as unlawful behavior, excessive use of force, or threats to personnel or communities—an incident report including root cause analysis (RCA), mitigation measures, and follow-up actions should be prepared by the Contractor and submitted to the Project Sponsor (AAOİAŞ) and, where applicable, to the relevant public authorities within the timeframe required by law.

All data, together with the results of security-related inspections and audits, should be summarized in the dedicated security chapter of the Environmental and Social Monitoring Report, prepared on a quarterly basis. This report will document any non-compliance observed, the corrective actions taken, and any recommended time-bound improvement measures, supported by relevant evidence such as site photos or formal correspondence.

All Project personnel are encouraged to raise concerns, suggestions, or complaints related to security management through the established grievance mechanism by completing a grievance form. Grievances from community members regarding the conduct or actions of security personnel will also be addressed and followed up in line with the procedures defined in the Stakeholder Engagement Plan. Accessible, inclusive, and confidential grievance mechanisms shall be maintained throughout the construction phase to enable both community members and Project workers to report security-related concerns without fear of retaliation. Multiple channels will be available, and community awareness will be promoted actively by the CLOs, with special outreach to vulnerable groups. The grievance mechanism will ensure confidentiality and protection against retaliation, especially for complaints submitted by vulnerable groups such as women or children. Reporting channels will include both verbal and written options, and community liaisons will support accessibility. Clear communication channels for submitting grievances will remain open and accessible throughout the construction period.

Throughout the construction phase of the Project, this Plan will be reviewed quarterly by the E&S manager, based on the findings of internal audits, incident reviews, or any significant changes in site security needs. Updates to the Plan will be coordinated and approved jointly by the E&S Manager and H&S Manager.

SUPPLY CHAIN and SUBCONTRACTOR MANAGEMENT PLAN

REVISION STATUS		
Revision Date	**Rev. No**	**Explanation**
01.04.2025	00	This plan is prepared according to TS EN ISO/IEC 9001:2015, TS EN ISO/IEC ISO 14001:2015, TS EN ISO/IEC 45001:2018 and IFC Performance Standards
23.05.2025	01	Revision
16.06.2025	02	Revision as per revision made under ESDD submitted by the Lender consultant
08.09.2025	03	Revision as per revision made under ESDD submitted by the Lender consultant

SUPPLY CHAIN and SUBCONTRACTOR MANAGEMENT PLAN

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LIST OF ABBREVIATIONS

AAOİAŞ	Antalya-Alanya Otoyolu İnşaat Yatırım ve İşletme A.Ş.
BOT	Build-Operate-Transfer
CLO	Community Liaison Officer
E&S	Environmental and Social
EHS	Environmental, Health and Safety
EIA	Environmental Impact Assessment
ESHS	Environmental, Social, Health, and Safety
ESIA	Environmental and Social Impact Assessment
ESMMP	Environmental, Social, Management and Monitoring Plan
ESMS	Environmental and Social Management System
HR	Human Resources
IFC	International Finance Corporation
KGM	General Directorate of Highways
KPIs	Key Performance Indicators
OHS	Occupational Health and Safety
PPE	Personal Protective Equipment
RfP	Request for Proposal
CLO	Community Liaison Officer

SUPPLY CHAIN and SUBCONTRACTOR MANAGEMENT PLAN

I. INTRODUCTION

Ministry of Transport, and Infrastructure (former Ministry of Transport, Maritime Affairs and Communications), General Directorate of Highways ("KGM" or "the Administration"), as the owner of the Antalya-Alanya Motorway Project, has tendered for a contract in accordance with the Law on Implementation of Some of the Investments and Services in the Framework of Build, Operate and Transfer Model (Law No: 3996). Following the tendering process, KGM has awarded Antalya-Alanya Otoyolu İnşaat Yatırım ve İşletme A.Ş. (AAOİAŞ or the Project Sponsor) with a Build, Operate and Transfer (BOT) contract for the implementation of the Project. Accordingly, AAOİAŞ will be referred as Project Sponsor[1] in the scope of this report. The main contractor for the Project has been designated as Limak and will henceforth be referred to as the Contractor (or EPC).

The Project is designed to connect the districts of Serik and Alanya via the Manavgat district of Antalya province. The Project will enhance the existing transportation network services with its surrounding provinces: Burdur, Muğla, Konya, Isparta, Karaman and Mersin. Various environmental, social, and technical studies have been conducted along the initial route of the Project tendered by the KGM. Based on these studies, the route was optimized, incorporating engineering practices and addressing environmental and social considerations, particularly issues of involuntary and economic resettlement, before being finalized. According to the most current design, the total length of the Motorway, which will be a dual carriageway of mostly 3 and partially 2 lanes (3x2 and 2x2) in each direction, is 117.8 kilometers including the main carriageway and the access roads[2].

This Supply Chain and Subcontractor Management Plan ("SCSMP" or "Plan") has been prepared by Antalya-Alanya Highway Construction Investment and Operation Inc. ("AAOİAŞ" or "SPV") for the Antalya-Alanya Highway Project ("Project") in accordance with national legislation, the Equator Principles ("EP"), the International Finance Corporation ("IFC") Performance Standards ("PSs"), and the international standards that reference the relevant legislative sections. The Plan covers the construction phase of the Project.

I.1 Project Description

The Project starts at Serik Interchange (Km: 52+000) and then proceeds eastward, following the corridor at the foothills of the Taurus Mountains within the boundaries of Serik and Manavgat districts, ending at north of Konaklı neighborhood of Alanya District (Km: 136+000). From this point onwards, the route turns southward with a 2x2 lane connection road and connects to the D400 state road at the Alanya West Interchange. As of April 2025, the current Project design includes a total of 117.8 kilometers of road, comprising 84 kilometers of main road (motorway) and 33.8 kilometers of access roads.

The map showing the construction components and road route within the scope of the Project's construction activities is provided in *Figure I-1.*

[1] The BOT Contract uses the term "Appointed Company" to refer Project Sponsor

[2] It should be noted that the environmental and social baseline characterization, maps and scoping assessments provided in this report are based on the most current design

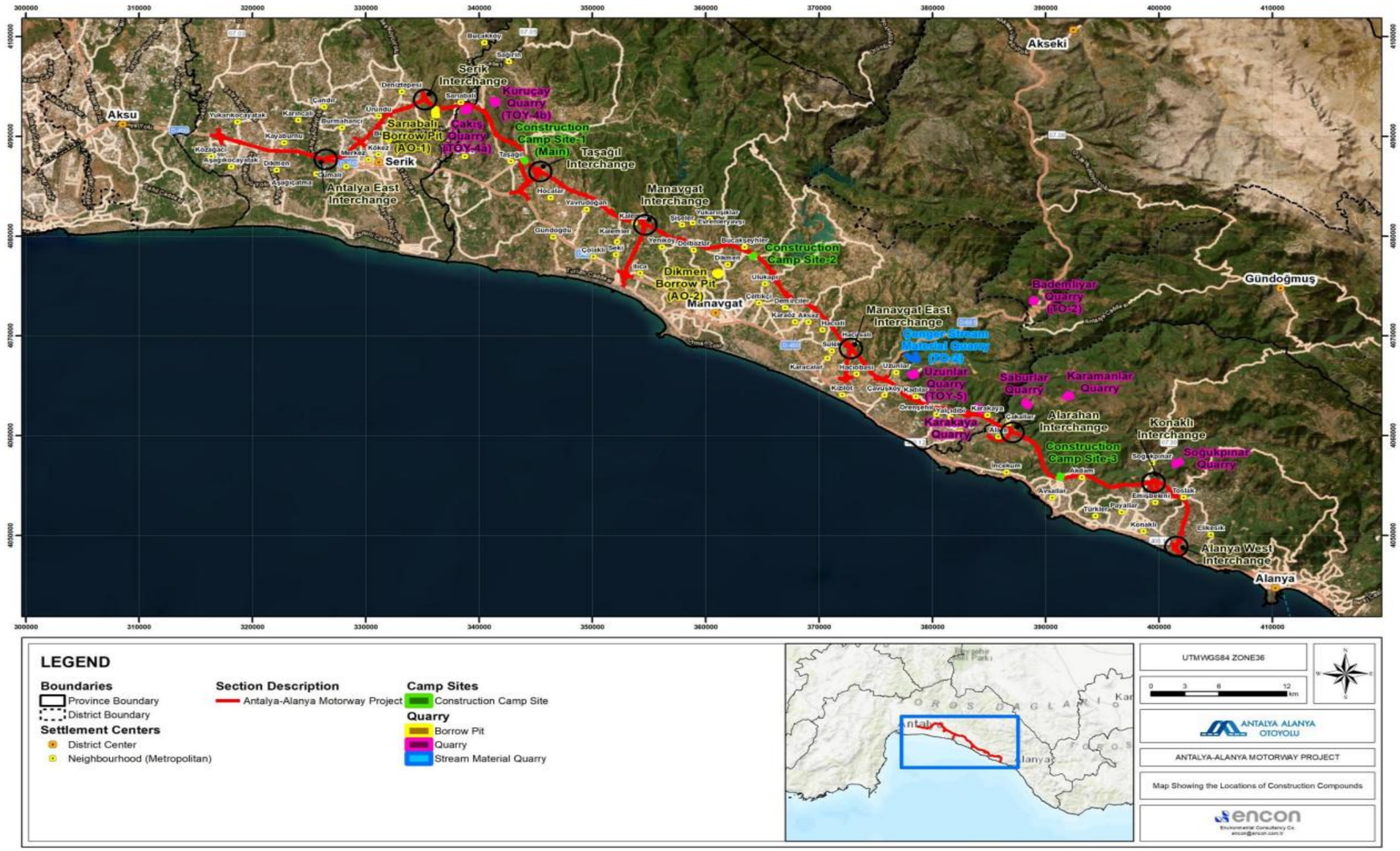

Figure I-1.Map Showing the Locations of Construction Compounds

Other structures to be built as part of the project are as follows:

- 16 viaducts,
- 22 bridges,
- 305 culverts,
- 25 interchanges,
- 56 overpasses,
- 43 underpasses, and
- 5 tunnels.

I.2 Purposeand Scope

The purpose of this Supply Chain and Subcontractor Management Plan (SCSMP) is to identify risks that may be encountered in the Project's procurement processes in order to comply with the Project's applicable Environmental and Social ("E&S") standards, mitigate the impacts of these risks, and ensure sustainable, ethical, environmentally and socially appropriate supply chain management. Additionally, the Plan defines the roles, responsibilities, and processes for AAOİAŞ to evaluate and manage Project suppliers.

AAOİAŞ aims to purchase goods and services from local suppliers as much as possible to ensure that the Project's economic benefits are shared at the local level to the maximum extent. However, if local businesses cannot meet the Project's quality standards and procurement requirements, AAOİAŞ reserves the right to purchase from alternative sources, including regional, national, and ultimately international suppliers, if necessary, in order of priority.

This Plan evaluates and manages AAOİAŞ and EPC supplier compliance with the applicable E&S standards within the Project.

• Supplier – company providing goods and services related to the The Project (suppliers of equipment and materials, services and activities which do not include construction works – catering, cleaning, etc.)

The selection, management and monitoring of sub-contractors will be carried out through this management plan.

This management plan is a living document developed with the best available information and will be reviewed and revised as necessary due to the nature of the construction and progress.

II. LEGISLATIVE FRAMEWORK AND REFERENCE STANDARDS

The Plan has been structured to align with both national and international requirements, including legislation, guidelines, and sectoral standards that govern supply chain risk management, labor practices, environmental and social safeguards, and ethical procurement. Accordingly, the following reference sources will guide the implementation, monitoring, and compliance procedures throughout the supply chain.

The regulations and standards to be applied in the project are provided in the following section.

II.1 National Requirements

The following Turkish laws and regulations should be considered as the legal foundation for ensuring subcontractor compliance with labor rights, occupational health and safety, and environmental protection during the construction phase:

- Environmental Law (Law No. 2872)
- Occupational Health and Safety Law (Law No. 6331)
- Labor Law (Law No. 4857)
- Regulation on Risk Assessment of Health and Safety
- Regulation on Occupational Health and Safety Services
- Regulation on Occupational Health and Safety Sign
- Regulation on Emergency Situations in Workplaces
- Regulation on Health and Safety Measures to be Taken in Workplace Buildings
- Regulation on the Use of Work Equipment in Terms of Occupational Health and Safety
- Regulation on the Use of Personal Protective Equipment in Workplaces
- Regulation on Occupational Health and Safety Requirements for Temporary or Fixed-Term Employment
- Regulation on Occupational Health and Safety in Construction Works
- Regulation on the Protection of Workers from Risks Related to Noise
- Regulation on Health and Safety Measures for Working with Chemical Substances
- Regulation on Fire Protection in Buildings
- Regulation on First Aid
- Regulation on Duties, Authorities, and Responsibilities of Occupational Physicians and Other Health Personnel
- Regulation on the Procedures and Principles of Employing Child and Young Workers,
- Law on the Protection of Personal Data No. 6698,
- Public Procurement Law No. 4734,
- Law on the Human Rights and Equality Institution of Turkey No. 6701.

II.2 International Standards and Guidelines

In addition to national requirements, the following international guidelines frameworks, standards and agreements should be considered to ensure alignment with best practices and financial institution requirements.

To ensure responsible operations, AIIB adheres to policies addressing environmental and social impacts as outlined in its Environmental and Social Framework (“ESF”) document. Updated in June 2024, the ESF reflects AIIB's commitment to international standards and sustainable development practices. The ESF includes the Environmental and Social Policy (ESP), which sets mandatory requirements for all projects, supported by Environmental and Social Standards (“ESSs”).

Moreover, the following standards, guidelines and directives should be used to align Project practices with international lender requirements and good practice environmental and social management:

- International Finance Corporation (IFC) (the private sector arm of the World Bank Group), which has published environmental and social sustainability performance standards;
    - IFC Performance Standards (January 2012);

- IFC Environmental, Health, and Safety (EHS) General Guidelines;
- IFC Stakeholder Engagement Handbook;
- Good Practice Note: Managing Subcontractors' Environmental and Social Performance, IFC 2017;
- Addressing Gender-Based Violence and Harassment: Emerging Good Practice for the Private Sector, IFC;
- Good Practice Note: Managing Risks Associated with Modern Slavery, IFC

II.3 Project Standards

The Project Standard will encompass all national and international legal, regulatory, and performance-based requirements governing all environmental, social, labor, health and safety, and ethical aspects of the Project, including those related to supply chain operations.

III. LINKAGE WITH OTHER PROJECT PLANS AND PROCEDURES

This Plan is supported by other management plans and procedures developed under the Environmental and Social Management System (ESMS) of the Project. The following plans and procedures are considered directly relevant and should be implemented in coordination with the Supply Chain and Subcontractor Management Plan to ensure consistent management of subcontractor-related risks and responsibilities during the construction phase:

- Human Resources and Labor Management Plan
- Communication and Training Plan
- Occupational Health and Safety Management Plan
- Community Health and Safety Management Plan
- Environmental Accident and Spill Response Management Plan
- Environmental and Social Management and Monitoring Plan (ESMMP)
- Responsible Sourcing Policy (As part of this SCMP (*Appendix 1*))
- Public Procurement Policy (Limak Group),
- Code of Business Ethics (Limak Group),

IV. ROLES AND RESPONSIBILITIES

The key roles in the procurement process are shared between AAOİAŞ (SPV) and EPC. AAOİAŞ (SPV) will have the main role in monitoring of E&S performance of all project participants during implementation of works and services (in addition to their other roles not related to supplier).

General Manager (SPV):

- Define and implement the overall business strategy and direction of the SPV in alignment with stakeholder expectations.
- Ensure the provision of necessary resources and organizational support for the implementation of SCSMP.

Procurement Department (SPV):

- Coordinate with the Procurement Department (EPC) throughout the construction phase of the Project
- Monitor EPC's purchases,

E&S Manager (SPV):

- Responsible for reporting to Lenders on implementation of E&S requirements of the Project.
- Collating feedback on supplier performance and reporting.

Project Director (EPC):

- Define and oversee the implementation of the overall EPC execution strategy in alignment with contract objectives and company standards.
- Lead interdisciplinary project teams, coordinating EPC functions to achieve key milestones.

Procurement Department (EPC):

- Identifies and selects the companies that could comply with the specifications included in the tender documents (technical and E&S specifications developed by EPC, as per below) – in order to ensure a favourable offer, at least 3 companies have to be approached for proposals.
- Performs initial Supplier assessment using the Supplier Assessment Framework
- Manages coordination with EPC Construction Manager and E&S Manager (EPC) to ensure the assessments of suppliers are performed at tender stage.
- Collate feedback on performance of suppliers from EPC teams.
- Manage supplier evaluation database.

Technical Department (represented by Construction Manager) (EPC):

- Identifies the need to engage suppliers and notifies Procurement Department.
- Develops technical specifications / criteria to be included in the tender documentation.
- Evaluates proposals against technical specifications.
- Assess the performance of suppliers and provide feedback to Procurement Department and SPV E&S Manager.

E&S Manager (EPC):

- Assess the performance of suppliers and provide feedback to Procurement Department and SPV E&S Manager.
- Evaluates proposals against E&S specifications.
- Performs detailed Supplier Assessment using the Supplier Assessment Framework

Community Liaison Officer (CLO)) (SPV &EPC):

- Collating grievances on supplier performance (external grievances – from host communities; internal grievances – workers on site) Facilitate resolution of grievances. Reporting to SPV & EPC E&S Manager.

V. SUPPLY CHAIN and SUBCONTRACTOR MANAGEMENT APPROACH

All subcontractors will be responsible of full compliance with the legislation, standards, procedures, rules and objectives identified in detail in of this Plan. Within this scope, LİMAK will manage the subcontractor and supplier evaluation mechanism with criteria targeting the assessment of sufficiency and compliance of existing environmental and social management structure and labor practices of the subcontractor/supplier that is being considered. Following selection of the subcontractors and suppliers,

the Scope of Work to be agreed on will ensure compliance of the subcontractor/supplier with Project Standards through contractual terms.

V.1 Subcontractor Selection Process

The subcontractor selection process will involve a multidisciplinary team involving Environmental and SocialManager. Primary responsibility of the team will be the project's E&S matters, including E&S performance, worker and community health, safety and security, and human resources (HR).

The participation and engagement of the Environmental and Social Manager in the subcontractor selection process is aimed at providing an early consideration of E&S matters and variables when selecting a subcontractor.

The first step in the subcontractor procurement process is the preparation of a Request for Proposal (RfP). This RfP is typically prepared by procurement staff with input from the project manager, internal counsel,technical department (for example, construction managerand lawyers.

This is a common industry practice that helps clarify AAOİAŞ's main Environmental, Social, Health, and Safety (ESHS) requirements, conditions, and provisions that every subcontractor must follow when entering into an agreement with the AAOİAŞ. In this way, management of Project risks and anticipated impacts and E&S performance will be done more effectively.

A high-level definition of ESHS expectations allows the subcontractor to better understand the minimum requirements that must be met. It also helps AAOİAŞ to set basic expectations of the HSE framework that will govern the AAOİAŞ–subcontractor relationship from the outset.

The Environmental and Social (E&S) Requirements encompass all relevant obligations, commitments, and provisions derived from various source documents. These include, as applicable, the Equator Principles (EPs) IV, the IFC Environmental, Health and Safety (EHS) Guidelines for Toll Roads, IFC Performance Standard 2 (PS2), the commitments outlined in the Environmental and Social Impact Assessment (ESIA) Report and E&S-related permits, applicable legal obligations and codes and standards, as well as company policies and internal procedures.

V.2 Proposal Evaluation and Subcontractor Selection

Evaluation methodology, criteria, key performance indicators (KPIs), and weightings need to be established in discussion with the rest of the project team. The following questions should be asked when developing the weightings: "What answers are we looking for?" and "What KPI scores are acceptable?" Significant E&S records and safety metrics are important, and poor records related to these matters should preclude the subcontractor from qualifying, regardless of technical aspects or price.

The subcontractor's existing management systems, its capacity to implement E&S requirements and the subcontractor-supplied information on past E&S performance will be among the key criteria used to evaluate subcontractors. Capacity may be judged by past performance, existing or projected management, technical ability, and resources. The latter can include solutions or options proposed by the subcontractor to implement the mitigations described in the E&S documentation, such as management plans that are contained in the bid package. A lack of capacity to establish an ESMS (if one does not exist), implement E&S requirements, and meet applicable standards will disqualify a subcontractor from further consideration. Referees should be asked to validate claims regarding E&S performance.

In addition, all recruitment agencies and labor providers must be approved, licensed, and have no past violations or associations with child or forced labor. Due diligence documentation, including

license verification and labor law compliance records, must be submitted as part of the subcontractor prequalification process. This criterion is considered mandatory and non-negotiable for selection eligibility.

As AAOİAŞ and EPC evaluates proposals, past E&S performance and key personnel of bidders can be evaluated on a numerical basis, which can then be included in overall comparisons (including technical and financial).

While the evaluation methodology varies according to the project, scope of work of the activity, and any project-specific feature, it will need to be agreed on by the project team. The following will be considered grounds for disqualification:

- Failure to provide information on past E&S performance, including health and safety records;
- Reports of past performance deemed unacceptable for the current project;
- Notices of material labor issues between workers and management;
- Fines and sanctions imposed by E&S and labor regulators and authorities;
- Poor security management records from previous projects; and
- Material community grievances and high profile adverse press reports on E&S matters.

The team evaluating proposals will include at least one qualified and experienced E&S professional, who has been involved in the tendering processes and the establishment of the criteria that will be used to evaluate bidders' E&S qualifications.

If a prospective subcontractor propose to substitute personnel for any proposed key E&S position(s) at any stage of the selection and or contract negotiation process, AAOİAŞ may require that the replacement(s) have at least equivalent qualifications and experience of the previous professional and that they be approved by AAOİAŞ or EPC, or the entire proposal may be re-evaluated using the substitute personnel.

At the end of the evaluation and selection process, AAOİAŞ will issue a letter of intention to place a contract subject to certain conditions, including E&S requirements and conditions, which should be listed. These could be over and above those in the offer, but they must have been discussed with the subcontractor during the selection process. In *Figure V-1*, the subcontractor management process that AAOİAŞ will comply with is presented.

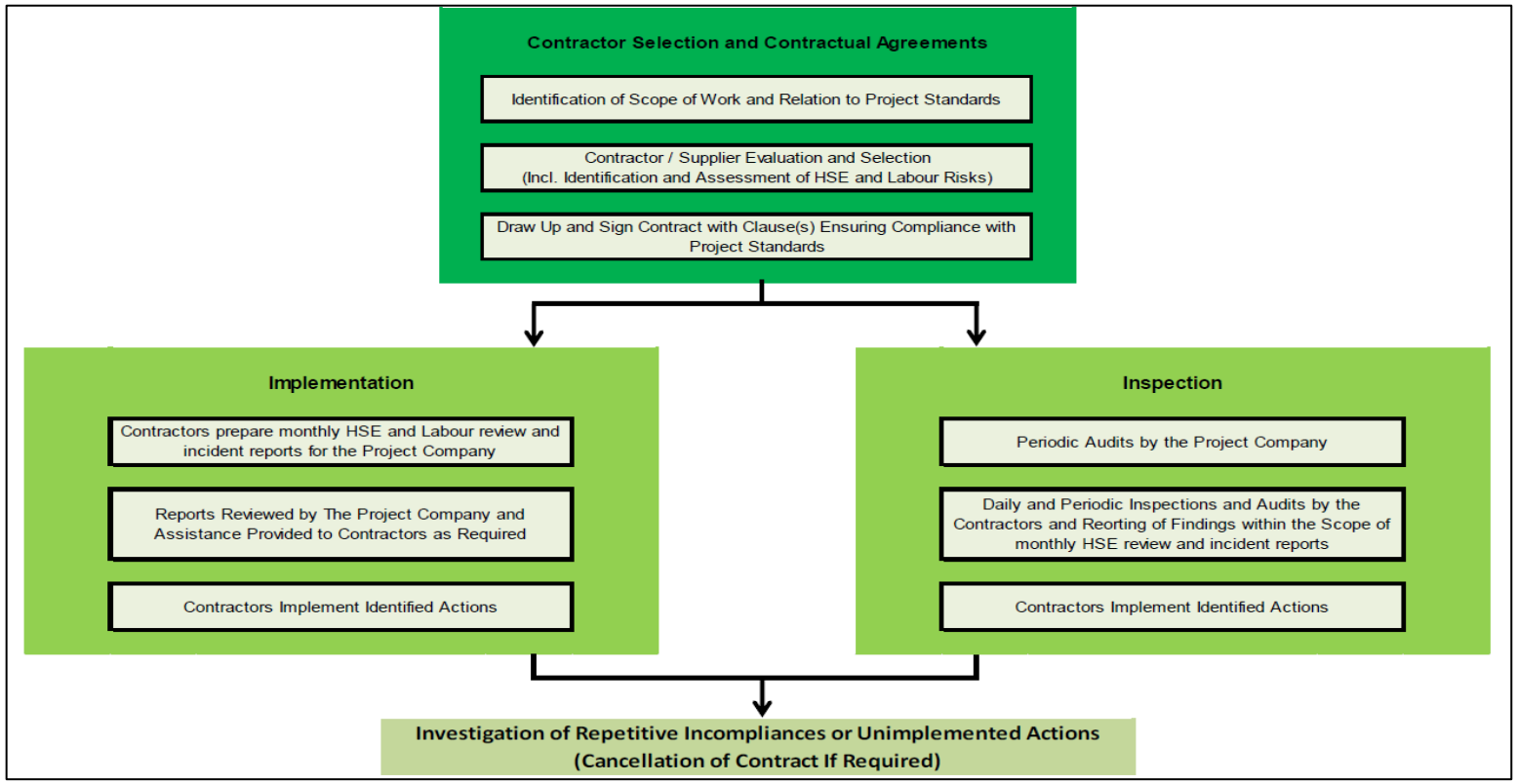

Figure V-1 Subcontractor Management Process

V.3 Subcontracting and Procurement

It is AAOİAŞ's responsibility to comply with IFC Guidelines, EHS Guidelines, loan agreement commitments, ESIA, EIA, Turkish laws and regulations, and permits and standards, ensuring that any subcontractor providing services of any kind to AAOİAŞ duly follows these requirements throughout the duration of the contract, including any activity or services performed by third parties undertaking a contract from the subcontractor.

V.4 Existing Clients – Managed Contracts (Amending Existing Contracts)

For large development projects, there may be existing, smaller contracts managed by AAOİAŞ that will continue into the construction phase alongside major contracts. For consistency, these contracts and the performance requirements associated with them shall be reviewed and, if necessary, brought in line with the other contracts through amendments to properly incorporate all applicable E&S requirements.

V.5 Project Planning

The following content outlines key planning requirements to ensure safe, coordinated, and compliant execution of subcontractor activities during the construction phase of the Project.

V.5.1 Information Exchange

In order to ensure that the project is planned and executed in a safe and controlled manner, all information related to existing hazards and risks at the project site should be exchanged mutually between the Contractor and the Project management. Similarly, any potential hazards and risks that may arise from the Contractor's scope of activities should also be communicated by the Contractor. Prior to the commencement of project activities, the Contractor should submit the necessary documentation and information to AAOİAŞ for review and verification.

The Contractor is required to provide its Occupational Health and Safety (OHS) Policy, as well as details of the designated OHS representative responsible for addressing all health and safety matters throughout the execution of the project. Documentation demonstrating the engagement of an occupational safety expert, workplace physician, and other health personnel should be presented in the form of official system records or certified copies.

In addition, method statements and detailed work instructions describing how project activities will be initiated should be submitted. The Contractor should also present risk assessments along with the proposed preventive and control measures. Information regarding the types of waste expected to be generated; methods for waste collection, and relevant waste disposal documentation should also be included.

A list of vehicles to be deployed at the project site must be provided, accompanied by copies of the drivers' licenses of those authorized to operate them. Likewise, operator certificates for machinery operators, and G-class driving licenses for those operating equipment on public roads, should be submitted.

The Contractor is also expected to provide a list of personnel to be mobilized to the site, along with copies of their identification documents and criminal background checks. Medical reports confirming fitness for duty, including suitability for night work and work at height, must also be submitted. Social security registration records should be provided in the form of system-generated documents or copies.

All contractor personnel must have received appropriate training on occupational health and safety before starting project activities, and copies of training certificates must be submitted. Evidence of the distribution and use of personal protective equipment (PPE), including signed inventory records, should also be provided.

Furthermore, the Contractor must present inspection certificates for lifting equipment, compressors, air tanks, and all pressurized vessels to be brought to the project site. A list of chemicals and other substances to be used during the project, along with Turkish versions of their Safety Data Sheets (SDS), should also be submitted.

V.5.2 Risk Management

All contractors should adopt a proactive approach to risk management, which involves identifying potential hazards in advance, planning accordingly, and implementing control measures before the start of project activities or before there is any significant exposure to risk.

An evaluation tool (*see Appendix 3*) is used to generate a general risk categorization which based on the qualitative assessment of the level of risk for each parameter outlined within the tool. Once all parameters are assessed a general risk classification is calculated based on the individual risk levels. There is no grading of parameters applied.

Based on the Supplier Assessment Questionnaire and using the evaluation tool results, a risk assessment will be conducted to consider potential non-compliances with EPCs ESMMP and this SCSMP and classify potential suppliers according to one of three categories. The risk assessment is led by the Procurement Department supported by the EPC E&S Department.

The final risk assessment is defined within the following boundaries.

Risk Score	Risk band	Description
1	Low	Acceptable; the risk is low, and no additional measures are required. Continue to monitor to ensure that E&S risks do not escalate to a higher level.
2	Medium	Partially acceptable; the risk may be acceptable to continue engagement, but mitigation measures should be considered. Further analysis or verification should be performed to give a better estimate of the risk.
3	High	Not acceptable. The project will not purchase goods and services from high risk suppliers.

V.5.3 Management of Contractor During Execution

The Contractor and all subcontractors are responsible for full compliance with Project standards. In this context, a contractor evaluation mechanism will be implemented which includes criteria aiming to evaluate the competence of the contractor and compliance with environmental, social, health and safety requirements.

During the execution of the works, the contractor will monitor their monthly environmental, social, health and safety performance as well as mitigations and corrective actions, and report it to SPV on a regular basis. SPV will review these reports and, if necessary, develop further suggested actions with the relevant contractor. Further reports will also include the performance of the actions taken. When urgent action is required in case of a nonconformity, the contractor is responsible for taking the necessary actions in a timely manner and reporting the results to SPV. The following subjects will be in consideration and will be followed by SPV:

- Contractor is responsible for providing support to ensure that their subcontractors also meet the requirements set by the Project environmental and social standards. All non-compliance situations of subcontractors on E&S and OHS management will be reported to SPV. The contractor will ensure that their subcontractors take adequate mitigation and corrective/preventive actions.
- In the monthly environmental, social, health and safety reports; there will be evaluations of the performance of the project related to environmental, social, health and safety, as well as the mitigation and corrective/preventive actions implemented.
- SPV will provide assistance in the implementation of mitigation and corrective/preventive activities by auditing the monthly environmental, social, health and safety reports and is responsible for keeping the E&S and OHS performance of the Project at a level that fully complies with the project environmental, social, health and safety standards.
- The contractor and its subcontractors' personnel will have access to the Project grievance mechanism.
    - Grievance records will be checked by relevant SPV to ensure that grievances are answered adequately and satisfactorily.
    - All contracted workers will also have access to the grievance mechanism.

With the aim of monitoring E&S and OHS performance of subcontractors and suppliers, SPV will collect the following data from subcontractors and suppliers:

- Incident investigation records,
- Environmental, social, health and safety training records,
- Information on waste management, waste types, amount, disposal methods, etc.,
- Hazardous substance registration and inventory, including Material Safety Data Sheets,
- Internal and external complaint records, studies to resolve complaints,
- Stakeholder interviews and information meeting records,
- Information on the social responsibility projects carried out,
- Corrective/Preventive Action records,
- Risk analysis records,
- Emergency drill records,
- Records of environmental measurements and analysis,
- Occupational hygiene measurement records,
- Medical records,
- Labor force statistics including gender data and local employment data.

V.5.4 Periodic Review of Contractor's Performance

The contractor will be evaluated on ongoing basis in order to confirm or revoke their inclusion in the vendor list. The evaluation will be made based on the quality of products and services delivered. The evaluation will be based on a scoring scale.

For contractor, SPV will perform the evaluation and records its outcome. The evaluation will generally be performed following the below indicators:

- Compliance with delivery and quantity due dates,
- Compliance with the technical specifications,
- Level of technical assistance guaranteed.

Negative feedback may render the contractor as "unreliable" which in turn may result in removing the respective supplier from the database. The contractor may be re-included in the database upon confirmation of compliance with pre-qualification requirements.

SPV will review periodically the supplier information and updates the database accordingly on ongoing basis.

VI. TRAINING

Upon hiring, all subcontractor personnel will receive structured training on human resources, labor rights, and occupational health and safety topics relevant to their roles. This includes awareness of potential social risks such as labor violations, unsafe working conditions, discrimination, and grievances, as well as the associated mitigation measures applicable to their responsibilities (e.g., proper use of personal protective equipment, safe working practices, respectful workplace behavior, and reporting procedures). In addition, personnel assigned to monitoring or supervisory duties will be provided with specialized training to ensure accurate, effective, and compliant performance.

SPV staff will deliver E&S training to contractors. The training will cover the following topics:

Lenders E&S Requirements and Project E&S Requirements for contractors as per financing agreement conditions. The SPV will identify specific training programs and will ensure the implementation.

The SPV will ensure that E&S training programs are extended to subcontractors by contractors if they are involved in the implementation of the Project.

In addition to above, the necessary funds and scheduling time will be provided to ensure effective health and safety training is provided. This commitment will include paid work time for training and training in the language that the workers understand. Both management and employees will be involved in developing the program. To most effectively carry out their safety responsibilities, all personnel must understand (1) their role in the program, (2) the hazards and potential hazards that need to be prevented or controlled, and (3) the ways to protect themselves and others.

Training program will focus on health and safety concerns that determine the best way to deal with a particular hazard. When a hazard is identified, it shall be removed entirely. If that is not feasible, workers shall be trained to protect themselves, if necessary, against the remaining hazard.

At a minimum, employees must know the general safety and health rules and CMP of the worksite, specific site hazards and the safe work practices needed to help control exposure, and the individual's role in all types of emergency situations. SPV will ensure all employees understand the hazards to which they may be exposed and how to prevent harm to themselves and others from exposure to these hazards.

SPV will commit available resources to ensure employees receive safety and health training during the circumstances below.

- Whenever a person or contractor is hired - general safety orientation including an overview of company contractor management systems, policies, procedures and rules,
- Whenever an employee or contractor is given a new job assignment -during formal classroom training, and again, when the supervisor provides specific task training.
- Whenever new work procedures are used - during formal classroom training and supervisor on-the-job training.
- Whenever new equipment is installed - if new hazards are introduced.
- Whenever new substances are used
- To conclude, safety trainings to be conducted whenever a new hazard is introduced.

Employees and contractors must know they are responsible for complying with all company safety rules, and that most accidents will be prevented by their safe work practices. They must be very familiar with any personal protective equipment required for their jobs. They must know what to do in case of emergencies.

Each employee and contractor need to understand that they are not expected to start working a new assignment until they have been properly trained. If a job appears to be unsafe, they will report the situation to their supervisors.

All line managers must understand their responsibilities within the scope of this Plan. This may require classroom training and other forms of communication. The subject can be covered periodically as a part of regular management meetings.

Managers will be trained in the following subject areas:

- The elements of the CMP, and the positive impact the various processes within the system can have on corporate objectives,
- Their responsibility to communicate the CMP goals and objectives to their employees,
- Their role that includes making clear assignments of CMP responsibilities, providing authority and resources to carry out assigned tasks, and holding subordinate managers and supervisors accountable, and
- Actively requiring compliance with CMP, policies and rules and encouraging employee involvement in discretionary safety activities such as making suggestions and participation in the safety committee.

Training will emphasize the importance of managers' visibly showing their commitment to the safety and health and CMP. They will be expected to set a good example by scrupulously following all the safety and health rules themselves.

VII. MONITORING

A structured internal monitoring program will be implemented to assess the effectiveness of human resources and labor management strategies outlined in this Plan during the construction phase of the Project. The scope and frequency of monitoring activities may be reviewed and revised as needed, based on site-specific labor practices, performance trends, stakeholder concerns, or changes in national labor regulations and international standards.

Monitoring activities will be coordinated by the Human Resources and Environmental and Social Departments, in close collaboration with the Technical Department. . Key responsibilities will include verifying subcontractor compliance with labor-related obligations, ensuring fair recruitment and employment practices, monitoring working conditions, verifying implementation of grievance mechanisms, and reviewing compliance with occupational health and safety requirements applicable to the workforce.

Subcontractors will be required to regularly report on labor-related performance metrics, including but not limited to working hours, contract status, wage payments, worker accommodation (where applicable), OHS training, and grievance records. AAOİAŞ will review these submissions on a scheduled basis to ensure that performance targets are met, labor rights are upheld, and workforce-related risks are minimized. Monitoring reports should document all relevant evidence, including statistics, audit findings, and records of worker interviews or inspections.

To ensure comprehensive oversight, subcontractors must also demonstrate active implementation of Human Resources and Labor Management Plan requirements. This includes clear adherence to the Code of Business Conduct (CoC) (Limak Group), provision of safe and equitable working conditions, delivery of regular health & safety and rights-based trainings, and the operation of accessible grievance mechanisms for all non-employee and third-party engaged workers. Monitoring documentation should include evidence such as worker interview summaries, training attendance logs, and grievance resolution records to verify compliance with these key requirements.

Practices such as identity checks at project site entrances and the complete recording of personal identification details in the visitor logbook will be utilized to enable the early detection of child labor and forced labor cases. Security personnel will be specifically informed and sensitized on this critical issue. A worker's ability to present their own identification is an indication that their ID has not been confiscated by a third party for the purpose of forced labor. Additionally, verifying the date of birth on the identification document serves as an effective measure for the early detection of child labor.

In case of actual or suspected forced/child labour incidents involving the SPV, EPC, subcontractors, or their core suppliers, specific investigation procedures will be activated immediately. These will include risk screening, immediate cessation of related work, and prioritization of the child's safety and well-being. Subcontractor Management Plan will be revised as necessary to include lessons learned and prevent recurrence. Corrective actions will be documented and tracked via the Corrective Action Plan system, and authorities will be notified in line with legal obligations.

In addition to routine internal monitoring, daily field-level site checks will be conducted by the Environmental and Social Department to gather information on site organization, workforce deployment, and general labor conditions. Monthly coordination meetings will also be held jointly by the Environmental and Social Department and the OHS Department to present the main findings of the monitoring process, identify systemic issues, and ensure that feedback is integrated into corrective action planning and performance improvement.

Subcontractor performance in implementing human resources and labor-related measures will be reviewed through regular audits, site supervision reports, and direct field observations. Any identified non-conformities—such as failure to provide contracts, non-payment of wages, unsafe working conditions, or misuse of the grievance mechanism—will trigger the preparation of corrective and preventive action plans. Follow-up monitoring will be conducted to confirm the effectiveness of implemented actions and to prevent recurrence.

In parallel to internal oversight, inspections may also be conducted by public institutions, including the Ministry of Labor and Social Security, the Ministry of Environment, Urbanization and Climate Change, the Ministry of Health, and their respective provincial directorates. The frequency and scope of such inspections will be determined by the authorities and may include review of documentation, worker interviews, and site-based compliance checks.

Monitoring efforts will be guided by the framework provided in Table VII.1, which outlines the parameters to be monitored, the corresponding monitoring locations, frequency of measurements, and responsible parties. These monitoring activities will be essential for evaluating the effectiveness of labor and workforce management practices and ensuring full compliance with national labor laws, international standards, and Project-specific commitments.

Table VII.1 Key Monitoring Activities

Parameter	Monitoring Location	Monitoring Method	Monitoring Frequency	Responsible Parties
The composition of the workforce, including the ratio of local to non-local workers, gender distribution, and representation in supervisory roles	Construction sites and AAOİAŞ Headquarters	Review of personnel and employment records submitted by subcontractors	Quarterly	SPV EPC
The number of labor-related grievances submitted	Construction sites and grievance registry	Review and analysis of grievance logs, resolution documentation, and interview feedback	Weekly	SPV EPC
The percentage of workers who have completed mandatory occupational health and safety and project-specific trainings	Construction sites and training venues	Review of attendance records, training logs, and cross-checking with annual training plans	Quarterly	SPV EPC,
Reported cases of discrimination, harassment, or other violations of equal opportunity principles	Construction sites and AAOİAŞ Headquarters	Review of incident reports, complaint investigations, and confidential interviews where applicable	Quarterly	SPV EPC
The extent to which labor policies and procedures are being implemented as per the Project's Labor Management Plan	Construction sites	Field inspections, document checks, and subcontractor interviews	Monthly	SPV EPC
Subcontractor compliance with national labor legislation and contractual labor obligations	Subcontractor offices and construction sites	Labor audits, payroll record reviews, and compliance inspections	Quarterly	SPV EPC

In cases of non-compliance identified through internal oversight, AAOİAŞ will ensure that corrective and preventive measures are promptly implemented in coordination with the Contractor and relevant subcontractors.

All labor-related findings, including violations of labor rights, non-compliance with working conditions, or complaints received from workers or other stakeholders, will be documented in accordance with national labor legislation and Project procedures. In the event of serious violations—such as repeated wage payment issues, lack of employment contracts, or unsafe working conditions—AAOİAŞ will ensure that the issue is reported to the competent authorities and that appropriate technical, procedural, and contractual actions are taken.

VIII. KEY PERFORMANCE INDICATORS

The following Key Performance Indicators (KPIs) will be monitored, verified, and evaluated.

Table VIII.1 Key Performance Indicators – Construction Phase KPIs

Monitoring Parameter / Performance Indicator	Target	Frequency	Responsible Party
Percentage of local employment	Up to 50% of the workers will be hired from the local population	Quarterly	AAOİAŞ,
Percentage of workers from directly project-affected areas	At least 50% of the workers will be hired from directly affected communities	Quarterly	AAOİAŞ,
Percentage of women employees	Priority will be given to hiring women; targets to be adjusted based on workforce requirements	Quarterly	AAOİAŞ,
Number of worker grievances	Less than five	Monthly	AAOİAŞ,
Percentage of employee complaints resolved	100% of complaints received will be concluded within the designated resolution timeframe	Monthly	AAOİAŞ,

IX. AUDIT AND REVIEW

The implementation of this Plan should be regularly monitored and reviewed in accordance with the ESMMP. All incidents and non-conformities related to subcontractor and labor management will be documented and reported as outlined in this Plan. Subcontractors will be inspected by the EPC Environmental Engineer and H&S Chief. Both EPC and subcontractors will also be subject to audits and oversight by the SPV Environmental and Social (E&S) Manager, H&S Manager and relevant are assigned by them in line with the scope and schedule defined under the Subcontractor Management Plan. These audits and associated records should be managed in compliance with the Project's approved plans and procedures. Relevant documents that should be reviewed during audits may include subcontractor-specific records such as the external and internal grievance and suggestion tracking databases related to subcontracted personnel, subcontractor labor and employment records (e.g., worker contracts, payroll), training attendance logs for subcontractor staff, non-conformity and incident reports, and subcontractor performance evaluation forms prepared. Observations and deficiencies identified during the audit process should be documented in formal audit reports, and all findings requiring improvement should be tracked under the Corrective Action system. Project management should regularly review audit results and corrective action records, ensure timely follow-up, and implement additional measures as needed to maintain full compliance with labor and subcontractor management requirements.

X. REPORTING

Regular reporting should be conducted to ensure the effective implementation and continuous improvement of subcontractor management activities throughout the construction phase of the Project. Reporting should be structured to address both internal monitoring and auditing outcomes, as well as external compliance obligations and stakeholder engagement requirements.

Based on monitoring results, necessary corrective and preventive actions should be identified, and required updates should be incorporated into this Plan. The training program will also be revised accordingly to address any observed gaps related to subcontractor performance, occupational health and safety, or compliance with Project requirements. Regular audits and site observations should be carried out to verify that all subcontractor-related activities are implemented in accordance with the provisions of this Plan.

Reports should be prepared using data gathered through the subcontractor monitoring activities defined under this Plan. The results and supporting documentation (e.g., grievance records, attendance logs, training records, and interview notes) should be clearly documented within appropriate reporting formats. This section of the Plan outlines the instructions and requirements for implementing these reporting activities.

Reporting activities under this Plan primarily relate to subcontractor workforce composition, grievances and resolution status, training participation rates, working hours compliance, registration with the Social Security Institution, and adherence to occupational health and safety procedures. In the event of serious subcontractor-related incidents—such as confirmed cases of discrimination, wage violations, or occupational accidents—an incident report including root cause analysis (RCA), corrective measures, and follow-up actions should be submitted to the relevant authorities, including the Ministry of Labor and Social Security, within 30 business days.

All data, together with the results of inspections and audits, should be summarized in the subcontractor management chapter of the Environmental and Social Monitoring Report, prepared on a quarterly basis. This report will document any identified non-compliances, corrective actions taken, and recommended time-bound improvements. Reporting should be supported by documentary evidence such as signed attendance forms, site inspection photographs, and subcontractor interviews.

All personnel are encouraged to raise concerns, suggestions, or complaints related to subcontractor operations through the established grievance mechanism by completing a grievance form. Grievances submitted by subcontractor workers regarding contracts, wages, working conditions, or other concerns should be addressed and followed up appropriately. Communication channels available for submitting grievances are outlined in the Stakeholder Engagement Plan.

Throughout the construction phase of the Project, this Plan will be reviewed by the SPV Environmental and Social (E&S) Manager and H&S Manager, based on audit results, subcontractor performance findings, and any major changes in site operations. Updates to the Plan will be coordinated between the E&S Manager and H&S Manager.

APPENDICES

Appendix 1: Responsible Sourcing Policy

Appendix 1: Responsible Sourcing Policy

RESPONSIBLE SOURCING POLICY

Wherever it operates, AAOİAŞ aims to be among the top businesses contributing favorably to the environment and society.

We want to make sure that the suppliers we work with are aware of their obligations to the people they employ, the communities they influence, and the environment both locally and globally.

We will engage with suppliers to support any required improvements and promote continual improvement. Suppliers are expected to follow applicable project standards at all times. If suppliers do not follow this policy, we will expect them to make the necessary corrections and improvements, working as cooperatively as they can with AAOİAŞ. Serious violations will result in AAOİAŞ ceasing its contractual obligations.

Our Commitments

- We are committed to sourcing only goods that are produced, processed, and traded in accordance with applicable national law and accepted international good practice;
- We aim to ensure that our suppliers join us in committing to Code of Business Ethics (Limak Group), Human Resources and Labor Management Plan.
- We are dedicated to preventing forced labour, child labour, modern slavery, human trafficking, bribery, and corruption in all areas of our business and supply chains;
- We have put in place measures to promote the reporting of issues. As stated in the Worker Grievance Mechanism, employees are required to voice problems, and management is expected to address them;
- We are dedicated to avoiding discrimination based on race, color, sex, language, religion, political opinion, national or socioeconomic origin, birth, union membership, sexual orientation, health condition, family obligations, age, disability, or any other distinctive personal features;
- We expect our suppliers to act in accordance with all environmental and social applicable laws and regulations, as well as applicable project standards, with suitable controls and processes in place to maintain compliance;

ANTALYA-ALANYA MOTORWAY PROJECT

Revision No: 3 **Date:** 08.09.2025

TRAFFIC MANAGEMENT PLAN

REVISION STATUS		
Revision Date	**Rev. No**	**Explanation**
01.04.2025	00	This plan is prepared according to TS EN ISO/IEC 9001:2015, TS EN ISO/IEC ISO 14001:2015, TS EN ISO/IEC 45001:2018 and IFC Performance Standards
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TRAFFIC MANAGEMENT PLAN

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LIST OF ABBREVIATIONS

AAOİAŞ	Antalya-Alanya Otoyolu İnşaat Yatırım ve İşletme A.Ş.
BOT	Build-Operate-Transfer
CLO	Community Liaison Officer
E&S	Environmental and Social
EHS	Environmental, Health, and Safety
ENCON	ENCON Environmental Consultancy Co.
EPC	Engineering, Procurement and Construction (Limak İnşaat Şanayi ve Tic. A.Ş.)
ESIA	Environmental and Social Impact Assessment
ESMMP	Environmental and Social Management and Monitoring Plan
ESMS	Environmental and Social Management System
HSE	Health, Safety and Environment
H&S	Health and Safety
IFC	International Finance Corporation
ITS	Intelligent Transportation Systems
KGM	General Directorate of Highways
KPIs	Key Performance Indicators
Limak	Limak İnşaat Şanayi ve Tic. A.Ş.
OHS	Occupational Health and Safety
PCE	Passenger Car Equivalents
RCA	Root Cause Analysis
SEP	Stakeholder Engagement Plan
SPV	Special Purpose Vehicle (Antalya-Alanya Otoyolu İnşaat Yatırım ve İşletme A.Ş.)
WHO	World Health Organization

TRAFFIC MANAGEMENT PLAN

I. INTRODUCTION

Ministry of Transport, and Infrastructure (former Ministry of Transport, Maritime Affairs and Communications), General Directorate of Highways ("KGM" or "the Administration"), as the owner of the Antalya-Alanya Motorway Project, has tendered for a contract in accordance with the Law on Implementation of Some of the Investments and Services in the Framework of Build, Operate and Transfer Model (Law No: 3996). Following the tendering process, KGM has awarded Antalya-Alanya Otoyolu İnşaat Yatırım ve İşletme A.Ş. (AAOİAŞ or the Project Sponsor) with a Build, Operate and Transfer (BOT) contract for the implementation of the Project. Accordingly, AAOİAŞ will be referred as Project Sponsor[1] in the scope of this report. The main contractor for the Project has been designated as Limak and will henceforth be referred to as the Contractor (or EPC).

The project is designed to connect the districts of Serik and Alanya via the Manavgat district of Antalya province. The Project will enhance the existing transportation network services with its surrounding provinces: Burdur, Muğla, Konya, Isparta, Karaman and Mersin. Various environmental, social, and technical studies have been conducted along the initial route of the Project tendered by the KGM. Based on these studies, the route was optimized, incorporating engineering practices and addressing environmental and social considerations, particularly issues of involuntary and economic resettlement, before being finalized. According to the most current design, the total length of the Motorway, which will be a dual carriageway of mostly 3 and partially 2 lanes (3x2 and 2x2) in each direction, is 117.8 kilometers including the main carriageway and the access roads[2].

This Traffic Management Plan ("Plan") has been prepared by Antalya-Alanya Highway Construction Investment and Operation Inc. ("AAOİAŞ" or "SPV") for the Antalya-Alanya Highway Project ("Project") in accordance with national legislation, the Equator Principles ("EP"), the International Finance Corporation ("IFC") Performance Standards ("PSs"), and the international standards that reference the relevant legislative sections. The Plan covers the construction phase of the Project.

I.1 Project Description

The Project starts at Serik Interchange (Km: 52+000) and then proceeds eastward, following the corridor at the foothills of the Taurus Mountains within the boundaries of Serik and Manavgat districts, ending at north of Konaklı neighborhood of Alanya District (Km: 136+000). From this point onwards, the route turns southward with a 2x2 lane connection road and connects to the D400 state road at the Alanya West Interchange.

As of April 2025, the current Project design includes a total of 117.8 kilometers of road, comprising 84 kilometers of main road (motorway) and 33.8 kilometers of access roads. Other structures to be built as part of the project are as follows:

- 16 viaducts,
- 22 bridges,
- 305 culverts,
- 25 interchanges,
- 56 overpasses,
- 43 underpasses, and
- 5 tunnels

The map showing the construction components and road route within the scope of the Project's construction activities is provided in Figure I.1.

[1] The BOT Contract uses the term "Appointed Company" to refer Project Sponsor

[2] It should be noted that the environmental and social baseline characterization, maps and scoping assessments provided in this report are based on the most current design.

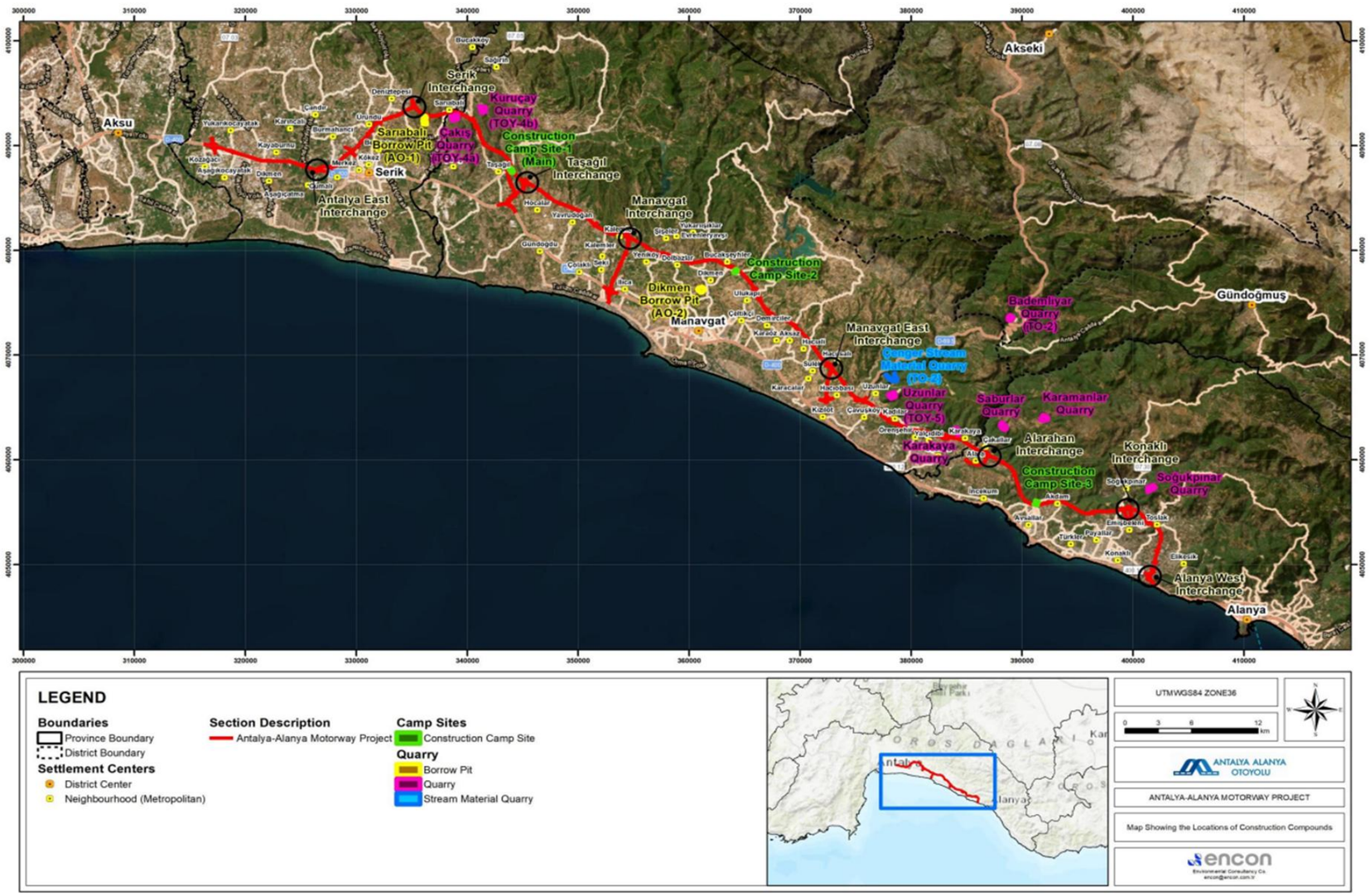


Figure I.1 Map Showing the Locations of Construction Compounds

II. PURPOSE AND SCOPE

This Traffic Management Plan ("the Plan") has been prepared for the Antalya-Alanya Motorway Project ("the Project").

The purpose of this Plan is to identify and mitigate traffic-related risks and impacts that may arise during the construction phase of the Project. This includes preventing, minimizing, and managing adverse impacts on community health and safety, environmental conditions, and worker safety caused by project-induced traffic activities. The Plan defines the key principles, mitigation measures, and monitoring requirements that should be done to ensure effective traffic management throughout the construction works.

This Plan has been developed in line with national legal requirements and applicable international standards, including those of international financial institutions. It aims to provide a structured framework for minimizing traffic-related risks resulting from driver behavior, vehicle conditions, road design, construction works, and site-specific traffic intensity. This management plan is a living document developed with the best available information and will be reviewed and revised as necessary due to the nature of the construction and progress.

The purpose of this plan is to ensure the safe management and control of trucks, cars and earth moving machines including all vehicles to be used for transportation of humans, materials and equipment during the execution of construction activities carried out on the Project.

The Plan applies to:

- Access roads to construction sites, manufacturing sites, active work fronts, quarries, borrow pits and dump sites, camp sites, etc.
- Delivery of machinery, equipment and materials,
- Movement of machinery and equipment within the manufacturing sites such as beam production facilities, batching plants and asphalt plants,
- Interaction with pedestrians and vehicle traffic

III. LEGISLATIVE FRAMEWORK AND REFERENCE STANDARDS

The Plan has been structured to align with both national and international requirements, including legislation, guidelines, and sectoral standards that govern road safety, traffic regulation, and transport risk management. Accordingly, the following sources of reference should be used to guide the implementation, monitoring, and compliance procedures related to traffic management activities during the construction phase of the Project.

III.1 National Requirements

The following Turkish laws and regulations form the legal framework for traffic management and occupational safety throughout the construction activities of the Project:

- Highway Traffic Law (Law No. 2918)
- Regulation on Highway Traffic
- Regulation on Traffic Signs
- Regulation on the Transportation of Hazardous Goods by Highway
- Regulation on Health and Safety Signs
- Regulation on the Use of Personal Protective Equipment in Workplaces
- Labor Law (Law No. 4857)

- Regulation on Procedures and Principles of Health and Safety Training for Employees
- Regulation on the Control of Exhaust Gas Emissions
- Regulation on Monitoring of Greenhouse Gas Emissions
- Regulation on Decreasing Ozone Depleting Substances
- Regulation on Reduction of Sulphur Content of Certain Fuels
- Regulation on Control of Excavation Soil and Construction Debris
- Regulation on the Evaluation and Management of Environmental Noise

These legal instruments define the mandatory requirements for traffic safety, signage, emissions control, workplace protective measures, and occupational health training that should be implemented throughout the construction phase.

III.2 International Standards and Conventions

In addition to national legislation, the Project should be implemented in accordance with internationally recognized guidelines and performance standards. These standards are essential for meeting the expectations of international financial institutions and ensuring best practice application in traffic management and community safety.

To ensure responsible operations, AIIB adheres to policies addressing environmental and social impacts as outlined in its Environmental and Social Framework (“ESF”) document. Updated in June 2024, the ESF reflects AIIB's commitment to international standards and sustainable development practices. The ESF includes the Environmental and Social Policy (ESP), which sets mandatory requirements for all projects, supported by Environmental and Social Standards (“ESSs”).

- IFC Performance Standards (2012), specifically:
  - Performance Standard 3: Resource Efficiency and Pollution Prevention
  - Performance Standard 4: Community Health, Safety, and Security
- IFC Environmental, Health and Safety (EHS) General Guidelines (2007)
- IFC EHS Guidelines for Toll Roads (2007)
- IFC Guidance Notes (2012)
- Equator Principles IV (2020)
- World Bank Environmental and Social Standard 4 (ESS4): Community Health and Safety (2017)
- European Union Road Safety Policy Guidelines and Directives

These international references should guide the planning and execution of traffic safety measures and support continual improvement in managing risks associated with Project-related traffic during the construction phase.

IV. LINKAGE WITH OTHER PROJECT PLANS AND PROCEDURES

This Plan is supported by other management plans and procedures developed under the Environmental and Social Management System (ESMS) of the Project. The following plans and procedures are directly relevant to the implementation of the Traffic Management Plan and should be applied in coordination to ensure comprehensive environmental and social risk management throughout the construction phase:

- Environmental Accident and Spill Response Management Plan

- Subcontractor Management Plan
- Construction Camp Site Management Plan
- Noise and Vibration Management Plan
- Labor Management Plan
- Community Health and Safety Management Plan
- Occupational Health and Safety Management Plan
- Communication and Training Plan
- Emergency Preparedness and response Plan
- Air Pollution and Emissions Management Plan
- Solid Waste Management Plan
- Hazardous Material Management Plan

The effective integration of these plans should be ensured to maintain alignment with national legislative requirements and international best practice standards. Coordination among these plans will help mitigate cumulative risks and enhance the efficiency and safety of construction operations.

V. ROLES AND RESPONSIBILITIES

The roles and responsibilities of key workers such as flagmen, drivers and operators are given below.

Project Manager (EPC)

- Providing the necessary resources for the development, implementation and monitoring of this Traffic Management Plan and associated strategies.
- Ensuring that employees or subcontractors have the required skills and training to conduct worksite traffic management activities.
- Ensuring any incidents are recorded and closed out and appropriate actions taken with minimal time frames
- Ensuring that all identified hazards are controlled
- Ensuring this Traffic Management Plan is complied with national legislations and international requirements.

E&S and OHS Manager (EPC)

- OHS Manager ensures that Traffic Chief is implementing this management plan.
- Monitoring and assurance of the EPC Contractor's subcontractors E&S and OHS system performance and requirements of the Project.
- Reviewing subcontractors and suppliers E&S and OHS documentation to ensure that they are aligned with Projects' requirements.
- Monitoring performance through Key Performance Indicators (KPIs), reports, audits, and meetings.
- Reporting E&S and OHS performance to the SPV E&S and OHS Management, and other related parties.
- Ensuring that all E&S and OHS training needs are identified, provided and recorded.

- Disclosing relevant E&S and OHS information to Project staff and the public and coordinating activities for raising awareness.
- Ensure that this traffic management plan is being implemented.
- Document and investigate incidents or near-miss incidents relating to the worksite traffic management processes.
- Regularly inspect the workplace, monitoring working and traffic conditions and taking appropriate action where necessary.
- Ensure that grievances received by the stakeholders through CLO's are resolved in a timely and transparent manner.

Traffic Chief

- Implement this Traffic Management Plan and report any non-compliance and accidents to the OHS Manager.
- Leading risk assessment studies on Traffic Management,
- Carry out planning activities that will reduce traffic loads by meeting with the responsible of activities that will cause vehicle - equipment traffic in the project at regular intervals
- Ensure that the flagmen, operators and drivers working in the project are familiar with the requirements of this Plan and to provide them with training on traffic safety practices, to take a priority role in creating and updating the training content,
- Conduct daily site inspections and share the findings with the OHS Manager.
- Ensure that the current status of vehicles - equipment and pedestrian roads in the field are inspected on a daily basis, ensure that unsafe situations are eliminated,
- Analyze the necessity of traffic signs, signalization and warnings in the field, guide the logistics units about the necessary standards in the supply of these elements, ensure that regular controls and inspections are carried out after their installation.
- Ensure that toolbox talks and refresher trainings for drivers and operators on safe traffic practices are given by Traffic Supervisor.

Traffic Supervisor

- Implement this Traffic Management Plan, ensuring compliance at site level, and report any non-compliance or accidents to the Traffic Chief.
- Inspect the current status of vehicles, equipment and pedestrian roads in the field on a daily basis, eliminate unsafe situations. Report findings of these inspections to the Traffic Chief.
- Supervising daily vehicle and equipment movements within the construction site and along access roads, ensuring safe circulation.
- Monitoring flagmen's performance during traffic control, ensuring they follow instructions and safety rules.
- Checking the placement and visibility of traffic signs, barriers, and warning boards, reporting deficiencies to the Traffic Chief.
- Coordinating with Security Personnel at site gates to manage entry/exit of vehicles and prevent congestion.
- Reporting unsafe driving, near misses, or violations to the Traffic Chief and recommending corrective actions.
- Supporting toolbox talks and refresher trainings for drivers and operators on safe traffic practices.
- Ensuring pedestrian routes and crossing points in work areas remain safe and free from obstructions.

- Resolve the grievances or suggestions received from the CLO's related to community traffic issues in timely and transparent manner, and escalate them to the Traffic Chief.
- Give specific flagmen trainings to flagmen and record these trainings.

Flagmen

- Join given specific flagmen trainings, toolbox talks and refresher trainings and guide vehicles safely.
- Giving signals to the driver-operator to ensure safe movement of vehicle-equipment in work areas,
- Report any non-compliance of vehicles and operators to the Traffic Supervisor.
- In case of any accident, report to the Traffic Supervisor immediately.
- Making directions to prevent drivers and operators from hitting people and other equipment,
- Supervising the operation of vehicles and equipment in the field and ensuring their safe parking,
- Guiding in order to reduce pedestrian and vehicle interaction in areas where vehicles and equipment are busy,
- Inform workers about using the pedestrian way,
- To use and maintain the PPE provided to him, indicating that he is the Flagman.

Drivers and Operators

- Having knowledge of the traffic rules in and out of the field,
- Having the appropriate driver's license and the necessary legal documents.
- To ensure that the vehicle or equipment used is maintained and in good condition,
- Wearing the seat belt while using the vehicle or equipment, ensuring that all other passengers wear seat belts, not moving until the other passengers are wearing their seat belts,
- To comply with the speed limits determined on and off the field,
- Complying with all traffic signs, signals and mandatory directions on and off the field,
- To use the vehicle or equipment with its headlights on, motion signals and alarms (reverse gear alarm, beacon lamp and alarms that work with the movement of pallets in tracked work machines),
- Do not disable the safety equipment's of the vehicles,
- To comply with the flags' signs and warnings,
- Not reversing where the flagman is not present,
- Parking in designated places only.
- Not to close or block in-field transition routes unplanned,
- Not to carry any unauthorized person in the vehicle or equipment,
- To make pre-use checks before using all vehicles and equipment,
- To use all PPE required by the project when going out of the cabin in the field,
- Not smoking in vehicle or equipment cabins,
- Keeping vehicle and equipment cabins clean and tidy,
- Not to consume food or hot drinks in vehicle and equipment cabins,
- Not using materials that will reduce the field of view on vehicle and equipment cabin windows (curtains, paper, cardboard, etc.)
- Not to leave the cabin while the vehicle or equipment is in operation,
- Stopping the engine of the vehicle or equipment when not in use,
- Not to use mobile phones and other communication tools while the vehicle or equipment is in operation
- Not to move unless the transported load is safely loaded.

- Joining toolbox talks and refresher trainings given by Traffic Supervisor and obliging to the rules.

CLO

- Communicating traffic arrangements and restrictions to local communities, subcontractors, and drivers.
- Collecting feedback, grievances, or complaints from affected stakeholders regarding traffic and reporting them to the EPC, ensure that they are resolved in a timely manner.
- Ensuring that advance notice of road closures, detours, or heavy vehicle movements is delivered to nearby settlements, grazing area users.
- Notifying and train nearby settlements, schools, and near institution users in advance about traffic arrangements and heavy vehicle usage where project traffic interacts with these areas.
- Supporting awareness campaigns about traffic safety for both workers and communities.

VI. GENERAL TRAFFIC RULES

General rules for traffic caused by construction are listed as below:

- All subcontractors and other project road users will be required to comply with this plan,
- School bus drivers will be informed about the busiest hours of project activities,
- Necessary training and awareness training will be given to heavy vehicle drivers,
- A follow-up mechanism will be established to continuously monitor and inspect the speed control of heavy vehicles, the routes they use, and the transportation routes,
- Regulations and laws regarding the transportation of materials and loads by heavy vehicles will be implemented and additional measures will be taken in accordance with national legislation, if required. Tarpaulin, closed transport, load limits, maintenance and measurements of vehicles will be checked, environmental and social security measures will be taken,
- The grievance mechanism will be used effectively, and traffic related complaints will be recorded, evaluated, resolved and managed
- Safe work zones will be established to physically separate workers on foot from the traffic;
- The timing for works implementation (Traffic management) will be optimized to minimize traffic delays due to rehabilitation, widening or maintenance work zones on existing road sections.
- Activities, e.g., maintenance, that affect traffic will, if possible, be conducted during low traffic hours in order to avoid affecting local traffic.
- For the construction works to be conducted at locations where traffic exists, the Contractor will establish safe work zones by taking relevant measures (closure of roads, diversion of traffic, use of protective barriers, cones, warning lights, etc.) in consultation with the pertinent authorities (police, traffic authorities, local authorities, etc).
- Weather forecasts will be monitored to provide advance warning of extreme weather to drivers and schedule the work accordingly.
- Temporary traffic control devices, such as signage, warning devices, physical barriers will be set up where required in a consistent manner throughout the work zone to provide passing motorists with advanced warning of upcoming work zones;
- Traffic Supervisor will train the workers in topics such as traffic flow, work zone setup, and proper placement of channelizing devices.
- All workers will wear high-visibility safety apparel.
- Speed Limits of vehicles related to the Project must be compliant with the limits.
- Speed limits will be implemented for trucks travelling to and from construction sites (local traffic speed limits).

- Slow driving rules in will be implemented, particularly near sensitive areas which will be identified prior to start of construction related activities;
- Project traffic routing through settlement areas will be reduced wherever possible.
- Optimum traffic routes will be identified and communicated to the drivers (both heavy and light vehicle drivers)
- Noise monitoring will follow the provisions set in Noise and Vibration Management Plan. Noise levels will be managed and monitored according to the Noise and Vibration Management Plan.
- Any grievances received from stakeholders will be managed in accordance with the Grievance Mechanism as detailed in the Project SEP
- Roads will be assessed to ensure suitability for heavy and large vehicles prior to use by Project vehicles
- Engagement will be made with local authorities on the issue of traffic movement during the construction phase whenever necessary but at least once a month.
- Residents in nearby communities will be informed about the transport routes to be used. Signage will be erected in the weeks prior to any works commencing along and on adjacent roads to the Project area, notifying the public of the construction activity and related transportation to take place and the timing
- Supervision and escort for heavy machinery (which requires escort and permit in line with national Legislation) will be provided.
- Supervision for vehicles carrying construction materials and equipment that pass over public or private roads and motorway crossings will be provided.
- Project related traffic will be regulated during certain dates and times where local community will require to commute (to/from schools, commercial areas etc.) or take on any agricultural activity (animal grazing or other farming activities etc.).
- In order to minimize off-site traffic, the Contractor will give priority to the determination of excavation material storage areas within the expropriation corridor of the motorway and the selection of quarries and borrow quarries with the least possible transport distance.
- The contractor will evaluate and approve subcontracted site locations considering the potential impacts of site-related traffic on nearby communities.
- The contractor will clearly identify construction zones with appropriate visual means such as reflective barriers and flashing signs.
- Temporary access to private property or appropriate accessing alternatives will be determined in consultation with the land owners or users.
- Local authorities and communities will be provided with detailed information on the planned closure of roads at least 2 week in advance by the communication channels defined in the SEP such per email, signage boards, traditional media (newspapers, radio), etc. as applicable. Routes envisaged for construction traffic and critical places (including sensitive receptors such as hospitals, schools) will be determined and agreed upon in consultation with relevant authorities and, if necessary, local people.
- Methods for every road crossing will be determined and agreed upon with authorities
- prior to taking any action. All methods and construction techniques proposed by the Contractor will aim to minimize possible disruptions caused by road crossings.
- Contractor will ensure that road safety training will be provided to employees.
- The schools nearby the Project site will be informed about the peak movements of the vehicles and vehicle traffic will be avoided during hours when children are traveling to and from school.
- Heavy machinery and vehicles utilized in transportation activities (including transportation of personnel) will be used by qualified and licensed drivers.
- All drivers will know and comply with all traffic signs, will be made aware of hotspots of intense traffic that are expected along the route and are trained properly for on and off road conditions.

- Managing and monitoring of working and resting hours drivers will be undertaken according to Turkey Legislation.
- Monitoring security arrangements for loads, vehicles and drivers will be undertaken according to national legislation.
- All project work sites, Project Facilities, temporary roads, and traffic management works will be signposted in line Turkey Legislation and as required by the Traffic Management Plan.
- Night drive/transportation will be limited as much as possible to reduce the risk of accidents and obtaining necessary permits shall night transportation be required.
- Compensating damages caused by an accident due to project activities will be undertaken according to national legislative requirements.
- A Grievance Mechanism Procedure will be set up for communities and individuals to formally communicate their concerns, complaints and grievances and facilitate resolutions that are mutually acceptable by the parties.
- The routes of the roads that will be used and the peak hours of the usage of the roads will be shared with village heads and management of the schools by the communication channels defined in the SEP such as email, as applicable.
- The CLOs of the contractors will arrange awareness training for schools, to be given by the HS Manager or Officer, if there is a school located on the route of the roads that will be used.
- Installation of barriers (e.g. fencing,) to prevent pedestrian access to the Project construction area except at designated crossing points.
- Landfill irrigation system will be applied to prevent dust formation on the road. Regular and frequent irrigation will be applied especially in the dry period for dust reduction.
- Where there are sensitive products, dust screening measures will be applied.
- The grievance mechanism will be strengthened and operated along the entire route, all complaints will be recorded and resolved in accordance with the GRM procedure.
- In case of complaints, additional measurements will be made and the results will be shared with the complainant.
- Road improvement/rehabilitation will be implemented when necessary.
- The level crossings used for livestock breeding and for passing to pasture areas will be determined and signposted, indicating an approaching speed limit of 10 km/h and installing a Stop signal at the crossing point.
- During the construction period, a passageway will be left at certain intervals for animal passages,
- It will be determined in consultation with the villagers so that the animal crossings do not cause difficulties in their livelihoods and do not lengthen the roads,
- Where necessary, safe and functional passageways or underpasses etc. will be constructed.
- Mitigation Measures for the Impact on the Community Health and Safety:
- In terms of children's health, taking dust-preventing screening measures to prevent dust towards schools, in order to prevent the schools from being affected by dust during the construction process and the security problems that may arise from the construction activities, the existing firewalls and wires should be developed and strengthened with more functional and protective measures.
- Improvement of the firewall so that students are not exposed to a risk from construction.
- Fire walls should extend through the roof and terminate close to the base of the wall. They should be finished off on the top with a sheet metal cap to protect it against harsh weather conditions. The appointed subcontractor in charge of the firewall’s
- improvement should ensure and provide documentation that the firewalls can withstand
- a standard fire resistance test (fire-resistance rating).

- Continuous monitoring and reporting of social and environmental impacts around schools, by means of signage boards and email and other appropriate communication channel as defined in the SEP.
- Underpasses and overpasses that are suitable for public use and that can pass at
- important points should be planned and implemented,
- The security measures and lighting of the passages should be taken at a sufficient level and they should be accessible; it will be built in accordance with the use of children, elderly, disabled and parents with children,
- The construction activities on the existing roads will only start after the relevant permits are obtained, and signage, barrier, fence, lighting, etc. will be completed in cooperation with the relevant authorities. All necessary precautions will be taken.
- The contractor will clearly identify construction zones with appropriate visual means such as reflective barriers and flashing signs. Routes envisaged for construction traffic and critical places
- (including sensitive receptors such as hospitals, schools) will be determined and agreed upon in consultation with relevant authorities and, if necessary, local people.
- Construction vehicles will only operate within these regions and routes.
- In order to minimize off-site traffic, the Contractor will give priority to the determination of excavation material storage areas within the expropriation corridor of the motorway and the selection of quarries and borrow quarries with the least possible transport
  distance.
- The contractor will evaluate and approve subcontracted site locations considering the potential impacts of site-related traffic on nearby communities.
- A follow-up mechanism will be established for the speed control of heavy vehicles, the routes they use and the continuous monitoring and inspection of transportation routes.
- Truck activity reports based on GPS technology will be periodically requested from the contractors.
- Considering the pedestrian traffic, the construction will continue without closing the pedestrian crossing routes or by providing alternative crossings,
- Heavy vehicle offsite traffic will be planned in such a way that it does not coincide with the entrance and exit times of the schools. The Contractor or the specific subcontractor will be responsible for this, as applicable.
- School bus drivers will be informed about the busiest hours of project activities,
- Necessary training and awareness training will be given to heavy vehicle drivers,
- Pits, splits and deteriorations that may pose danger will be maintained immediately.
- Road improvement works to prevent risks arising from weather conditions will be carried out.
- Considering that the traffic from villages to districts will increase on the days when the district market is established, heavy vehicle traffic will be kept under control in order to prevent risks these days.
- Duration of traffic density and dense points etc information will be given to the local people by mukhtars or by holding safety meetings.
- A follow-up mechanism will be established for the speed control of heavy vehicles, the routes they use and the continuous monitoring and inspection of transportation routes,
- The grievance mechanism will be used to ensure traffic-related complaints are recorded, evaluated, resolved and managed. Steps and time scales for managing grievances will follow the Grievance Mechanism provisions included in the Stakeholder Engagement Plan (SEP).
- A shuttle bus will transport the project workers from the workers camp to the project construction site.

Risk Assessment

- Preferring the hours when the traffic is not very busy when planning high-risk activities,
- The location of the work carried out in the field, its interaction with vehicles or pedestrians, hazards specified in the traffic management plan prepared specifically for the site Control of Risks
- Separation of routes with appropriate traffic controls to minimize pedestrian and vehicle interaction,
- Suitable marking, signaling and using barriers to reduce vehicle speed and control pedestrian movements,
- Separation of vehicle and pedestrian roads with physical barriers,
- Providing safe access for pedestrians and people with disabilities,
- Recording traffic management regulations for the site,
- Regular control and inspection of field traffic routes and all traffic control devices
- In cases where it is not possible to completely eliminate the risk as a result of the risk assessment, one or more of the following options are considered in order to minimize the risks:
    - Ensuring the job is done with safer equipment (Ex: Replacing forklifts with other load handling equipment such as walker stackers or pallet trucks),
    - Avoiding contact between hazards and people (e.g. creating a delivery area away from other pedestrians or their activities),
    - Using engineering controls (Ex: Speed limiters on forklifts, presence detection devices, breakers, etc.)
- If a risk still remains after applying the above control measures, the following controls are considered in order to minimize the residual risk, as reasonably practicable:
    - Using administrative controls (eg, reviewing warning signs or delivery times to prevent or reduce the need for pedestrians and vehicles to interact),
    - Use of personal protective equipment (eg: high-visibility workwear)
    - If a single control is not sufficient to minimize risks, a combination of the above mentioned controls may be used.

VI.1 License Classes

Class age requirement, experience requirement, the period of validity, and other classes for authorization are provided in Figure VI.1.

SINIFI	YAŞ ŞARTI	DENEYİM ŞARTI	GEÇERLİLİK SÜRESİ	YETKİLİ OLDUĞU DİĞER SINIFLAR
M	16		10	
A1	16		10	M
A2	18		10	M-A1
A	20	EN AZ İKİ YIL A2 *	10	M-A1-A2
B1	16		10	M
B	18		10	M-B1-F
C1	18	EN AZ B	5	M-B-B1-F
C	21	EN AZ B	5	M-B-B1-C1-F
D1	21	EN AZ B	5	M-B-B1-F
D	24	EN AZ B	5	M-B-B1-D1-F
BE	18	B	10	M-B-B1-F
C1E	18	C1	5	M-B-BE-B1-C1-F
CE	21	C	5	M-B-BE-B1-C-C1-C1E-F **
D1E	21	D	5	M-B-BE-B1-D1-F
DE	24	D	5	M-B-BE-B1-D-D1-D1E-F***
F	18		10	M
G	18		10	M

Figure VI.1 License Classes and Details

VI.2 Vehicle Classification

The following vehicles will be classified as Light Vehicles.

- Passenger cars and pickups
- Vans
- Four-wheel drive, minibuses and pickups
- Personnel transport vehicles with a capacity of 12 or less passengers
- Trucks or vans with a capacity of less than 2.5 tons.
- 2- or 4-wheel drive vehicles with a capacity of less than 2.5 tons.

The following vehicles will be classified as Heavy Vehicles.

- Trucks or vans with a capacity of more than 2.5 tons.
- Buses with a capacity of 12 or more passengers
- Semi dumpers
- Light loaders and loaders
- All dump/freight trucks
- 2- or 4-wheel drive vehicles with a capacity of more than 2.5 tons;
- Water tankers.

VI.3 Traffic Signs

With regard to off-site project-related traffic, it is mandatory to comply with all traffic regulations and warning signs in accordance with the Highway Traffic Law and related regulations, to ensure that works are carried out safely. For on-site traffic, the necessary arrangements and warning signs will be established within the work areas and in locations where interaction with third parties may occur.

VII. MITIGATION MEASURES FOR TRAFFIC-RELATED RISKS AND IMPACTS

Following measures will be taken in accordance with the KGM's Technical Specifications for Motorways and relevant international standards to ensure traffic safety at the construction sites and minimize the risk of accidents:

- Significant numbers of trucks and other construction machinery will be involved in the land preparation and construction activities. Since the heavy machinery will work within the construction corridor, the risks posed on the users of public roads would be insignificant. On the other hand, delivery of the construction materials extracted at the quarries and material borrow sites to the construction site and transportation of the unused excavated materials from the work sites to the storage sites by means of trucks, delivery of construction materials (steel, beams, concrete, etc.) by means of trailers and trucks, transportation of personnel accommodating at campsites to the work sites will be the main activities associated with increased traffic.
- Roads and intersections with heavy construction traffic will be supported with additional safety measures such as traffic control personnel, speed reduction systems, warning signage, and awareness initiatives for drivers. The safety of the local population and road users will be prioritized. Details on traffic signage to be used at the construction site are provided in Table XII.1
- Construction activities on existing roads will not commence until all necessary traffic safety measures, including traffic signage and placement of control equipment, are implemented to protect both pedestrians and vehicles. During construction, some public roads will be diverted to another route or closed for a certain period of time. During the works, road signs will be installed and adequate lighting measures will be taken at night to minimise the risk of accidents. The passage of trucks and other construction machinery through residential areas with alternative routes will be kept to a minimum. A service road will be constructed to provide access to campsites, and there will be no interaction with nearby residential areas.
- Limak and all subcontractors and other Project road users will be required to comply with this plan,
- Road signage for nighttime traffic will be provided through the use of reflectors and flashing lights. Upon completion of construction works, temporary signage will be promptly removed and replaced with standard permanent signage.
- All roads designated for Project vehicle use will be assessed beforehand to ensure they are suitable for the movement of heavy and oversized vehicles.
- Where alternative routes are available, construction traffic will be rerouted to avoid passing through residential areas. Hazardous or unsuitable routes will be identified, and dedicated service roads will be constructed wherever feasible, including where temporary diversions are needed. These service roads will be used for the transport of machinery, equipment, and materials.
- Valid licenses for all drivers and machinery operators will be required and verified.

- Drivers and operators will be trained in traffic safety, with emphasis on recognizing and complying with signage, respecting speed limits, and anticipating high-traffic areas. Training will include preparation for both on-road and off-road conditions.
- Transport schedules, particularly for large vehicles, will be arranged to avoid peak traffic hours (07.30-09.00 and 17.00-18.00) and minimize conflicts with community use of roads.
- Traffic delays caused by construction activities will be minimized. Traffic flow will be allowed to proceed at intervals of no more than 30 minutes.
- Limits on daily working and trip durations for drivers and operators will be established to prevent fatigue. These limits will be managed and monitored in accordance with Article 98 of the Motorway Traffic Regulations and will not exceed 9 hours.
- Construction materials, machinery, or equipment will not be left on active roads. All unused items will be stored in designated, secure areas to prevent obstruction and accidents.
- Necessary training and awareness training will be given to heavy vehicle drivers,
- A follow-up technic will be established to continuously monitor and inspect the speed control of heavy vehicles, the routes they use, and the transportation routes,
- Regulations and laws regarding the transportation of materials and loads by heavy vehicles will be implemented and additional measures will be taken in accordance with national legislation, if required. Tarpaulin, closed transport, load limits, maintenance and measurements of vehicles will be checked, environmental and social security measures will be taken,
- The grievance mechanism will be used effectively, and traffic related complaints will be recorded, evaluated, resolved and managed.
- Safe work zones will be established to physically separate workers on foot from the traffic;
- The timing for works implementation (Traffic management) will be optimized to minimize traffic delays due to rehabilitation, widening or maintenance work zones on existing road sections. Activities, e.g., maintenance, that affect traffic will, if possible, be conducted during low traffic hours in order to avoid affecting local traffic.
- For the construction works to be conducted at locations where traffic exists, Limak will establish safe work zones by taking relevant measures (closure of roads, diversion of traffic, use of protective barriers, cones, warning lights, etc.) in consultation with the pertinent authorities (police, traffic authorities, local authorities, etc).
- Weather forecasts will be monitored to provide advance warning of extreme weather to drivers and schedule the work accordingly.
- Temporary traffic control devices, such as signage, warning devices, paddles, and concrete barriers will be set up where required in a consistent manner throughout the work zone to provide passing motorists with advanced warning of upcoming work zones;
- Traffic control workers will be trained in topics such as traffic flow, work zone setup, and proper placement of channelizing devices.
- All workers will wear high-visibility safety apparel.
- Speed limits (40 km/h) will be implemented for trucks travelling to and from construction sites (within built-up areas and on village roads of poor condition: 20 km/h). For monitoring purposes, a truck speed report will be regularly required to the companies responsible for the transportation.
- Slow driving rules in villages (e.g., max. speed 20km/h) will be implemented, particularly near sensitive use areas which will be identified (at least one month) prior to start of construction related activities;
- Project traffic routing through community areas will be reduced wherever possible. Optimum traffic routes will be identified and communicated to the drivers (both heavy and light vehicle drivers)
- The motorway alignment will be used for transportation whenever possible.

Mitigation Measures for the Impact on the Local Road Network:

- Ongoing stakeholder engagement will include consultation with authorities, local communities and any other relevant stakeholders, as per the SEP and additional stakeholders are to be identified in the course of the project as necessary, with regard to Traffic Management. Any grievances received from stakeholders will be managed in accordance with the Grievance Mechanism as detailed in the Project SEP
- Roads will be assessed to ensure suitability for heavy and large vehicles prior to use by Project vehicles
- Engagement will be made with local authorities on the issue of traffic movement during the construction phase.
- Residents in nearby communities will be informed about the transport routes to be used. Signage will be erected in the weeks prior to any works commencing along and on adjacent roads to the Project area, notifying the public of the construction activity and related transportation to take place and the timing thereof, including contact details of AAOİAŞ and Limak,
- In cases where transit from existing settlements is inevitable, AAOİAŞ and Limak will take all necessary precautions (speed limits, traffic signs, driver trainings) to prevent safety risks that concern the public, and will contact the public representatives to plan the traffic by taking into account the daily life of the people and by appropriate means such as brochures, notices, signs, etc, it will inform the public about the construction program, activities to be carried out and safety measures taken.
- Supervision and escort for heavy machinery (which requires escort and permit in line with national Legislation) will be provided.
- Supervision for vehicles carrying construction materials and equipment that pass over public or private roads and motorway crossings will be provided.
- Project related traffic will be regulated during certain dates and times where local community will require to commute (to/from schools, commercial areas etc.) or take on any agricultural activity (animal grazing or other farming activities etc.).
- Limak will evaluate and approve subcontracted site locations considering the potential impacts of site-related traffic on nearby communities.
- Limak will clearly identify construction zones with appropriate visual means such as reflective barriers and flashing signs.
- Temporary access to private property or appropriate accessing alternatives will be determined in consultation with the land owners or users.
- Local authorities and communities will be provided with detailed information on the planned closure of roads at least 2 week in advance by the communication channels defined in the SEP such per email, signage boards, traditional media (newspapers, radio), etc. as applicable. Routes envisaged for construction traffic and critical places (including sensitive receptors such as hospitals, schools) will be determined and agreed upon in consultation with relevant authorities and, if necessary, local people.
- Methods for every road crossing will be determined and agreed upon with authorities prior to taking any action. All methods and construction techniques proposed by Limak will aim to minimize possible disruptions caused by road crossings.
- Limak will ensure that road safety training will be provided to employees.
- The schools nearby the Project site will be informed about the peak movements of the vehicles and vehicle traffic will be avoided during hours when children are traveling to and from school.
- Heavy machinery and vehicles utilized in transportation activities (including transportation of personnel) will be used by qualified and licensed drivers.
- All drivers will know and comply with all traffic signs, will be made aware of hotspots of intense

traffic that are expected along the route and are trained properly for on and off-road conditions.

- Managing and monitoring of working and resting hours drivers will be undertaken according to national legislation.
- Monitoring security arrangements for loads, vehicles and drivers will be undertaken according to national legislation.
- All project work sites, Project Facilities, temporary roads, and traffic management works will be signposted in line national legislation and as required by the Plan
- Night drive/transportation will be limited as much as possible to reduce the risk of accidents and obtaining necessary permits shall night transportation be required.
- Compensating damages caused by an accident due to project activities will be undertaken according to national legislative requirements and the Grievance Mechanism defined in the Stakeholder Engagement Plan (SEP) of the Project.
- A Grievance Mechanism set up for communities and individuals to formally communicate their concerns, complaints and grievances and facilitate resolutions that are mutually acceptable by the parties.
- The routes of the roads that will be used and the peak hours of the usage of the roads will be shared with village heads and management of the schools by the communication channels defined in the SEP such as email, as applicable.
- The CLOs of the AAOİAŞ and Limak will arrange awareness training for schools, to be given by the HS Manager or H&S Engineer, if there is a school located on the route of the roads that will be used.
- Installation of barriers (e.g. fencing,) to prevent pedestrian access to the Project construction area except at designated crossing points.
- Landfill irrigation system will be applied to prevent dust formation on the road. Regular and frequent irrigation will be applied especially in the dry period for dust reduction. Where there are sensitive products, dust screening measures will be applied.
- The grievance mechanism will be strengthened and operated along the entire route, all complaints will be recorded and resolved in accordance with the Grievance Mechanism,
- In case of complaints, additional measurements will be made and the results will be shared with the complainant.
- Road improvement/rehabilitation will be implemented when necessary.
- The level crossings used for livestock breeding and for passing to pasture areas will be determined and signposted, indicating an approaching speed limit of 10 km/h and installing a Stop signal at the crossing point.
- During the construction period, a passageway will be left at certain intervals for animal passages,
- It will be determined in consultation with the villagers so that the animal crossings do not cause difficulties in their livelihoods and do not lengthen the roads,
- Where necessary, safe and functional passageways or underpasses etc. will be constructed.

Mitigation Measures for the Impact on the Community Health and Safety:

- In terms of children's health, taking dust-preventing screening measures to prevent dust towards schools, in order to prevent the schools from being affected by dust during the construction process and the security problems that may arise from the construction activities, the existing firewalls and wires should be developed and strengthened with more functional and protective measures.
- Continuous monitoring and reporting of social and environmental impacts around schools, by means of signage boards and email and other appropriate communication channel as defined in the SEP.

- The security measures and lighting of the passages should be taken at a sufficient level and they should be accessible; it will be built in accordance with the use of children, elderly, disabled and parents with children,
- The construction activities on the existing roads will only start after the relevant permits are obtained, and signage, barrier, fence, lighting, etc. will be completed in cooperation with the relevant authorities. All necessary precautions will be taken. Limak will clearly identify construction zones with appropriate visual means such as reflective barriers and flashing signs. Routes envisaged for construction traffic and critical places (including sensitive receptors such as hospitals, schools) will be determined and agreed upon in consultation with relevant authorities and, if necessary, local people. Construction vehicles will only operate within these regions and routes.
- Limak will evaluate and approve subcontracted site locations considering the potential impacts of site-related traffic on nearby communities.
- Considering the pedestrian traffic, the construction will continue without closing the pedestrian crossing routes or by providing alternative crossings,
- Heavy vehicle offsite traffic will be planned in such a way that it does not coincide with the entrance and exit times of the schools.
- Necessary training and awareness training will be given to heavy vehicle drivers,
- Pits, splits and deteriorations that may pose danger will be maintained immediately. Road improvement works to prevent risks arising from weather conditions will be carried out.
- Considering that the traffic from villages to districts will increase on the days when the district market is established, heavy vehicle traffic will be kept under control in order to prevent risks these days.
- Duration of traffic density and dense points etc information will be given to the local people by mukhtars or by holding safety meetings.
- The grievance mechanism will be used to ensure traffic-related complaints are recorded, evaluated, resolved and managed. Steps and time scales for managing grievances will follow the Grievance Mechanism provisions included in the Stakeholder Engagement Plan (SEP).
- A shuttle bus will transport the project workers from the workers camp to the project construction site.
- Movement of delivery and private vehicles will be limited to predefined areas and routes. One-way circulation systems will be implemented where feasible to improve traffic safety and flow.
- Rigid objects will not be used for diverting traffic. Only approved, flexible traffic control equipment will be utilized to ensure safe redirection.

Table VII.1 Construction Site Signage

Typical Signs	Translation	Locations
	Warning – Construction Vehicles	Installed at site access points
	All visitors must report to site office	Installed at site access points

TRAFFIC MANAGEMENT PLAN

Typical Signs	Translation	Locations
	20 km/h Speed Restriction Sign	Installed at construction site access point
	50 km/h Speed Restriction Sign	Installed at site access point and along site roadway
	Stop Sign	Installed at site road intersections if required
	No Entry	Installed at main access
	Parking Sign	Installed at entrance to site parking
	Roadwork Sign	Installed at the beginning of the access roads if required

VIII. TRAINING

The overall training process to be implemented for the Project activities will address the identification of training requirements by job description and will provide basic procedures for conducting and documenting training activities.

As part of their standard job-specific training, employees who will directly engage in transportation and vehicle operation will also receive specific training on how their job responsibilities must be performed to prevent accidents, and to minimize related risks to their own health and safety and the health and safety of their co-workers and the general public. Training topics will, at a minimum include a general introduction to this Plan, the standard operating procedures applicable to individual work assignments. Training will include recognition of the general traffic rules and traffic safety. The documents will be made available to all Project staff via the controlled document distribution to be developed. Required trainings will be provided by Traffic Supervisor. Refresher training on traffic rules and traffic safety will also be conducted for all workers.

IX. MONITORING

As part of this Plan, regular monitoring activities will be conducted to assess the implementation of mitigation measures during the construction phase. To support continuous improvement, monitoring and reporting mechanisms will be established throughout the Project.

Monitoring efforts will include on-site inspections to verify the implementation of traffic flow arrangements, signage, and temporary traffic control measures. The application of traffic safety measures at construction sites and along the motorway alignment will be closely observed.

Automated systems and communication links will be used for obtaining, recording and reporting the traffic weather and road conditions, as well as traffic incidents. Any adverse conditions, accidents and/or illegitimate incidents will be recorded and monitored by the personnel in charge of traffic management during the construction phase.

Real-time traffic data, including speed, density, and flow, will be continuously monitored through the use of Intelligent Transportation Systems (ITS), where applicable. Additional inputs such as incident records, driver feedback, and field assessments will also be gathered and reviewed on a regular basis.

Traffic accident rates and their underlying causes will be systematically analyzed to identify patterns and areas in need of improvement. Based on these findings, necessary revisions will be made to traffic routing and management plans to enhance safety and operational efficiency.

Monitoring efforts will be guided by the framework provided in Table IX.1, which outlines the parameters to be monitored, the corresponding monitoring locations, frequency of measurements, and responsible parties. These monitoring activities will be essential for evaluating the effectiveness of air quality and emissions mitigation measures and ensuring full compliance with national regulations and Project standards.

Table IX.1 Key Monitoring Activities

Parameter	Monitoring Station / Location	Monitoring Method	Monitoring Frequency	Responsible Parties
Number of trainings conducted related to traffic	Construction camp and administrative offices	Tracking the number of Project personnel and contractor workers who have received training	Quarterly	EPC SPV
Compliance with Plan implementation	Project documentation and management system	Review of records and documents uploaded to the system in accordance with the Plan	Quarterly	EPC SPV
Number of complaints received on traffic	Public relations records and grievance system	Logging and monitoring of grievances as per the Grievance Mechanism Procedure	Weekly	EPC SPV

In cases of non-compliance identified through internal oversight, SPV will ensure that corrective and preventive measures are promptly implemented in coordination with the EPC and relevant subcontractors.

All traffic-related findings, including safety incidents, traffic flow disruptions, or complaints received from surrounding communities, will be documented in accordance with national regulations and Project procedures. In the event of serious violations—such as major accidents, repeated safety breaches, or significant obstruction of public roads—AAOİAŞ will ensure that the issue is reported to the competent authorities and that appropriate technical, procedural, and contractual actions are taken.

X. KEY PERFORMANCE INDICATORS

The following Key Performance Indicators (KPIs) will be monitored, verified, and evaluated.

Table X.1 Key Performance Indicators – Construction Phase KPIs

Monitoring Parameter / Performance Indicator	Target	Frequency	Responsible Party
Number of reported accidents and incidents	Zero major accidents; decreasing trend in minor incidents	Monthly	EPC
License / Medical surveillance	100% of drivers/operators compliant with licensing and health checks	Annually	EPC
Condition of the access roads	Access roads in safe and serviceable condition	Monthly	EPC
Maintenance records of vehicles	All vehicles maintained as per schedule	Annually	EPC
Speed control devices	All trucks equipped and devices functioning	Monthly	EPC
Weather forecast	Weather-related risks identified and communicated daily	Daily	EPC

XI. AUDIT AND REVIEW

The implementation of this Plan should be regularly monitored and reviewed in accordance with the ESMMP. All incidents and non-conformities should be documented and reported as outlined in the Plan. Contractors and subcontractors should be subject to audits conducted by the Project Sponsor within the scope and schedule defined in the Contractor and Subcontractor Management Plan. These audits and the associated records should be managed in compliance with the Project's established human resources and labor-related procedures. Records to be reviewed during traffic management audits will include, but are not limited to, traffic incident and accident reports, driver license and medical surveillance records, maintenance records of vehicles and equipment, speed control monitoring logs, traffic signage and control measures documentation, and traffic-related grievance logs. Observations and deficiencies identified during audits should be recorded in formal audit reports, and all findings requiring improvement should be registered under Corrective Actions. Project management should review audit outcomes and corrective action records, follow up on progress, and ensure that additional measures are implemented where necessary to ensure full compliance with labor legislation and international standards.

XII. REPORTING

Regular reporting should be conducted to ensure effective implementation and continuous improvement of E&S management activities throughout the construction phase of the Project. Reporting should be structured to address both internal monitoring and auditing results, as well as stakeholder reporting obligations.

Based on the monitoring results, necessary corrective and preventive actions will be identified and required changes will be reflected to this Plan. Training program will also be updated accordingly. Regular audits and visual inspections shall be conducted in order to ensure all activities are being undertaken according to this Plan.

Reports will be produced by using the findings of the monitoring programs for each issue regarding this Plan. Evidences and results of the monitoring (measurements) activities have to be described in detail in appropriate monitoring reports. This section of the Plan provides instructions and requirements for this reporting activity.

Reporting activities for this Plan is mainly related to data on accident/incident records, license and medical surveillance of the drivers/operators, and maintenance records of vehicles. In case of injury in traffic accidents, reporting is required according to local legislation. Any significant incidents will be immediately reported to local authorities and an incident report, including root cause analysis (RCA), precautions and compensation measures taken will be submitted to local authorities within 30 business days.

These data together with the results of the inspection and audit activities will be summarized in a dedicated chapter to traffic management in the Environmental and Social Monitoring Report to be prepared on quarterly basis. Any non-compliance observed, corrective actions taken and/or recommended time-bound corrective actions to be taken will be included to Report, and these will be supported with documentary proofs such as photos in the report.

All personnel can raise their concerns, suggestions and complaints according to grievance mechanism by filling grievance form. In addition, grievances from public regarding traffic issues will be make sure that resolved in a timely and transparent manner.

APPENDIX A

Access roads to construction sites, plant areas, active work fronts, quarries, borrow pits and camp sites and the transportation routes of construction materials are listed in Table XII.1 and satellite views of the roads are given in below. Table XII.1 shows the transportation routes from Toy-4a, Karamanlar and Çenger quarries, where route studies have been completed, to the facility areas (camp site areas, concrete plants, mechanical plants, asphalt plants) and from these facility areas to the relevant construction sites. In addition when new routes are needed, this plan will be revised before the relevant route is put into use.

In addition, construction materials such as cement and rebar will be supplied from production factories. Since different suppliers can be used in the supply of construction materials and therefore transportation will be carried out via the existing state road network up to Antalya Province, the starting point in the material supply route planning was taken as the D-685 exit of the Antalya Ring Road (see Table XII.2).

Table XII.1: Site Access Roads

Road ID	Start	End	Location	Closest Neighborhood
Yol-1	Concrete Plant 1	T1-Entrance (Structures)	Between 52+000–55+000	Sarıabalı
Yol-2	Concrete Plant 1	Serik Interchange	Between 52+000–55+000	Sarıabalı, Deniztepesi
Yol-3	Concrete Plant 1	Between T1 Exit and Viaduct-1	Between 52+000–55+000	No settlement
Yol-4	Concrete Plant 1	T1 Entrance Section	Between 52+000–55+000	Sarıabalı
Yol-5	TOY4a Rock Quarry	Concrete Plant 1	Between 52+000–55+000	Belkıs, Taşağıl, Sarıabalı
Yol-6	Concrete Plant 2 Mechanical Plant-1 Asphalt Plant-1 Temporary Camp Site	Viaduct 1 Exit	Between 55+000–68+000	No settlement
Yol-7	Concrete Plant 2 Mechanical Plant-1 Asphalt Plant-1 Temporary Camp Site	T2 Entrance	Between 55+000–68+000	No settlement
Yol-8	Concrete Plant 2 Mechanical Plant-1 Asphalt Plant-1 Temporary Camp Site	T2 Exit	Between 55+000–68+000	No settlement
Yol-9	Concrete Plant 2 Mechanical Plant-1 Asphalt Plant-1 Temporary Camp Site	T3 Exit	Between 55+000–68+000	Taşağıl
Yol-10	Concrete Plant 2 Mechanical Plant-1 Asphalt Plant-1 Temporary Camp Site	T3 Exit–Main Camp Area	Between 55+000–68+000	Taşağıl
Yol-11	Concrete Plant 2 Mechanical Plant-1 Asphalt Plant-1 Temporary Camp Site	Taşağil K1 Interchange	Between 55+000–68+000	Taşğıl, Bereket, Hocalar
Yol-12	Concrete Plant 2 Mechanical Plant-1 Asphalt Plant-1 Temporary Camp Site	Km:68+500 Structures	Between 55+000–68+000	Taşğıl, Bereket, Hocalar

Road ID	Start	End	Location	Closest Neighborhood
Yol-13	Concrete Plant 2 Mechanical Plant-1 Asphalt Plant-1 Temporary Camp Site	Km:65+800 Structures	Between 55+000–68+000	Taşğıl, Bereket, Hocalar
Yol-14	Toy4a Rock Quarry	Concrete Plant 2	Between 55+000–68+000	No settlement
Yol-15	Concrete Plant 3	Viaduct 4 Entrance And Structures	Between 68+000–83+000	Yeniköy
Yol-16	Concrete Plant 3	Viaduct 3 And Structures	Between 68+000–83+000	Yeniköy, Gültepe, Hatipler, Ilıca, Evren, Seki, Çolaklı, Yavrudoğan
Yol-17	Concrete Plant 3	Km:75+000 Structures	Between 68+000–83+000	Yeniköy, Gültepe, Hatipler, Ilıca, Evren, Seki, Yavrudoğan
Yol-18	Concrete Plant 3	T4	Between 68+000–83+000	Yeniköy, Gültepe, Hatipler, Ilıca, Evren, Seki, Çolaklı, Yavrudoğan
Yol-19	Concrete Plant 3	Km:68+500 Structures	Between 68+000–83+000	Yeniköy, Gültepe, Hatipler, Ilıca, Evren, Seki, Çolaklı, Gündoğdu, Hocalar
Yol-20	Concrete Plant 3	Km:68+500 Structures	Between 68+000–83+000	Yeniköy, Gültepe, Hatipler, Ilıca, Evren, Seki, Çolaklı, Gündoğdu, Hocalar
Yol-21	Concrete Plant 3	Taşağil K1 Interchange	Between 68+000–83+000	Yeniköy, Gültepe, Hatipler, Ilıca, Evren, Seki, Çolaklı, Gündoğdu, Hocalar
Yol-22	Concrete Plant 3	Km:75+000 Structures	Between 68+000–83+000	Yeniköy, Gültepe, Hatipler, Ilıca, Evren, Seki, Yavrudoğan
Yol-23	Concrete Plant 3	Km:73+000 Structures	Between 68+000–83+000	Yeniköy, Gültepe, Hatipler, Ilıca, Evren, Seki, Yavrudoğan
Yol-24	Concrete Plant 3	Km:71+850 Structures	Between 68+000–83+000	Yeniköy, Gültepe, Hatipler, Ilıca, Evren, Seki, Çolaklı, Yavrudoğan
Yol-25	Concrete Plant 3	Km:75+750 Structures	Between 68+000–83+000	Yeniköy, Gültepe, Hatipler, Ilıca, Evren, Seki, Çolaklı, Yavrudoğan, Kalemler
Yol-26	Toy4a Rock Quarry	Concrete Plant 3	Between 68+000–83+000	Yeniköy, Gültepe, Hatipler, Ilıca, Evren, Seki, Çolaklı, Gündoğdu, Bereket, Taşağıl
Yol-27	Concrete Plant 4a	Km:90+000 Structures	Between 89+000–94+000	Ulukapı
Yol-28	Concrete Plant 4a	Km:89+000 Structures	Between 89+000–94+000	Ulukapı
Yol-29	Concrete Plant 4a	Km:91+000 Structures	Between 89+000–94+000	Ulukapı, Aşağıışıklar
Yol-30	Concrete Plant 4a	Km:92+500 Structures	Between 89+000–94+000	Ulukapı, Aşağıışıklar
Yol-31	Concrete Plant 4a	Km:92+750 Structures	Between 89+000–94+000	Ulukapı, Aşağıışıklar
Yol-32	Concrete Plant 4a	Km:93+500 Structures	Between 89+000–94+000	Ulukapı, Aşağıışıklar, Demirciler
Yol-33	Çengel Stream Material Quarry (Remote)	Concrete Plant 4	Between 89+000–94+000	Uzunlar, Çavuşköy, Kızlot, Çavuşköy, Kızılağaç, Karacalar, Seydiler, Doğançam, Aksaz, Karaöz, Demirciler, Aşağıışıklar, Çeltikçi, Ulukapı

Road ID	Start	End	Location	Closest Neighborhood
Yol-34	Concrete Plant 4 Mechanical Plant-2 Asphalt Plent-2 Construction Camp Site-2	Viaduct 7	Between 83+000–89+000	Bucakşeyhler
Yol-35	Çengel Stream Material Quarry (Remote)	Concrete Plant 4a	Between 83+000–89+000	Uzunlar, Çavuşköy, Kızlot, Çavuşköy, Kızılağaç, Karacalar, Seydiler, Doğançam, Aksaz, Karaöz, Demirciler, Aşağıışıklar, Çeltikçi, Örnek, Eskihisar, Bahçelievler, Aydınevler, Mimar Sinan, Sorgun, Hatipler, Sarılar, Dikmen, Bucakşeyhler
Yol-36	Concrete Plant 4 Mechanical Plant-2 Asphalt Plent-2 Construction Camp Site-2	Km:87+000 Structures	Between 83+000–89+000	Bucakşeyhler
Yol-37	Concrete Plant 4 Mechanical Plant-2 Asphalt Plent-2 Construction Camp Site-2	Viaduct 6	Between 83+000–89+000	Bucakşeyhler
Yol-38	Concrete Plant 4 Mechanical Plant-2 Asphalt Plent-2 Construction Camp Site-2	Viaduct 6	Between 83+000–89+000	Bucakşeyhler
Yol-39	Concrete Plant 4 Mechanical Plant-2 Asphalt Plent-2 Construction Camp Site-2	Km:84+750 Structures	Between 83+000–89+000	Bucakşeyhler, Dikmen
Yol-40	Concrete Plant 4 Mechanical Plant-2 Asphalt Plent-2 Construction Camp Site-2	Manavgat K1 Interchange	Between 83+000–89+000	Bucakşeyhler, Dikmen, Yukarıışıklar
Yol-41	Concrete Plant 4 Mechanical Plant-2 Asphalt Plent-2 Construction Camp Site-2	Km:81+000 Structures	Between 83+000–89+000	Bucakşeyhler, Dikmen, Sarılar, Dolbazlar, Evrenleryavşı
Yol-42	Concrete Plant 4 Mechanical Plant-2 Asphalt Plent-2 Construction Camp Site-2	Km:82+000 Structures	Between 83+000–89+000	Bucakşeyhler, Dikmen, Sarılar, Dolbazlar, Evrenleryavşı
Yol-43	Concrete Plant 4 Mechanical Plant-2 Asphalt Plent-2 Construction Camp Site-2	Km:83+000 Structures	Between 83+000–89+000	Bucakşeyhler, Dikmen, Yukarıışıklar
Yol-44	Concrete Plant 4 Mechanical Plant-2 Asphalt Plent-2 Construction Camp Site-2	Viaduct 8	Between 83+000–89+000	Ulukapı

Road ID	Start	End	Location	Closest Neighborhood
Yol-45	Çengel Stream Material Quarry (Remote)	Concrete Plant 5	Between 94+000–111+000	Uzunlar, Çavuşköy, Kızlot, Çavuşköy, Kızılağaç, Karacalar, Seydiler, Sülek
Yol-46	Concrete Plant 5	Viaduct 13	Between 94+000–111+000	No settlement
Yol-47	Concrete Plant 5	Viaduct 12	Between 94+000–111+000	Sülek, Cevizler, Hacıali
Yol-48	Concrete Plant 5	Viaduct 13	Between 94+000–111+000	Sülek, Cevizler
Yol-49	Concrete Plant 5	Km:97+200 Structures	Between 94+000–111+000	Sülek, Cevizler, Hacıali
Yol-50	Concrete Plant 5	Viaduct 11	Between 94+000–111+000	Sülek, Cevizler, Hacıali
Yol-51	Concrete Plant 5	Viaduct 10	Between 94+000–111+000	Sülek, Cevizler, Hacıali
Yol-52	Concrete Plant 5	Km:95+450 Structures	Between 94+000–111+000	Sülek, Cevizler, Hacıali, Seydiler, Aksaz
Yol-53	Concrete Plant 5	Viaduct 9	Between 94+000–111+000	Sülek, Cevizler, Hacıali, Seydiler, Aksaz, Karaöz
Yol-54	Concrete Plant 5	Manavgat East K1 Interchange	Between 94+000–111+000	Sülek
Yol-55	Concrete Plant 5	Km:105+000 Structures	Between 94+000–111+000	Sülek, Seydiler, Kızıağaç, Karacalar, Kızılot, Hacıobası, Uzunlar
Yol-56	Concrete Plant 5	Km:104+950 Structures	Between 94+000–111+000	Sülek, Seydiler, Kızıağaç, Karacalar, Kızılot, Hacıobası
Yol-57	Concrete Plant 5	Viaduct 14	Between 94+000–111+000	Sülek, Seydiler, Kızıağaç, Karacalar, Kızılot, Hacıobası
Yol-58	Concrete Plant 5	Km:102+100 Structures	Between 94+000–111+000	Sülek, Seydiler, Kızıağaç, Karacalar, Kızılot, Hacıobası
Yol-59	Concrete Plant 5	Km:105+900 Structures	Between 94+000–111+000	Sülek, Seydiler, Kızıağaç, Karacalar, Kızılot, Hacıobası
Yol-60	Concrete Plant 5	Km:107+550 Structures	Between 94+000–111+000	Sülek, Seydiler, Kızıağaç, Karacalar, Kızılot, Hacıobası, Kadılar
Yol-61	Concrete Plant 5	Km:110+850 Structures	Between 94+000–111+000	Sülek, Seydiler, Kızıağaç, Karacalar, Kızılot, Çenger, Örenşehir
Yol-62	Concrete Plant 5	Km:109+150 Structures	Between 94+000–111+000	Sülek, Seydiler, Kızıağaç, Karacalar, Kızılot, Çenger, Örenşehir, Kadılar
Yol-63	Karamanlar Rock Quarry	Concrete Plant 6	Between 111+000–141+000	No settlement
Yol-64	Concrete Plant 6 Mechanical Plant-3 Asphalt Plent-3 Construction Camp Site-3	Km:124+250 Structures	Between 111+000–141+000	Avsallar, İncekum, Okurcalar, Örenşehir, Boztepe, Odaönü, Yalçıdibi
Yol-65	Concrete Plant 6 Mechanical Plant-3 Asphalt Plent-3 Construction Camp Site-3	Km:120+000 Structures	Between 111+000–141+000	Avsallar
Yol-66	Concrete Plant 6 Mechanical Plant-3 Asphalt Plent-3 Construction Camp Site-3	Km:115+200 Structures	Between 111+000–141+000	Avsallar, İncekum, Okurcalar, Örenşehir, Boztepe, Odaönü, Karakaya

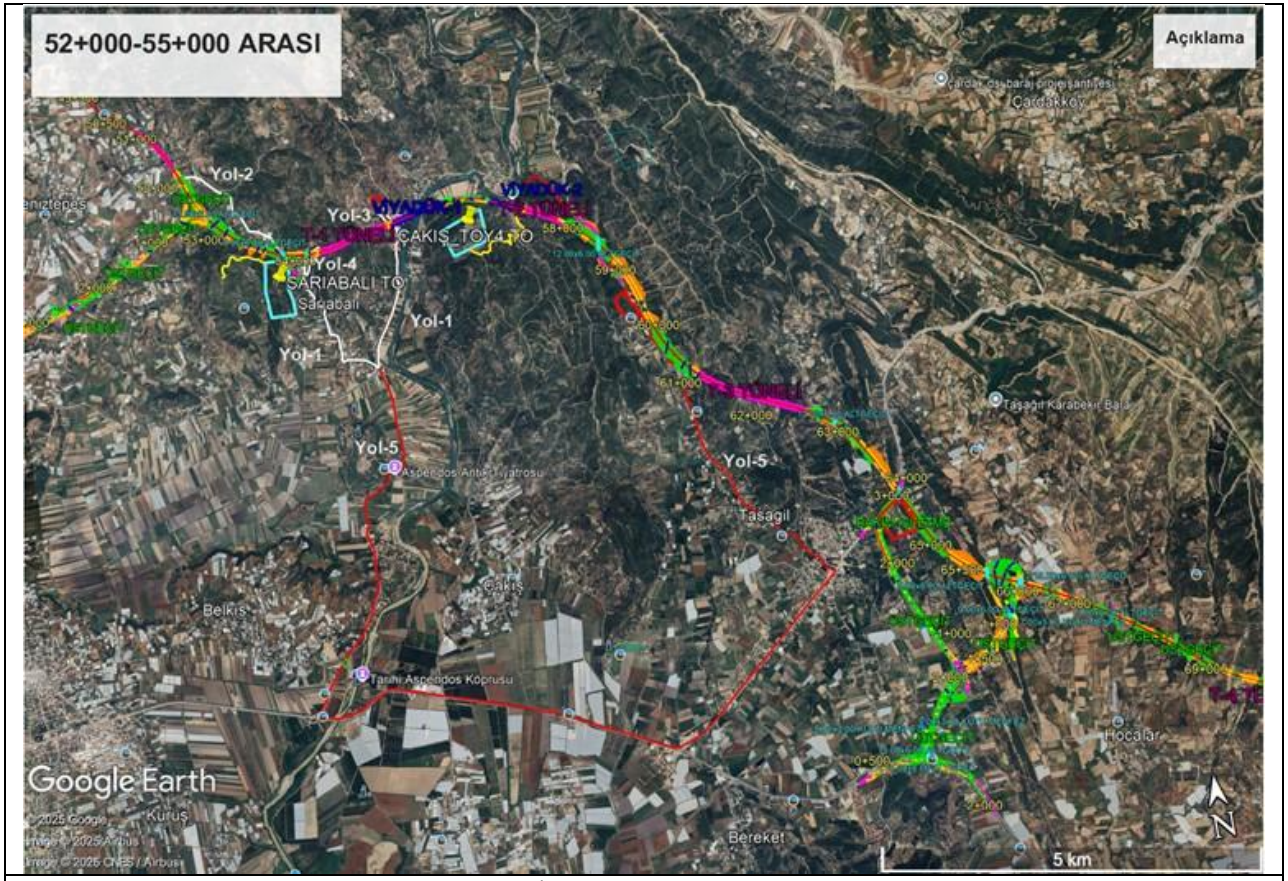
Road ID	Start	End	Location	Closest Neighborhood
Yol-67	Concrete Plant 6 Mechanical Plant-3 Asphalt Plent-3 Construction Camp Site-3	Km:115+950 Structures	Between 111+000–141+000	Avsallar, İncekum, Okurcalar, Örenşehir, Boztepe, Odaönü, Karakaya
Yol-68	Concrete Plant 6 Mechanical Plant-3 Asphalt Plent-3 Construction Camp Site-3	Km:114+000 Structures	Between 111+000–141+000	Avsallar, İncekum, Okurcalar, Örenşehir, Boztepe, Odaönü
Yol-69	Concrete Plant 6 Mechanical Plant-3 Asphalt Plent-3 Construction Camp Site-3	Km:112+700 Structures	Between 111+000–141+000	Avsallar, İncekum, Okurcalar, Örenşehir, Boztepe, Odaönü, Yalçıdibi
Yol-70	Concrete Plant 6 Mechanical Plant-3 Asphalt Plent-3 Construction Camp Site-3	Km:119+000 Structures	Between 111+000–141+000	Avsallar, İncekum, Okurcalar, Alara, Çakallar
Yol-71	Concrete Plant 6 Mechanical Plant-3 Asphalt Plent-3 Construction Camp Site-3	Km:133+400 Structures	Between 111+000–141+000	Avsallar, Türkler, Payallar, Emişbeleni, Soğukpınar
Yol-72	Concrete Plant 6 Mechanical Plant-3 Asphalt Plent-3 Construction Camp Site-3	Viaduct 15	Between 111+000–141+000	Avsallar, Türkler, Akdam
Yol-73	Concrete Plant 6 Mechanical Plant-3 Asphalt Plent-3 Construction Camp Site-3	Viaduct 16	Between 111+000–141+000	Avsallar, Türkler, Payallar, Emişbeleni
Yol-74	Concrete Plant 6 Mechanical Plant-3 Asphalt Plent-3 Construction Camp Site-3	Alanya West K1 Interchange	Between 111+000–141+000	Avsallar, Türkler, Payallar, Konaklı
Yol-75	Concrete Plant 6 Mechanical Plant-3 Asphalt Plent-3 Construction Camp Site-3	Km:136+550 Structures	Between 111+000–141+000	Avsallar, Türkler, Payallar, Emişbeleni, Toslak
Yol-76	Concrete Plant 6 Mechanical Plant-3 Asphalt Plent-3 Construction Camp Site-3	Km:139+700 Structures	Between 111+000–141+000	Avsallar, Türkler, Payallar, Emişbeleni, Toslak
Yol-77	Concrete Plant 6 Mechanical Plant-3 Asphalt Plent-3 Construction Camp Site-3	Km:140+150 Structures	Between 111+000–141+000	Avsallar, Türkler, Payallar, Konaklı
Yol-78	Concrete Plant 6 Mechanical Plant-3 Asphalt Plent-3 Construction Camp Site-3	Km:141+100 Structures	Between 111+000–141+000	Avsallar, Türkler, Payallar, Konaklı

Road ID	Start	End	Location	Closest Neighborhood
Yol-79	Concrete Plant 6 Mechanical Plant-3 Asphalt Plent-3 Construction Camp Site-3	Km:140+550 Structures	Between 111+000–141+000	Avsallar, Türkler, Payallar, Konaklı

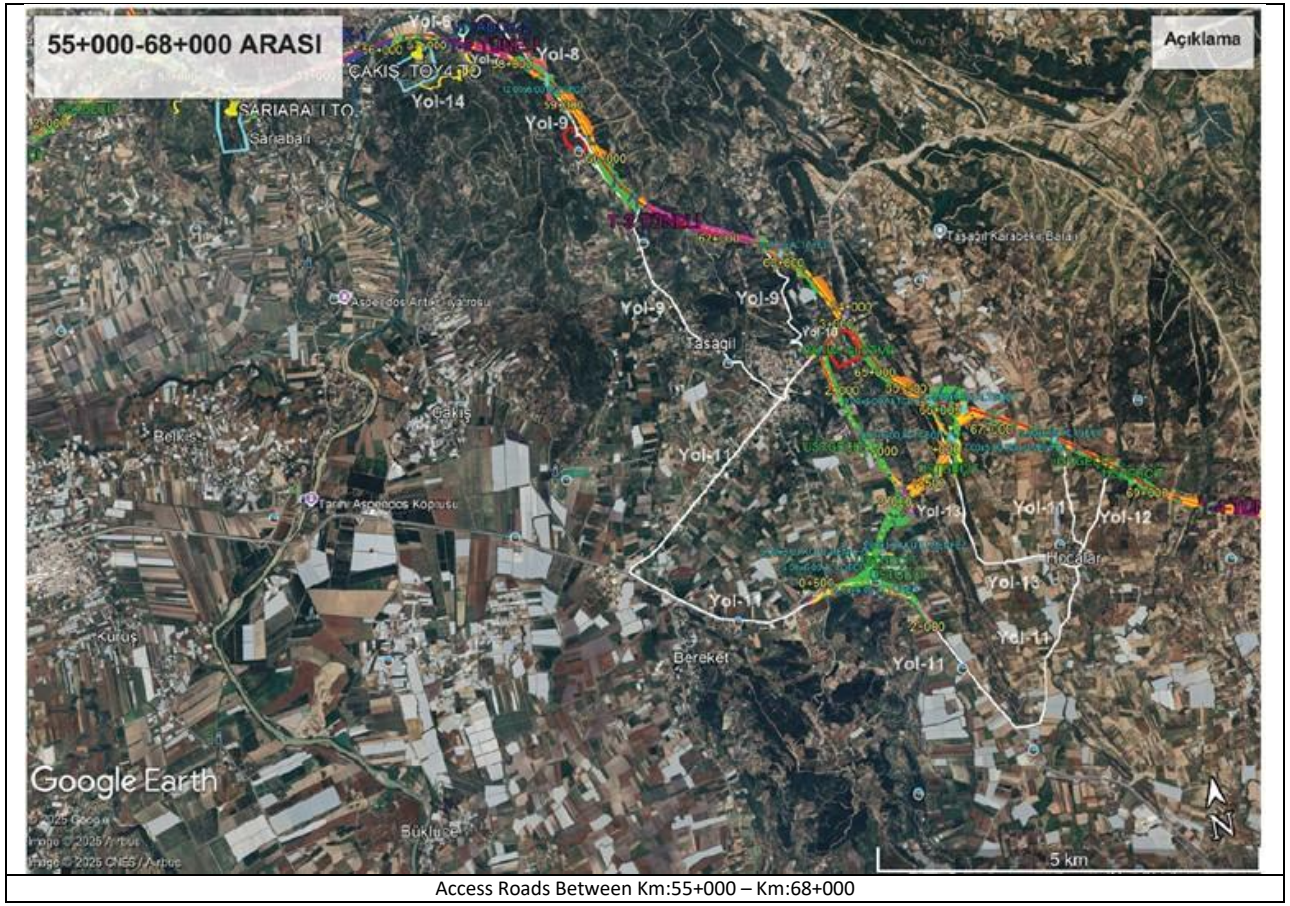
Table XII.2: Transportation Routes

Road ID	Start	End	Road
Yol-1	Antalya Ring Road	Concrete Plant 1	D685 D400 Sarıabalı Rural Road / Forest Road / Field Road
Yol-2		Concrete Plant 5	D685 D400 Karacalar Rural Road / Forest Road / Field Road
Yol-3		Concrete Plant 4a	D685 D400 Ulukapı and Demirciler Rural Road / Forest Road / Field Road
Yol-4		Concrete Plant 4 Mechanical Plant-2 Asphalt Plent-2 Construction Camp Site-2	D685 D400 Manavgat Urban Road Dikmen Rural Road / Forest Road / Field Road
Yol-5		Concrete Plant 3	D685 D400 Manavgat Urban Road Dolbazlar Rural Road / Forest Road / Field Road
Yol-6		Concrete Plant 2 Mechanical Plant-1 Asphalt Plent-1	D685 D400 Taşağıl Rural Road / Forest Road / Field Road
Yol-7		Concrete Plant 6 Mechanical Plant-3 Asphalt Plent-3 Construction Camp Site-3	D685 D400 Avsallar Urban Road

The routes given in Table XII.2, which will be used for both access to the sites and material transportation, are asphalted and generally D-600 state road and district roads. There will be an increase in truck traffic due to material transportation on the roads between the quarries and plant areas (ready-mixed concrete plant, asphalt plant, mechanical plant). Transportation of cement and rebar, etc., which are the main material items, will generally be provided via D400, which is used for transportation to district settlements and roads, and there will be an increase in truck traffic on these roads.

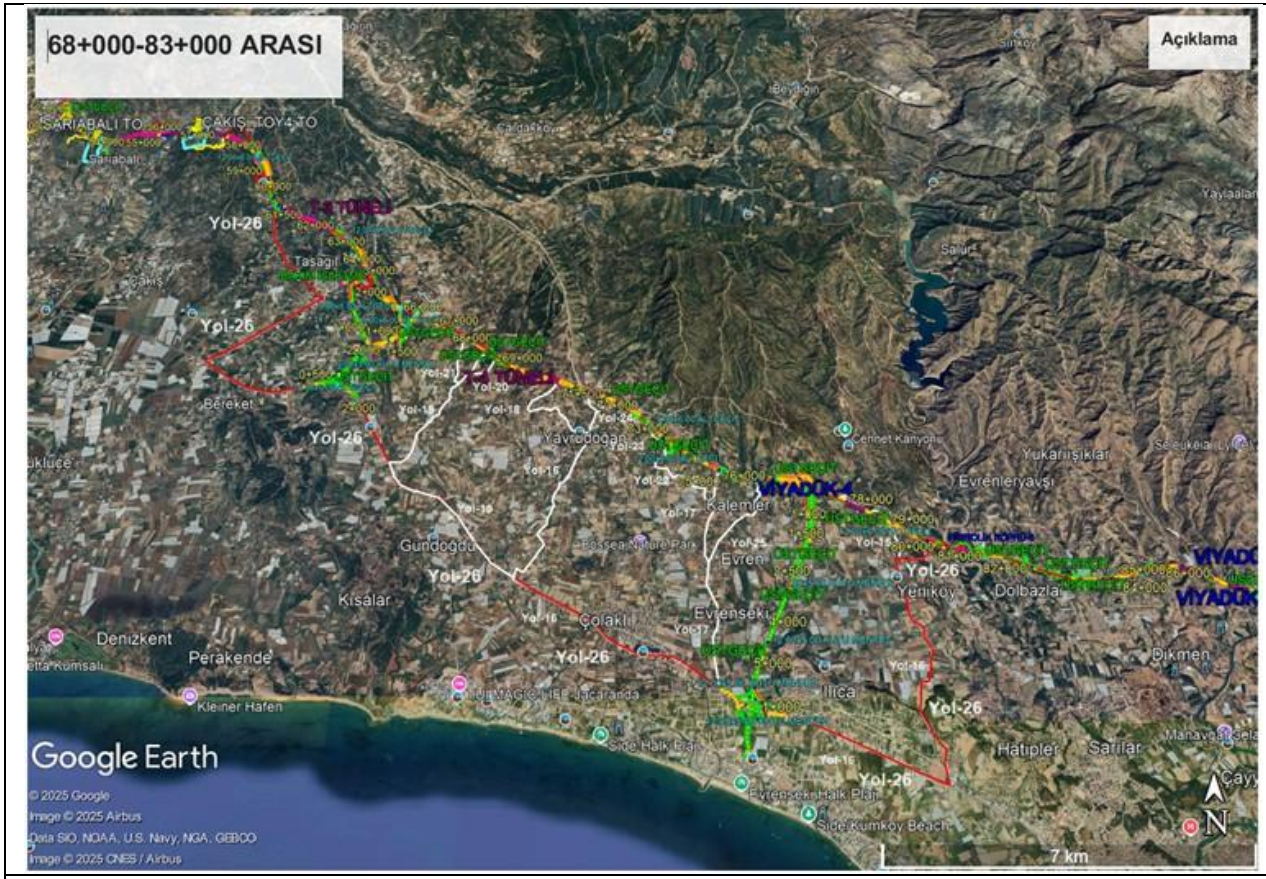


Access Roads Between Km52+000 – Km 55+000



Access Roads Between Km:55+000 – Km:68+000

TRAFFIC MANAGEMENT PLAN


68+000-83+000 ARASI
Açıklama
Yol-26
Yol-26
Yol-26

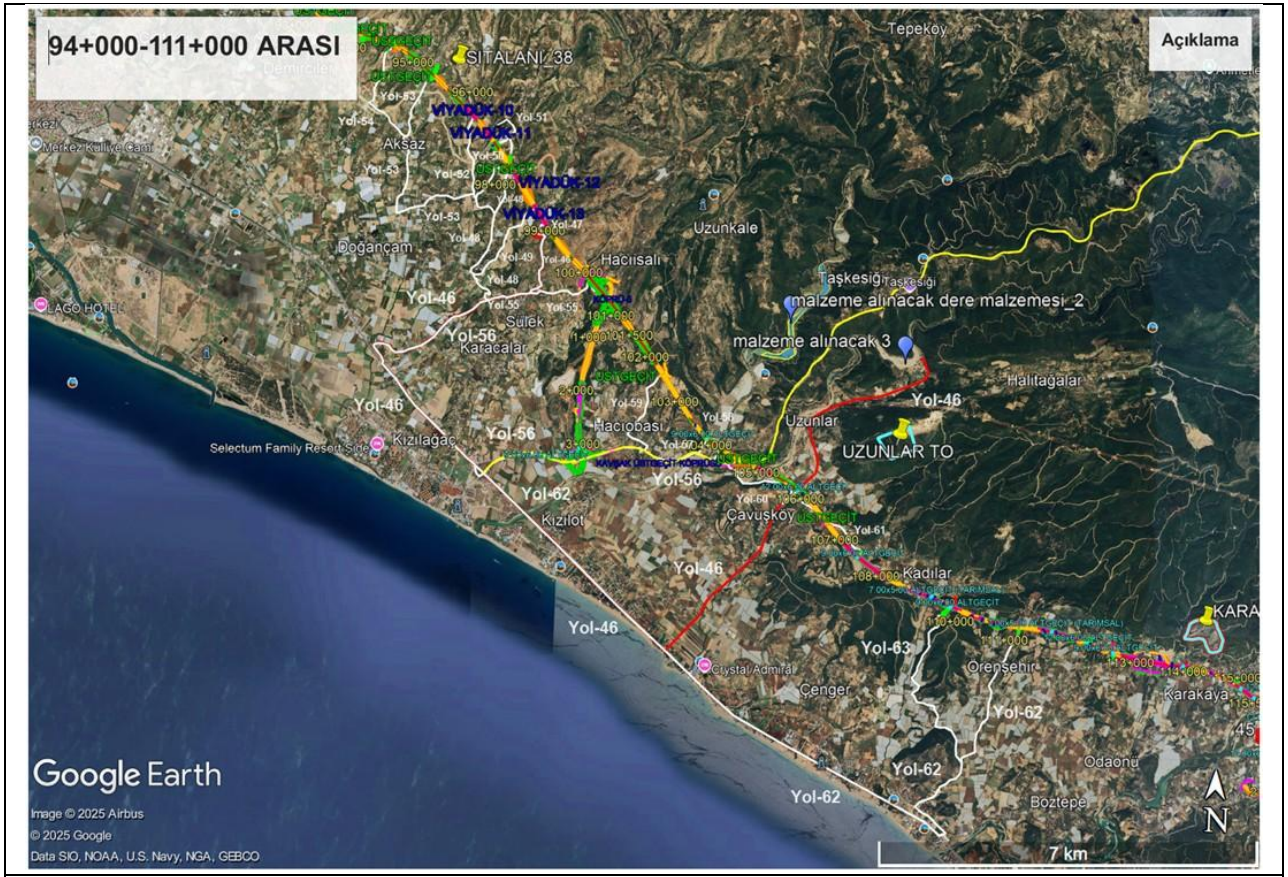
TRAFFIC MANAGEMENT PLAN

Access Roads Between Km:83+000 – Km:89+000

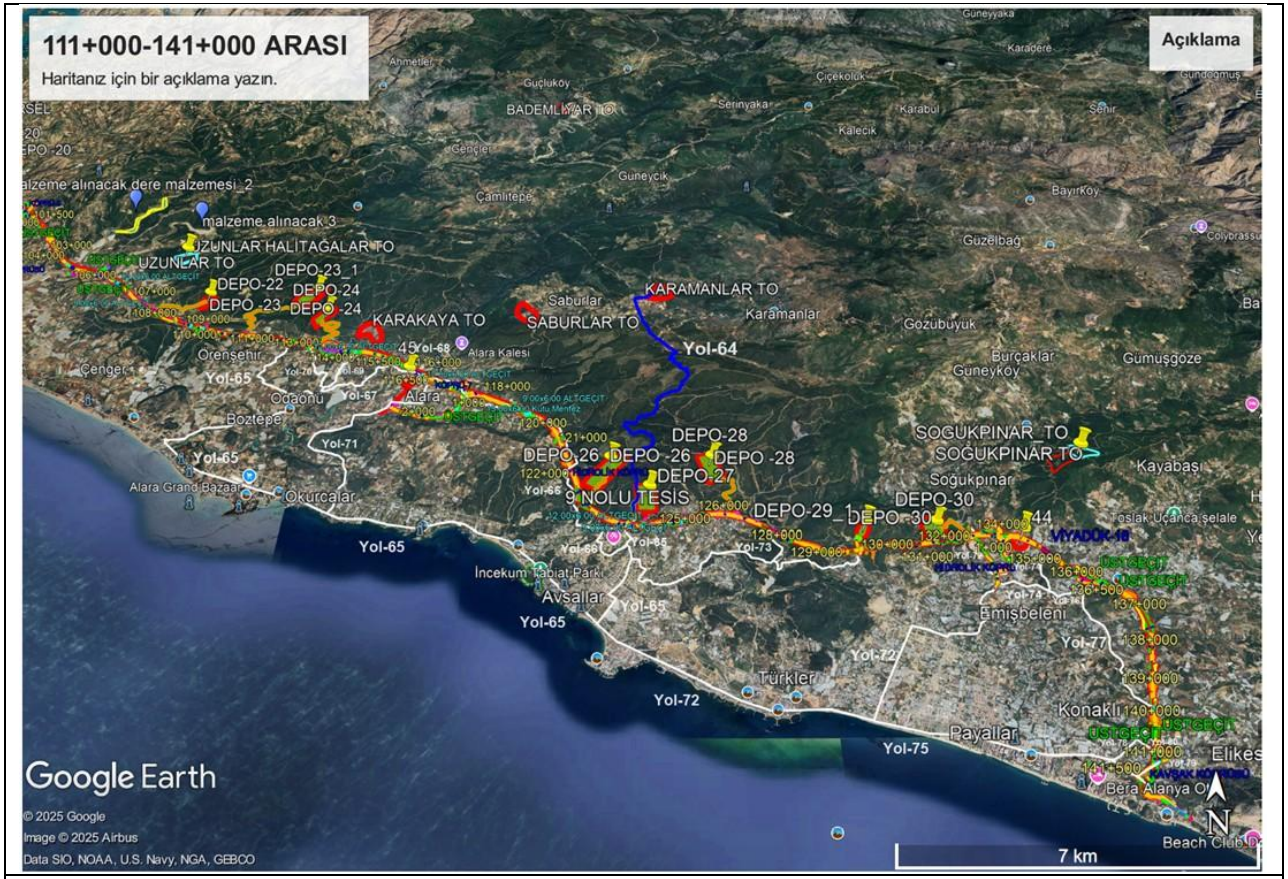
TRAFFIC MANAGEMENT PLAN

Access Roads Between Km:89+000 – Km:94+000

TRAFFIC MANAGEMENT PLAN

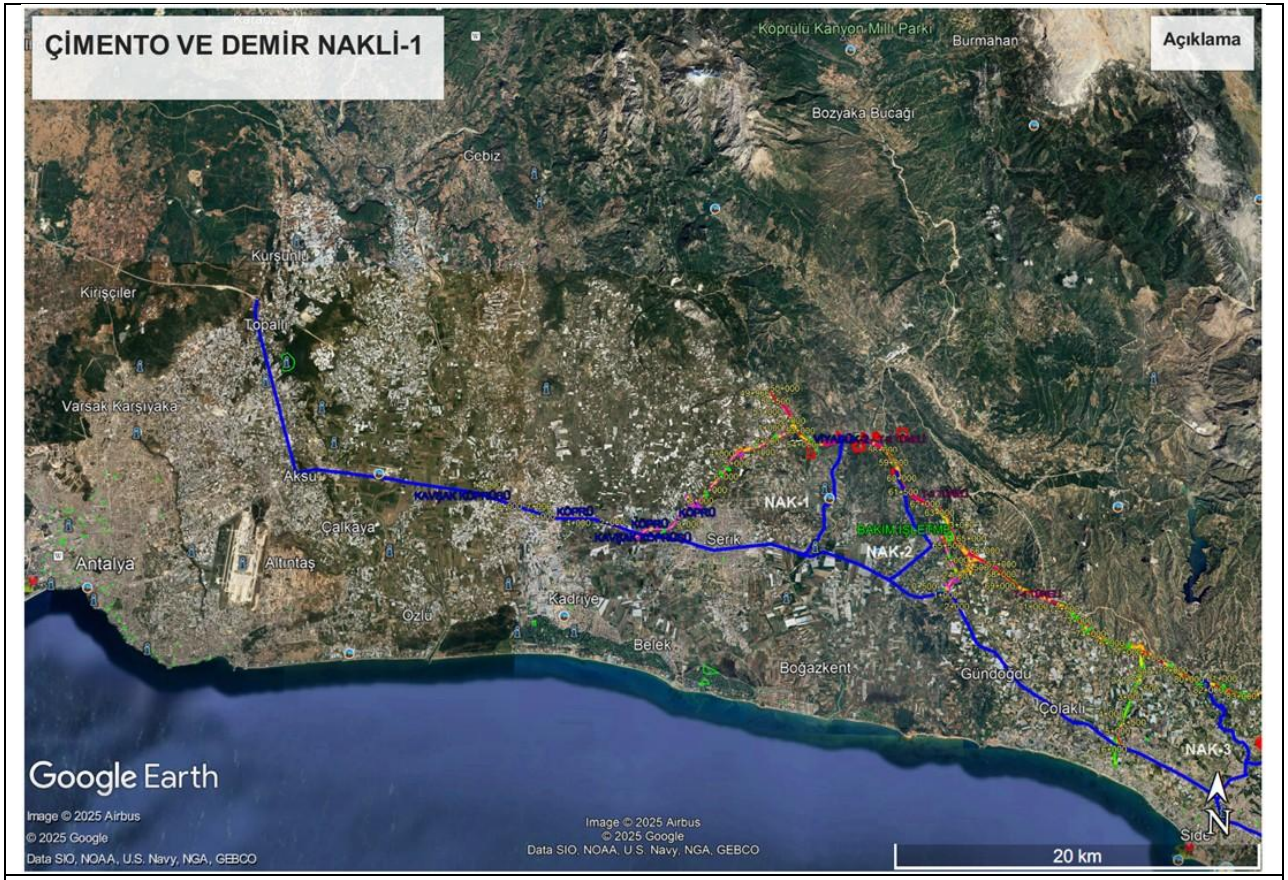


Access Roads Between Km:94+000 – Km:111+000



Access Roads Between Km:111+000 – Km:141+000

TRAFFIC MANAGEMENT PLAN



Transportation Routes of Construction Materials

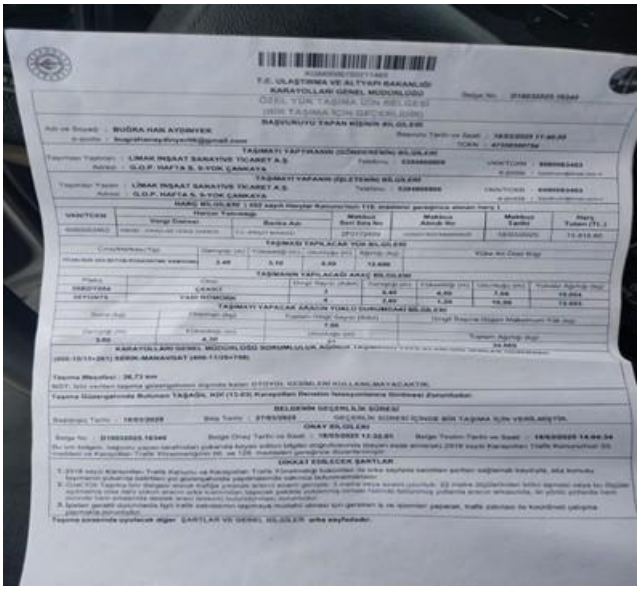
TRAFFIC MANAGEMENT PLAN

Transportation Routes of Construction Materials

APPENDIX B

PERSONNEL TRANSPORTATION VEHICLE

HEAVY VEHICLE TRANSPORTATION VEHICLE



T.C. ULAŞTIRMA VE ALTYAPI BAKANLIĞI
KARAYOLLARI GENEL MÜDÜRLÜĞÜ
ÖZEL YUK TAŞIMA İZİN BELGESİ
(YER TAŞIMA İÇİN EKİPMANLARI)

TRAFFIC SIGNS SAMPLES FROM PROJECT SITE

Gözcü
V-8 giden yol
T-5 Tünel giden yol 4

TRAFFIC MANAGEMENT PLAN

Cami 2
20
T-5 Tünel giden yol 2

Okul tabelası

APPENDIX C

At the entrance of T-2 Tunnel, a site entry signboard will be placed, and 200 m before the tunnel entrance, information signs will be installed to warn drivers to slow down (see Figure XII.1).

Figure XII.1 T-2 Entrance

At the exit of T-2 Tunnel, workers will be given training on stopping before connecting to the main road, checking traffic flow, and then merging safely. A STOP sign will be placed.
For civil vehicles, 200 m before the exit area, “Caution – Construction Vehicles May Exit” signs will be installed (see
Figure XII.2).

Figure XII.2 T-2 Exit

On the V-2 access road, since there are residential roads, construction machinery will comply with the 30 km/h speed limit. Awareness training will be given to machine operators (see Figure XII.3).

Figure XII.3 V-2 Access Road

On the V-1 access road (Sarıabalı), the local speed limit will be observed. Operators and drivers will be informed about the speed limit (see Figure XII.4).

Figure XII.4 V-1 Access Road

On the T-1 access road, the 30 km/h speed limit will be observed. Operators/drivers will be informed about the speed limit. Slowdown signs will be installed 200 m before the tunnel entrance area (see Figure XII.5).

Figure XII.5 T-1 Access Road

On the Kalemler connection road, the local speed limit will be observed. Operators and drivers will be informed about the speed limit (see Figure XII.6).

Figure XII.6 Kalemler Connection Road

On the Bucakşeyhler/Ulukapı road, the local speed limits will be observed. Operators and drivers will be informed about the local speed limits (see Figure XII.7).

Figure XII.7 Bucakşeyhler/Ulukapı Road

On the Manavgat site access road, the local speed limits will be observed. Operators and drivers will be informed about the speed limits. The site entrance will be marked with signboards, and slowdown signs will be installed 200 m before the site entrance. At the site exit, a STOP sign will be placed to ensure drivers control the traffic flow before merging into the road (see Figure XII.8).

Figure XII.8 Manavgat Site Access Road

On the V-8 access road, vehicles will comply with the 20 km/h speed limit (for dust control and traffic safety) (see Figure XII.9).

Figure XII.9 V-8 Access Road

Within the V-8 site boundaries, the 20 km/h speed limit will be observed. Flagmen will be placed at turning points and blind spots (see Figure XII.10).

Figure XII.10 V-8 Site Boundaries

Within the T5 – Storage Area 31 site boundaries, the 20 km/h speed limit will be observed. Flagmen will be placed at turning points and blind spots. Drivers will be informed about the risks of the working area (see Figure XII.11).

Figure XII.11 T5 – Storage Area 31 Site Boundaries

On the V-12 access road, compliance with local speed limit signboards will be ensured. Operators and drivers will be informed about the speed limits. Within the V12 site, the 20 km/h speed limit will be observed. Flagmen will be placed at turning points and blind spots. Drivers will be informed about the risks of the working area. At entry and exit points, STOP–SLOW signs will be installed to ensure operators are cautious when merging onto the main road (see Figure XII.12).

Figure XII.12 V-12 Access Road

On the V-11 access road, compliance with local speed limit signboards will be ensured. Operators and drivers will be informed about the speed limits. Within the V-12 site, the 20 km/h speed limit will be observed. Flagmen will be placed at turning points and blind spots. Drivers will be informed about the risks of the working area. At entry and exit points, STOP–SLOW signs will be installed to ensure operators are cautious when merging onto the main road (see Figure XII.13).

Figure XII.13 V-11 Access Road

TRAINING AND COMMUNICATION MANAGEMENT PLAN

REVISION STATUS		
Revision Date	**Rev. No**	**Explanation**
01.04.2025	00	This plan is prepared according to TS EN ISO/IEC 9001:2015, TS EN ISO/IEC ISO 14001:2015, TS EN ISO/IEC 45001:2018 and IFC Performance Standards
23.05.2025	01	Revision
16.06.2025	02	Revision as per revision made under ESDD submitted by the Lender consultant
08.09.2025	03	Revision as per revision made under ESDD submitted by the Lender consultant

TRAINING AND COMMUNICATION MANAGEMENT PLAN

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EPC Health and Safety Manager 8
EPC HSE Chief 8
EPC Environment and Social Manager 8
HR Chief 9
Project Manager 9
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LIST OF ABBREVIATIONS

AAOİAŞ	Antalya-Alanya Otoyolu İnşaat Yatırım ve İşletme A.Ş.
CLO	Community Liaison Officer
E&S	Environmental and Social
EHS	Environmental, Health, and Safety
ESIA	Environmental and Social Impact Assessment
ESMMP	Environmental and Social Management and Monitoring Plan
ESMS	Environmental and Social Management System
IFC	International Finance Corporation
ILO	International Labor Organization
KPIs	Key Performance Indicators
OHS	Occupational Health and Safety
PPE	Personal Protective Equipment
SEP	Stakeholder Engagement Plan
WHO	World Health Organization

TRAINING AND COMMUNICATION MANAGEMENT PLAN

I. INTRODUCTION

Ministry of Transport, and Infrastructure (former Ministry of Transport, Maritime Affairs and Communications), General Directorate of Highways ("KGM" or "the Administration"), as the owner of the Antalya-Alanya Motorway Project, has tendered for a contract in accordance with the Law on Implementation of Some of the Investments and Services in the Framework of Build, Operate and Transfer Model (Law No: 3996). Following the tendering process, KGM has awarded Antalya-Alanya Otoyolu İnşaat Yatırım ve İşletme A.Ş. (AAOİAŞ or the Project Sponsor) with a Build, Operate and Transfer (BOT) contract for the implementation of the Project. Accordingly, AAOİAŞ will be referred as Project Sponsor in the scope of this report. The main contractor for the Project has been designated as Limak and will henceforth be referred to as the Contractor (or EPC).

The project is designed to connect the districts of Serik and Alanya via the Manavgat district of Antalya province. The Project will enhance the existing transportation network services with its surrounding provinces: Burdur, Muğla, Konya, Isparta, Karaman and Mersin. Various environmental, social, and technical studies have been conducted along the initial route of the Project tendered by the KGM. Based on these studies, the route was optimized, incorporating engineering practices and addressing environmental and social considerations, particularly issues of involuntary and economic resettlement, before being finalized. According to the most current design, the total length of the Motorway, which will be a dual carriageway of mostly 3 and partially 2 lanes (3x2 and 2x2) in each direction, is 117.8 kilometers including the main carriageway and the access roads.

This Management Plan ("Plan") has been prepared by Antalya-Alanya Highway Construction Investment and Operation Inc. ("AAOİAŞ" or "SPV") for the Antalya-Alanya Highway Project ("Project") in accordance with national legislation, the Equator Principles ("EP"), the International Finance Corporation ("IFC") Performance Standards ("PSs"), and the international standards that reference the relevant legislative sections. The Plan covers the construction phase of the Project.

I.1 Project Description

The Project starts at Serik Interchange (Km: 52+000) and then proceeds eastward, following the corridor at the foothills of the Taurus Mountains within the boundaries of Serik and Manavgat districts, ending at north of Konaklı neighborhood of Alanya District (Km: 136+000). From this point onwards, the route turns southward with a 2x2 lane connection road and connects to the D400 state road at the Alanya West Interchange.

As of April 2025, the current Project design includes a total of 117.8 kilometers of road, comprising 84 kilometers of main road (motorway) and 33.8 kilometers of access roads. Other structures to be built as part of the project are as follows:

- 16 viaducts,
- 22 bridges,
- 305 culverts,
- 25 interchanges,
- 56 overpasses,
- 43 underpasses, and
- 5 tunnels

The map showing the construction components and road route within the scope of the Project's construction activities is provided in Figure I-1

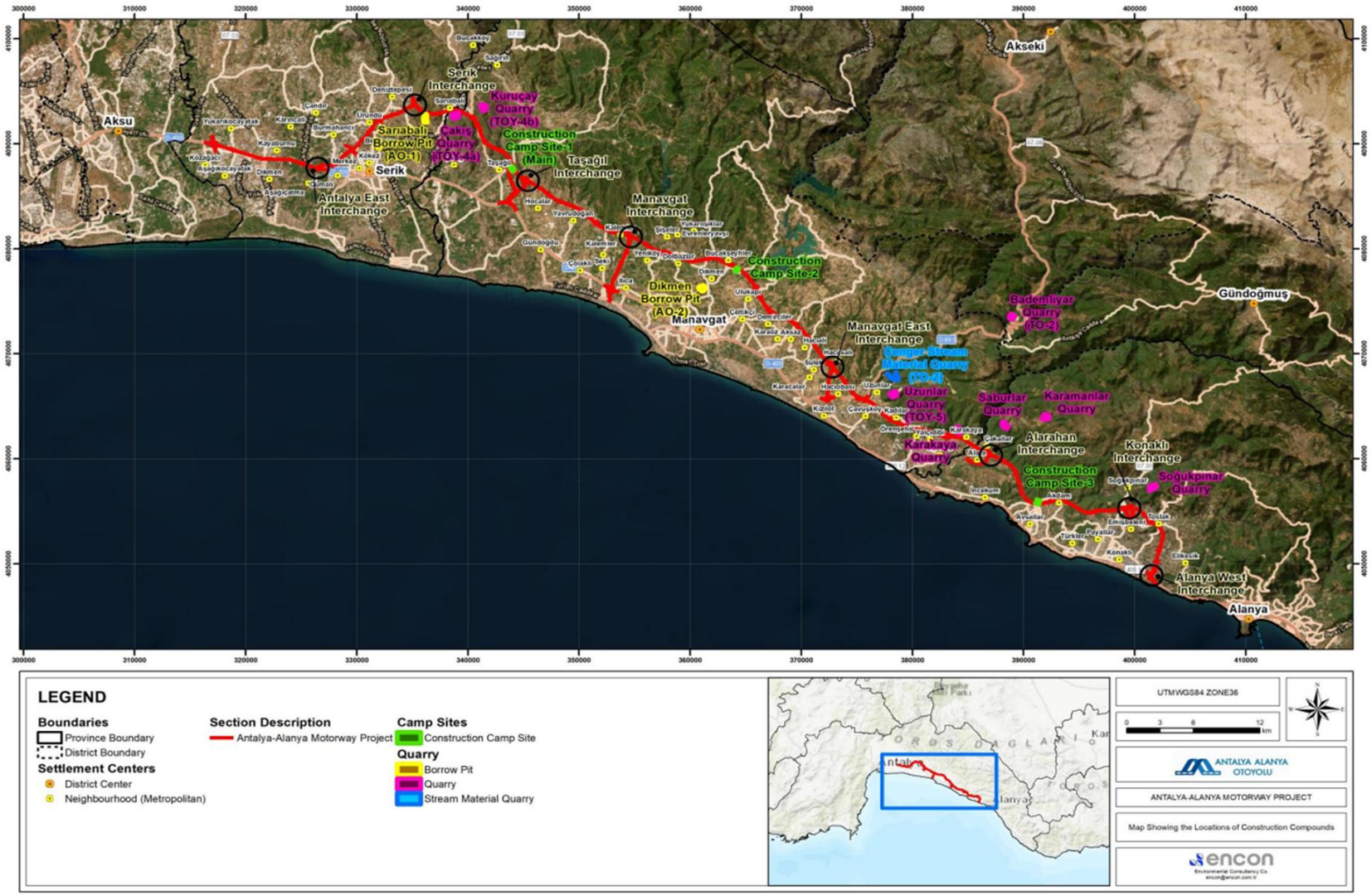

Figure I-1: Map Showing the Locations of Construction Compounds

II. PURPOSE AND SCOPE

This Training and Communication Management Plan ("the Plan") has been prepared for the Antalya-Alanya Motorway Project ("the Project").

The purpose of this Plan is to outline the procedures and responsibilities necessary to ensure that all personnel—including direct employees, subcontracted workers and site visitors—receive adequate Occupational Health and Safety (OHS) training and information during the construction phase. The Plan aims to ensure that all individuals possess the required knowledge and competencies to carry out their duties safely and effectively, thereby minimizing occupational risks on-site.

This management plan is a living document developed with the best available information and will be reviewed and revised as necessary due to the nature of the construction and progress.

This Plan defines procedures for planning, implementing, and monitoring OHS training programs that are responsive to site-specific risks, task modifications, technological changes, equipment updates, and workplace relocations. Specialized training should be provided for personnel assigned to emergency response roles, including first-aid and rescue duties. In parallel, visitor orientation and access control protocols should be established to prevent unauthorized access to hazardous areas and to safeguard both workers and visitors.

Training obligations should also be extended to subcontractors and service providers through appropriate contract provisions and active performance monitoring. AAOİAŞ, as the Project Sponsor, should ensure that all contracted entities fulfill these training requirements before assignment commencement.

This Plan should be implemented by all relevant Project stakeholders, including AAOİAŞ (Project Sponsor), the Main Contractor Limak, and all subcontractors. Roles and responsibilities related to implementation, monitoring, and reporting should be clearly defined. The Plan should be revised as necessary to accommodate changes in construction methodologies, organizational structures, or regulatory frameworks.

III. LEGISLATIVE FRAMEWORK AND REFERENCE STANDARDS

This Plan has been structured in accordance with relevant national legislation and aligned with international standards and guidelines. These references should be used to guide the development, implementation, and monitoring of training programs and communication practices throughout the construction phase of the Antalya Alanya Motorway Project.

III.1 National Requirements

The following Turkish laws and regulations should form the legal basis for ensuring OHS training and communication throughout construction activities:

- Environmental Law (Law No: 2872)

- Labor Law (Law No. 4857)
- Occupational Health and Safety Law (Law No. 6331)
- Regulation on Occupational Health and Safety Training of Employees
- Regulation on Health and Safety Measures in Construction Works
- Regulation on the Duties, Authority, and Responsibilities of Occupational Safety Experts
- Regulation on the Procedures and Principles of Occupational Health and Safety Services

These legal instruments provide the foundation for planning and executing adequate training strategies for workers and site visitors, including requirements for risk-based training, emergency preparedness, and employer obligations in occupational health and safety.

III.2 International Standards and Conventions

In addition to national legislation, the following international standards and agreements should be considered to ensure consistency with best practices and compliance with requirements of international financial institutions:

- IFC Performance Standards (2012), specifically:
  - Performance Standard 1: Assessment and Management of Environmental and Social Risks and Impacts
  - Performance Standard 2: Labor and Working Conditions
  - Performance Standard 4: Community Health, Safety, and Security
- IFC Environmental, Health and Safety (EHS) General Guidelines (2007)
- IFC EHS Guidelines for Toll Roads (2007)
- IFC Guidance Notes (2012)
- Equator Principles IV (2020)
- International Labor Organization (ILO) Occupational Safety and Health Convention (No. 155)
- ILO Occupational Health Services Convention (No. 161)
- ILO Convention on Vocational Guidance and Training (No. 142)

These standards and conventions should be used to guide the planning, implementation, and periodic evaluation of OHS training and communication measures on-site. The Project Sponsor (AAOİAŞ), the Main Contractor (Limak), and all subcontractors should ensure that all training activities reflect the principles outlined in these documents.

IV. LINKAGE WITH OTHER PROJECT PLANS AND PROCEDURES

This Plan is supported by other management plans and procedures developed under the Environmental and Social Management System (ESMS) of the Project. The following plans and procedures are particularly relevant and should be implemented in coordination with the Training and Communication Plan:

- Human Resources and Labor Management Plan
- Subcontractor Management Plan
- Community Health and Safety Management Plan
- Occupational Health and Safety Management Plan
- Traffic Management Plan
- Hazardous Material Management Plan

- Environmental and Social Management and Monitoring Plan (ESMMP)
- Security Management Plan
- Resettlement Action Plan (RAP)
- Stakeholder Engagement Plan (SEP)

The effective integration of these plans should be ensured to maintain consistency in training delivery, enhance health and safety awareness, ensure subcontractor compliance, and support alignment with national regulations and international standards throughout the construction phase of the Project.

V. ROLES AND RESPONSIBILITIES

Antalya Alanya Otoyol İnşaat Yatırım ve İşletme A.Ş. (SPV) as the Project Sponsor and Limak (EPC) as the main contractor of the Project will be responsible for the following:

SPV Environment & Social and Health & Safety Manager

- Ensure safety inductions, toolbox talks, and job-specific training are conducted and recorded.
- Supervise the integration of safety controls into daily work permits, toolboxes, and field activities.
- Ensure the preparation, revision, and implementation of training plans and documents in accordance with the Project ESIA and EIA, SPV's corporate policies, regulatory obligations, international standards and lender requirements.

SPV HSE Specialist

- Conduct regular site inspections, hazard identification, safety inductions, toolbox talks, and job-specific training.

EPC Health and Safety Manager

- Ensure the completion of the safety inductions, toolbox talks, and job-specific training, safety briefings, and daily pre-task planning meetings to reinforce safety culture and awareness on site.
- Supervise the integration of safety controls into daily work permits, toolboxes, and field activities.
- Conduct the site-specific H&S training plan and programs for EPC and subcontractors.
- Coordinate HR and E&S departments to prepare site and job-specific annual training plan according to the Project and regulation requirements and implement through activities.

EPC HSE Chief

- Ensure the completion of the safety inductions, toolbox talks, and job-specific training, safety briefings.

EPC Environment and Social Manager

- Ensure the preparation, revision, and implementation of this Plan and documents, policies in accordance with the Project ESIA and EIA, SPV's corporate policies, regulatory obligations, international standards and lender requirements and are implemented by EPC.

- Conduct periodic audits, inspections, and spot checks for subcontractor to ensure alignment with Project requirements.
- Coordinate HR and H&S departments to prepare site and job-specific annual training plan according to the Project and regulation requirements and implement through activities.
- Review and validate training records and related documentation from Contractor/Subcontractor.

HR Chief

- Ensure the preparation, revision, and implementation of this Plan and documents, policies in accordance with the Project ESIA and EIA, SPV's corporate policies, regulatory obligations, international standards and lender requirements and are implemented by EPC.
- Conduct periodic audits, inspections, and spot checks for subcontractor to ensure alignment with Project requirements.
- Coordinate E&S and H&S departments and all other department managers to prepare site and job-specific annual training plan according to the Project and regulation requirements and implement through activities.
- Review and validate training records and related documentation from Contractor/Subcontractor.
- Review the Training Request form and respond, and conduct training organisation with relevant parties.

Project Manager

The Project Manager is responsible for the approval of the OHS Training list, Tranning Matrix.

Line Managers

Line Managers are responsible for filling out and submitting the Training Request Form to the HR Department.

The comments and justifications of the requesting manager should be documented in the and forwarded sequentially to the Project Manager, and ultimately to the General Manager for approval.

VI. COMMUNICATION AND TRAINING MANAGEMENT APPROACH

Effective communication and systematic occupational health and safety (OHS) training are critical components for minimizing occupational accidents and promoting a safe working environment throughout the construction phase of the Antalya-Alanya Motorway Project. The accident rate on construction sites is significantly influenced by the awareness and attentiveness of personnel regarding task-specific hazards. Therefore, ensuring that all individuals involved in construction activities—whether directly employed, subcontracted, or visiting the site—receive appropriate training and safety information should be prioritized.

A comprehensive OHS Training Program specific to the Project will be developed and implemented in accordance with a predefined schedule. This program should cover all essential safety aspects and be adapted to address site-specific conditions, emerging risks, and technological

developments. Training should be provided to all categories of personnel, including direct and contracted workers, management and supervisory staff, and visitors.

Training modules should include the following key topics:

- Basic site rules and hazard awareness;
- Hygiene requirements and practices;
- Identification of site-specific hazards and associated health risks;
- Safe work practices and procedures;
- Proper use and maintenance of materials, tools, and equipment;
- Selection and use of appropriate personal protective equipment (PPE);
- Safety protocols for working near machinery and moving vehicles;
- Prevention of injury to co-workers and self;
- Safe working practices under low-visibility conditions (e.g., nighttime operations, use of high-visibility apparel, adequate lighting with minimal glare);
- Emergency response procedures for incidents such as fires and natural disasters.

In addition, refresher and task-specific training should be conducted under the following conditions:

- Prior to the commencement of work for newly recruited project personnel;
- When a worker's task or assigned work location is modified;
- Upon the introduction of new equipment, tools, or construction techniques;
- When new occupational hazards are identified.

To ensure the safety of non-operational personnel, a Visitor Orientation and Control Program should be established. Visitors should not be allowed to access hazardous zones unescorted. This program should include checkpoint monitoring, entry restrictions, safety briefings, and proper record-keeping practices to safeguard both workers and visitors.

Training sessions provided to both contracted and subcontracted employees, as well as site visitors, should ensure that participants acquire an understanding of:

- Materials, equipment, and tools used at the site;
- Recognized operational hazards and control measures;
- Exposure risks and mitigation strategies;
- Required hygiene standards and practices;
- Correct use of PPE;
- Causes and consequences of incidents and near-misses.

Communication tools such as warning signs and hazard labels should be designed in accordance with international standards to ensure they are universally understandable and visible to workers, visitors, and emergency responders. A standardized hazard coding system should be visibly displayed in key locations, including emergency entrances and fire safety systems.

Additionally, information regarding the nature of hazardous materials stored, handled, or used at the construction site should be communicated proactively to emergency services and security personnel. This will ensure timely and efficient response actions in the event of an emergency and contribute to overall risk reduction.

The successful implementation of the Training and Communication Program should be supported through routine monitoring, performance reviews, and periodic updates to training content in alignment with evolving construction practices and legal requirements.

VII. MITIGATION MEASURES TO ADDRESS TRAINING AND COMMUNICATION RISKS

The following measures, focusing on structured training planning, training formats and content, and training documentation practices, should be implemented to mitigate risks associated with training and communication throughout the construction phase of the Project. These measures are described in detail in the subsequent subsections of this Plan.

VII.1 Training Planning

Training planning should form the foundation of effective occupational health and safety practices and overall capacity development during the construction phase of the Project.

In this context, an annual training needs analysis should be carried out to identify priorities for both mandatory and non-mandatory training programs. Based on the identified development requirements, an individual development plan should be prepared for each employee. This plan should be developed through mutual agreement between the employee and their direct supervisor, reviewed regularly, and updated as necessary in line with evolving Project requirements.

A comprehensive Training Matrix, including OHS training list which is identified under Regulation on Occupational Health and Safety Training of Employees should be used to support the structured planning and scheduling of these programs. Trainings should be repeated periodically, taking into account emerging and changing risks. Employees who have been absent from work for more than six months, regardless of the reason, should be provided with refresher training before resuming their duties. The OHS Annual Training Program is identified under the Occupational Health and Safety Management Plan.

If new training needs arise during the year, additional training requests from department managers should be submitted through the same process using the Training Request Form. The comments and justifications of the requesting manager should be documented in the Training Request Form and forwarded sequentially to the Project Manager, and ultimately to the General Manager for approval. The Approved Request Form will be submitted to the HR Department to prepare or revise the Draft/Annual Training Program and Training Matrix.

The main sources used to identify training needs include legal training requirements, the company’s strategies, management plans and objectives, job descriptions outlining key duties and required competencies, performance evaluation results, internal and external audit findings, the effectiveness of previous trainings, changes in legislation and technological developments, and feedback from clients, subcontractors, and employees.

The feasibility of delivering the requested training, considering company objectives and available resources such as budget, time, and physical capacity, should be assessed by the relevant Project Manager.

Training Matrix, Appendix A, should be used as the basis for preparing the Draft Annual Training Program by HR Chief Annual Training Program should document key information related to all scheduled training activities throughout the year, including training topics, content, target participants, training type (in-house or external), training duration, trainer or training provider, training location, and training date.

Annual Training Program will be approved by Project Manager and HR Chief. EPC and its subcontractors will provide training for the relevant positions in accordance with this Program.

VII.2 Training Formats and Content

The Annual Training Plan should include a comprehensive range of core training content applicable to the construction phase of the Project. These training topics should cover the following areas :

Use of Personal Protective Equipment (PPE)
Emergency procedures
Working at height, excavation safety, and heavy equipment operations
Waste management
Water and air pollution control
Noise and vibration management
Erosion and sediment control
Construction procedures and techniques
Quality control and inspection procedures
Traffic management and temporary road arrangements
Rules for interacting with local communities
On-site and off-site safety precautions
Public relations and grievance mechanism procedures

Trainings should be conducted in appropriate and adequately equipped venues that allow for practical applications. Training venues should meet acceptable thermal comfort conditions and provide adequate lighting to support effective learning.

Training sessions should be implemented in three main formats: internal in-house training conducted by company personnel using company facilities; internal external training conducted at company premises by external experts such as training institutions, consultants, suppliers, or subcontractors; and external training held outside company premises by third-party training providers, public institutions, or suppliers/subcontractors. In-house training should be prioritized, and internal trainers should be identified in consultation with department managers. Employees who attend external training may be requested to share the key knowledge gained with their colleagues upon returning to work.

Occupational health and safety trainings should be delivered by workplace safety experts and occupational physicians assigned to the Project. Additionally, such trainings may also be provided by institutions including labor, employer, and public service organizations; training foundations and centers established by such organizations; universities; training units of public institutions; professional associations with public institution status; and training institutions or joint health and safety units

authorized by the Ministry. Trainers should be selected based on their subject-matter expertise relevant to the topics included in the training program.

The following categories represent the primary types of training to be implemented under the Training and Communication Plan. These training types should be designed to foster continuous learning, maintain compliance with applicable legislation, and improve employee competencies during the construction phase of the Project:

- **Personnel Training and Development:** Includes all activities intended to maintain, update, and improve employee knowledge, skills, and capabilities. This encompasses formal, informal, and on-the-job training, as well as e-learning, self-learning, participation in conferences, mentoring and coaching, job shadowing, and job rotation.
- **Mandatory Training:** Refers to employer-required training to ensure that employees are competent to perform their roles. This includes general skill training applicable to all workers and specific training tailored to certain staff groups.
- **Legal Training:** Encompasses training programs that are legally required to ensure the health, safety, and security of employees and all individuals interacting with the worksite. This includes mandatory EHS training.
- **Training for New Employees:** Covers orientation and role-specific training provided to newly hired personnel. Each new employee will follow a personal training plan, including both on-the-job training and general induction, prepared by the relevant department supervisor.

Employees who wish to participate in congresses, conferences, seminars, or similar professional development activities, outside the scope of company-planned trainings, may do so with the prior approval of their respective department manager, provided these activities are offered free of charge and contribute to professional knowledge enhancement.

VII.3 Evaluation of Training Effectiveness

The effectiveness of trainings should be assessed through two complementary methods, and the outcomes should be taken into consideration by managers during the planning and implementation of future training programs. Following each training session—whether conducted internally or externally—participants should be asked to complete a Training Evaluation Form to assess the training content, trainer performance, and suitability of the training venue. The results of these forms should be reviewed and recorded for reference in future training planning and implementation processes.

Additionally, the impact of training on employee development should be evaluated by supervisors, who should monitor participant progress based on specific criteria. These criteria include the extent to which the training is reflected in job performance, behavioral changes and interpersonal interactions, improvements in motivation levels, contributions to personal development, and readiness for future responsibilities. The evaluation results should be used in revising the Annual Training Plan and planning subsequent training activities. Relevant findings regarding training effectiveness should also be communicated to the E&S Manager, as appropriate.

VII.4 Training Documentation

All training activities conducted under the scope of the Project should be properly documented, and training records should be maintained in the personnel files of each employee. Each training record should include the full name of the participant, job title, subject and duration of the training, the name, title, and signature of the trainer, as well as the training date. In cases where the training is delivered by an external provider, the name of the institution should also be clearly indicated on the issued certificate.

VIII. MONITORING

A structured internal monitoring program should be implemented to assess the effectiveness of the training and communication measures outlined in this Plan during the construction phase of the Project. The scope and frequency of monitoring activities should be reviewed periodically and revised where necessary, based on site-specific observations, feedback from stakeholders, the results of internal audits, or changes in applicable legal or institutional requirements.

Monitoring activities should be coordinated by the Human Resources (HR) Department, in close collaboration with the OHS and Construction Management teams. Key responsibilities should include verifying the timely implementation of training sessions, reviewing attendance and certification records, evaluating the relevance and quality of training content, and ensuring the consistent application of training requirements across contractors and subcontractors, particularly in high-risk work areas.

Regular monitoring should be conducted across all worksites to ensure that planned trainings are delivered as scheduled, participants are properly recorded, and feedback is systematically collected. This includes reviewing records such as the Annual Training Plan, Training Attendance Forms, Evaluation Forms, and issued Certificates. Spot checks and field verifications should be conducted to confirm that trained personnel are applying learned practices on-site.

The performance of contractors and subcontractors in fulfilling training-related obligations should be reviewed through internal audits, site supervision reports, and direct observations. Any identified non-conformities should trigger the preparation and implementation of corrective and preventive action plans. Follow-up monitoring should be carried out to verify the effectiveness of these measures and to ensure continuous improvement and avoidance of repeat deficiencies.

In addition to internal monitoring, inspections may also be conducted by relevant public institutions, including the Ministry of Labor and Social Security or other competent authorities, in accordance with Turkish legislation. The scope and frequency of these inspections will be determined by the relevant authority and may include review of training records, on-site verification of trained personnel, and compliance with mandatory training standards.

Monitoring efforts should be guided by the framework provided in Table VIII.1, which outlines the training-related parameters to be monitored, the locations where records are held or verified, methods of monitoring, the frequency of monitoring activities, and the responsible parties. These activities are essential for evaluating the overall performance of the Training and Communication Plan and ensuring full compliance with national regulations and Project-specific commitments.

Table VIII.1 Key Monitoring Activities

Parameter	Monitoring Station / Location	Monitoring Method	Monitoring Frequency	Responsibility
Number and scope of trainings (e.g. security, health and safety), number of participants, training hours per employee, training materials, and trainings provided to subcontractors	Project office	Document review	Monthly	EPC AAOİAŞ,
Number of raised training requests from stakeholder	Project office	Document review	Quarterly	EPC AAOİAŞ,

In cases of non-compliance identified through internal oversight or external audits, AAOİAŞ should ensure that corrective and preventive measures are promptly implemented in coordination with the Main Contractor (Limak) and relevant subcontractors. Any training-related gaps or deficiencies—such as missing records, low participation rates, or failure to meet legal training obligations—should be documented and addressed through appropriate management actions.

All findings related to training implementation, including unresolved grievances, non-compliance with training schedules, or absence of certification where required, should be recorded in accordance with national legislation and internal Project procedures. In the event of serious violations—such as systemic failure to provide mandatory training or recurrent non-compliance—LİMAK should notify the relevant authorities and initiate appropriate technical, procedural, or contractual remedies to ensure compliance and prevent recurrence.

IX. KEY PERFORMANCE INDICATORS

The following Key Performance Indicators (KPIs) will be monitored, verified, and evaluated.

Table IX.1 Key Performance Indicators – Construction Phase KPIs

Monitoring Parameter / Performance Indicator	Target	Frequency	Responsible Party
Number of trainings conducted	All personnel should receive training	Monthly Quarterly	EPC SPV

X. AUDIT AND REVIEW

The implementation of this Plan should be regularly monitored and reviewed in accordance with the ESMMP. All incidents and non-conformities should be documented and reported as outlined in the Plan. Contractors and subcontractors should be subject to audits conducted by the Project Sponsor within the scope and schedule defined in the Subcontractor Management Plan. These audits and the associated records should be managed in compliance with the Project's established plans and procedures. Relevant records that should be reviewed during audits may include the external grievance and suggestion tracking database, internal grievance and suggestion tracking database, training records, and non-conformity records. Observations and deficiencies identified during audits should be recorded in formal audit reports, and all findings requiring improvement should be registered under Corrective Actions. Project management should review audit outcomes and corrective action records, follow up on progress, and ensure that additional measures are implemented where necessary.

XI. REPORTING

Regular reporting should be conducted to ensure the effective implementation and continuous improvement of training and communication activities throughout the construction phase of the Project. Reporting should be structured to reflect internal monitoring and audit findings, as well as external compliance obligations and stakeholder engagement feedback related to capacity-building efforts.

Based on monitoring results, necessary corrective and preventive actions should be identified, and corresponding updates should be incorporated into this Plan. The training program should be revised accordingly to address observed implementation gaps or unmet performance targets. Periodic audits and field verifications should be conducted to ensure that all training-related activities are carried out in accordance with the provisions of this Plan.

Reports should be prepared using data gathered through training monitoring activities defined in this Plan. This includes reviewing the status of implemented trainings, participation rates, evaluation outcomes, grievances received, and actions taken in response. All supporting documentation—such as training logs, attendance records, evaluation forms, and photographs of training activities—should be compiled in appropriate reporting formats.

Reporting activities under this Plan should focus on key performance indicators such as the number of trainings conducted, the percentage of trained personnel, the frequency of refresher trainings, and the responsiveness to training-related grievances. In the event of critical non-compliance—such as failure to provide legally required training or repeated complaints about inadequate safety awareness—an incident report, including root cause analysis and corrective measures, should be submitted to the relevant department within 30 business days.

All relevant data, including findings from audits, performance monitoring, and field observations, should be consolidated within the training section of the Environmental and Social Monitoring Report, prepared on a semi-annual basis. These reports should summarize non-compliance issues, detail corrective actions taken, and outline any time-bound improvement measures, supported by documentary evidence such as signed attendance sheets, certificates, and photographic documentation.

All personnel should be encouraged to raise concerns, suggestions, or complaints related to training and communication practices through the established grievance mechanism by submitting a grievance form. Internal and external grievances about training delivery, participation, or effectiveness should be recorded, addressed, and followed up as per the procedures defined in the Stakeholder Engagement Plan.

This Plan should be reviewed semi-annually by the E&S Manager and H&S Manager, based on the results of audits, employee feedback, and any significant changes in site operations or training requirements. Updates to the Plan should be approved in coordination with the relevant Managers and the Project Sponsor to ensure it remains aligned with national legislation, international standards, and Project-specific objectives.

APPENDIX-A: TRAINING MATRIX RELATED WITH E&S AND H&S ISSUES

TRAINING AND COMMUNICATION MANAGEMENT PLAN

Name of the Training	Subject of the Training	Participants	Training Document	Training Duration	Training Continuity	Training Location	Goal and Objective
1.Orientation Training / Induction Training							
Orientation Training	1-Introduction of the Project 2-Project OHS and Environmental Rules 3-Duties, Authorities, and Responsibilities 4-Emergencies, Emergency Response Methods, and Actions to Take in Emergencies 5-Hazards and Risks in the Work Area, Precautions Against These Hazards and Risks, Safe Working Methods, and Establishing Safe Working Environments	All Newly Recruited Employees	Visual Training Presentation (Before each new worker starts working on site)	2 Hours	Every Month	Training Room	Until the Basic OHS trainings are provided, employees are informed about the Project, made aware of the OHS and Environmental rules and instructions that must be implemented in the Project, and are aimed to gain knowledge about the hazards and risks in the work areas, the precautions to be taken against these hazards and risks, and the necessary actions in case of emergencies.
2.Basic Occupational Health and Safety Trainings							
General Topics	a) Information on labor legislation b) Legal rights and responsibilities of employees c) Workplace cleanliness and order ç) Legal consequences of occupational accidents and diseases d) Use of Personal Protective Equipment (PPE) e) General Occupational Health and Safety rules and safety culture	All Newly Recruited Employees	Relevant Legal Requirements and Procedures	2 Hours	Every Month	Training Room, Worksite	At the time of recruitment (in-person/remote) and at one-year intervals, the trainings specified under General Occupational Health and Safety topics are provided to employees and documented. Following the training, it is expected that employees will demonstrate changes in behavior regarding occupational health and safety knowledge and safe working methods, and they will be subject to supervision.
		All Employees	Toolbox Talks				
Health Topics	a) Causes of occupational diseases b) Principles of disease prevention and implementation of protection techniques c) Biological and psychological risk factors ç) First aid d) Harmful effects of tobacco products and passive exposure	All Newly Recruited Employees	Special Training Documents			Training Room, Worksite	
		All Employees	Toolbox Talks				
Technical Topics	a) Chemical, physical, and ergonomic risk factors	All Newly Recruited Employees	Special Training Documents			Training Room, Worksite	

TRAINING AND COMMUNICATION MANAGEMENT PLAN

Name of the Training	Subject of the Training	Participants	Training Document	Training Duration	Training Continuity	Training Location	Goal and Objective
	b) Flammability, explosion, fire, and fire prevention c) Working with display screen equipment d) Safety and health signs e) General occupational health and safety rules, safety culture, and behavior-based OHS	All Employees	Toolbox Talks				
	Safe Manual Lifting and Handling	Newly Recruited Employees and All Employees	Special Training Documents	30 Minutes	Every Month	Training Room, Worksite	Employees are informed about the hazards and risks involved in manual lifting and handling activities, the necessary OHS precautions to be taken against these hazards and risks, and safe working methods for manual lifting and handling. A change in behavior is expected following the training.
			Toolbox Talks	15 Minutes			
	Safe Use of Work Equipment	Newly Recruited Employees and All Employees	Special Training Documents	30 Minutes	Every Month	Training Room, Worksite	Users of work equipment are informed about the potential hazards and risks that may arise during the use of such equipment, the necessary OHS precautions to be taken against these hazards and risks, and safe working methods based on the equipment's user manual. It is expected that the equipment will be used safely following the training.
			Toolbox Talks	15 Minutes			
	Electrical hazards, risks, precautions, electrical hand tools, and cable management	Newly Recruited Employees and All Employees	Special Training Documents	30 Minutes	Every Month	Training Room, Worksite	Users of electrical hand tools are informed about electrical hazards and risks in the work areas, as well as the safe use of electrical hand tools.
			Toolbox Talks	15 Minutes			
	Causes of Occupational Accidents, Legal Responsibilities, and Reporting	Newly Recruited Employees and All Employees	Specialized Training Documents	1 Hour	Every Month	Training Room, Worksite	Employees are informed about the causes of occupational accidents, the legal responsibilities of managers and workers, and the legislation related to the reporting of occupational accidents.
			Toolbox Talks	15 Minutes			

TRAINING AND COMMUNICATION MANAGEMENT PLAN

Name of the Training	Subject of the Training	Participants	Training Document	Training Duration	Training Continuity	Training Location	Goal and Objective
	Evacuation and Rescue	Newly Recruited Employees and All Employees	Specialized Training Documents	30 Minutes	Every Month	Training Room, Worksite	In situations requiring evacuation, employees are informed about the necessary actions to quickly reach the assembly point from the work areas.
			Toolbox Talks	15 Minutes			
Other Topics	Safe Working at Heights	Newly Recruited Employees and All Employees	Specialized Training Documents	1 Hour	Every Month	Training Room, Worksite	Employees are informed about the existing hazards and risks associated with working at heights, the necessary OHS precautions to be taken against these hazards and risks, and safe working methods at heights. Compliance with rules and instructions is expected.
			Toolbox Talks	15 Minutes			
	Safe Working in Confined/Restricted Spaces/Environments	Newly Recruited Employees and All Employees	Specialized Training Documents	1 Hour	Every Month	Training Room, Worksite	Employees are informed about the existing hazards and risks in confined/restricted spaces, the necessary OHS precautions to be taken against these hazards and risks, and safe working methods for tasks performed in confined/restricted spaces. Compliance with instructions is expected.
			Toolbox Talks	15 Minutes			
	Safe Working During Hot Work (Welding, Grinding, Cutting, etc.)	Newly Recruited Employees and All Employees	Specialized Training Documents	1 Hour	Every Month	Training Room, Worksite	Employees are informed about the existing hazards and risks during hot work (welding, grinding, cutting), the necessary OHS precautions to be taken against these hazards and risks, and safe working methods for hot work activities.
			Toolbox Talks	15 Minutes			
	Safe Working with Chemical Substances	Newly Recruited Employees and All Employees	Specialized Training Documents	1 Hour	Every Month	Training Room, Worksite	Employees are informed about the hazards and risks of the chemicals used according to their SDS (Safety Data Sheets) forms, as well as the necessary OHS precautions to be taken against these hazards and risks. Compliance with instructions is expected.
			Toolbox Talks	15 Minutes			
	Safe Working in Areas with Radiation Risk		Specialized Training Documents	30 Minutes	Every Month		Employees are informed about radiation-related hazards and risks, the necessary

TRAINING AND COMMUNICATION MANAGEMENT PLAN

Name of the Training	Subject of the Training	Participants	Training Document	Training Duration	Training Continuity	Training Location	Goal and Objective
		Newly Recruited Employees and All Employees	Toolbox Talks	15 Minutes		Training Room, Worksite	OHS precautions to be taken against these hazards and risks, and safe working methods in radiation areas.
	Safe Working in Lifting Operations	Newly Recruited Employees and All Employees	Specialized Training Documents	1 Hour	Every Month	Training Room, Worksite	Employees are informed about the hazards and risks related to lifting machines and equipment or lifting operations, the necessary OHS precautions to be taken against these hazards and risks, and safe working methods during lifting operations.
			Toolbox Talks	15 Minutes			
	Working with Special Risk Equipment	Newly Recruited Employees and All Employees	Specialized Training Documents	30 Minutes	Once every 2 months	Training Room, Worksite	Users of special risk or specific work equipment are informed about the safe use of the machine/equipment they will operate before starting work.
			Toolbox Talks	15 Minutes			
	Potential Health Risks Caused by Carcinogenic Substances	Newly Recruited Employees and All Employees	Specialized Training Documents	30 Minutes	Every Month	Training Room, Worksite	Lists of materials with carcinogenic effects are prepared, their SDS (Safety Data Sheets) are obtained, and employees are provided with training on safe working methods related to these materials.
			Toolbox Talks	15 Minutes			
	Safe Working at Night/In the Dark	Newly Recruited Employees and All Employees	Specialized Training Documents	1 Hour	Once every 2 months	Training Room, Worksite	Employees are informed about the hazards and risks that may occur in environments without daylight or in darkness, the necessary OHS precautions to be taken against these hazards and risks, and safe working methods for working at night or in the dark.
			Toolbox Talks	15 Minutes			
	Safe Working in Excavation Operations	Newly Recruited Employees and All Employees	Specialized Training Documents	1 Hour	Every Month	Training Room, Worksite	Employees are informed about the hazards and risks involved in all excavation works, as well as the measures to be taken to eliminate or reduce these hazards and risks to an acceptable level. They are expected to apply this knowledge in practice
			Toolbox Talks	15 Minutes			
	Safe Working in Tunnel Operations		Specialized Training Documents	1 Hour	Every Month		Employees are informed about the existing hazards and risks in energized areas

Name of the Training	Subject of the Training	Participants	Training Document	Training Duration	Training Continuity	Training Location	Goal and Objective
		Newly Recruited Employees and All Employees	Toolbox Talks	15 Minutes		Training Room, Worksite	(mechanical, electrical), the precautions to be taken against these hazards and risks, and safe working methods.
	Return-to-Work Training for Employees Who Have Experienced a Work Accident or Occupational Disease	Employees Who Have Experienced a Work Accident or Contracted an Occupational Disease	Specialized Training Documents	1 Hour	Every Month	Training Room, Worksite	Employees who have experienced a work accident or contracted an occupational disease are informed about the root causes of the accident or disease, and all employees are educated to prevent similar incidents from occurring in the future.
			Toolbox Talks	15 Minutes			
3.Emergency Training							
General Emergency Training	Emergency Response Plan Training of Emergency Teams Training on Emergency Response Methods Testing of Response Plans (Drills) and Subsequent Performance Evaluation	All Employees, Emergency Teams	Specialized Training Documents	1 Hour	Every Month	Training Room, Worksite	Emergency teams are informed about their duties, authorities, and responsibilities in potential emergency situations according to the emergency response plan. Practical field drills are conducted to reinforce the training.
			Toolbox Talks	15 Minutes			
First Aid	First Aid Training (Certified)	First Aiders	Legal Requirements	3 Days	Once every 3 months	Training Room	First aid personnel are provided with information about their duties, authorities, and responsibilities, and their qualifications are documented.
Fire Safety	Fire Formation, Types of Fire Extinguishers, and Their Use	All Employees	Specialized Training Documents	1 Hour	For 4 months, once a month	Training Room, Worksite	Employees are informed about fire formation, combustible materials, fire prevention methods, types of fire extinguishers, and fire-fighting techniques. They are expected to know how to respond in the event of a fire.
			Toolbox Talks	15 Minutes			
4.Risk Assessment Trainings							
Risk Assessment	Concept of hazard and risk Identification of hazards in the workplace Evaluation of risks arising from hazards Risk assessment	Risk Assessment Team and All Employees	Specialized Training Documents	1 Hour	Once a month for 6 months	Training Room, Worksite	The risk assessment team and employees are informed about the identification, analysis, and evaluation of hazards and risks that may arise in all ongoing project activities, as well as the implementation of
			Toolbox Talks	15 Minutes			

Name of the Training	Subject of the Training	Participants	Training Document	Training Duration	Training Continuity	Training Location	Goal and Objective
	Elimination of risks or reduction to an acceptable risk level						OHS measures. A change in OHS awareness is expected.
5.Specialized Trainings							
Visitor Training	Hazards and risks that guests and visitors may encounter in the work area, the precautions to be taken to protect against these hazards and risks, safe working practices, and safe working environments.	Guests and Visitors	Special Training Documents	1 Hour	Every Month	Training Room	Personnel who come to the work area as visitors, guests, etc. are informed about the hazards and risks in the work area, the precautions to be taken to protect against these hazards and risks, and safe working environments.
Training of Apprentices, Interns, and Individuals Requiring Special Policies	Apprentices, interns, and individuals requiring special policies are informed about the project, the rules to be followed within the project, their specific rules and instructions, working conditions, and hazards and risks in the work areas.	Apprentices and Interns	Special Training Documents	2 Hour	Every Month	Training Room	Hazards and risks in the work area, the OHS measures to be implemented against these hazards and risks, and safe working methods are communicated to apprentices, interns, and individuals requiring special policies by the relevant personnel when they start working.
Hygiene Training	Training and information for personnel involved in cleaning and food handling on prevention of infectious diseases and skin conditions.	Kitchen and Cleaning Staff	Authorized Organization/Person	8 Hour	Once	Training Room	Canteen, tea kitchen, and cleaning staff are expected to comply with hygiene rules.
Employee Representative / Support Staff	Duties, Authorities, and Responsibilities of Employee Representatives and Support Staff	Employee Representatives, Support Staff	Special Training Documents	1 Hour	Twice	Training Room	Designated employee representatives and support staff are informed about their duties, authorities, and responsibilities.
Occupational Health and Safety (OHS) Committee Training	Duties and authorities of the committee National legislation and standards on OHS Common occupational accidents and their causes Basic principles of occupational hygiene Communication techniques Emergency measures Occupational diseases Specific risks related to workplaces Risk assessment	OHS Committee Members	Relevant Legal Requirements and Special Training Documents	2 Hours	Once	Training Room	Occupational Health and Safety committee members are informed about their duties, authorities, and responsibilities as defined in the relevant legislation. They are expected to perform and implement their roles accordingly throughout the committee's term.

TRAINING AND COMMUNICATION MANAGEMENT PLAN

Name of the Training	Subject of the Training	Participants	Training Document	Training Duration	Training Continuity	Training Location	Goal and Objective
Safe Driving Training	Project-specific rules and instructions regarding the safe use of company vehicles	All Personnel Who Drive Vehicles	Relevant Legal Requirements and Special Training Documents	1 Hour	First 3 months, then twice thereafter	Training Room, Worksite	All personnel driving vehicles on the project are informed about the driving rules they must follow, and compliance with the specified rules and instructions is expected.
6.Environmental Trainings							
Environmental Cleanliness and Waste Management	Legal legislation and project plans and procedures related to environmental cleanliness and waste management	All Employees	Documents specially prepared for the training content: ● Solid Waste Management Plan and Hazardous Materials Management Plan ● Relevant legal legislation ● Project's EIA (Environmental Impact Assessment) and ESIA (Environmental and Social Impact Assessment) Reports	1 Hour	Every Month	Training Room	Employees are informed about the disposal of waste in the work area, housekeeping and waste management procedures in the work areas, and the existing procedures are explained to them. A change in behavior is expected.
Environmental Emergency Management	What are environmental emergencies? Which procedures should be followed? What actions need to be taken? What are the duties, authorities, and responsibilities of employees?	All Employees	Documents specially prepared for the training content: ● Emergency Management Plan ● Relevant legal legislation ● Project's EIA (Environmental Impact Assessment) and ESIA (Environmental	1 Hour	Every Month	Training Room	Communication and response methods during environmental emergencies are explained.

Name of the Training	Subject of the Training	Participants	Training Document	Training Duration	Training Continuity	Training Location	Goal and Objective
			and Social Impact Assessment) Reports				
Biodiversity Awareness and Code of Conduct	What are the sensitive areas and species that may be encountered within the project sites? What should the rules be for working in natural environments? What actions should be taken when encountering fauna species within the site or during transportation? What are the endemic species in and around the project area? What measures should be taken to protect wildlife?	All Employees	Documents specially prepared for the training content: • Biodiversity Action Plan • Relevant legal legislation • Project's EIA (Environmental Impact Assessment) and ESIA (Environmental and Social Impact Assessment) Reports	1 Hour	Every Month	Training Room	The precautions to be taken in field operations are explained according to the Biodiversity Management Plan prepared for the project.
Water and Energy Efficiency	What is efficiency in water consumption? What is efficiency in energy consumption? What is the importance of saving water and energy for the project, the country, and the world? How can individuals contribute to water and energy efficiency?	All Employees	Documents specially prepared for the training content: • Water, Wastewater, and Surface Water Management Plan • Relevant legal legislation • Project's EIA (Environmental Impact Assessment) and ESIA (Environmental and Social Impact Assessment) Reports	1 Hour	Every Month	Training Room	During the project, both on-site and in camp areas, the necessary actions to be taken regarding water and energy efficiency are explained.

TRAINING AND COMMUNICATION MANAGEMENT PLAN

Name of the Training	Subject of the Training	Participants	Training Document	Training Duration	Training Continuity	Training Location	Goal and Objective
Rules for Communication with the Community	What are the general characteristics of the local population in the area? What should be considered when establishing communication with the community? Are there any local communities specific to the project area and its surroundings? If so, what are the important points to consider when communicating with these communities? What are the correct communication methods within the construction site?	All Employees	Documents specially prepared for the training content: • Stakeholder Engagement Plan • Public Health and Safety Management Plan • Human Resources and Employee Management Plan • Relevant legal legislation • Project's EIA (Environmental Impact Assessment) and ESIA (Environmental and Social Impact Assessment) Reports	1 Hour	Every Month	Training Room	The rules for communication with the community are explained throughout the duration of the project.
Grievance Mechanism	What is a grievance mechanism? What is the purpose of the grievance mechanism? Who are the persons responsible for the grievance mechanism? Explanation of how employees can submit all their requests, demands, and complaints, including their personal rights and living standards, to the company.	All Employees	Documents specially prepared for the training content: • Stakeholder Engagement Plan • Relevant legal legislation • Project's EIA (Environmental Impact Assessment) and ESIA (Environmental	1 Hour	Every Month	Training Room	Both project employees and stakeholders affected by the project are informed about how to submit complaints related to the project and how to follow up on the outcomes.

Name of the Training	Subject of the Training	Participants	Training Document	Training Duration	Training Continuity	Training Location	Goal and Objective
			and Social Impact Assessment) Reports				

REVISION STATUS		
Revision Date	**Rev. No**	**Description**
01.03.2025	00	Revised and made compliant with the TS EN ISO/IEC 9001:2015, TS EN ISO/IEC ISO 14001:2015 and Occupational Health and Safety Standards.
23.05.2025	01	Job descriptions have been added.
16.06.2025	02	Revision as per revision made under ESDD submitted by the Lender consultant.
08.09.2025	03	Revision as per revision made under ESDD submitted by the Lender consultant.

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INTRODUCTION

Ministry of Transport, and Infrastructure (former Ministry of Transport, Maritime Affairs and Communications), General Directorate of Highways ("KGM" or "the Administration"), as the owner of the Antalya-Alanya Motorway Project ("The Project"), has tendered for a contract in accordance with the Law on Implementation of Some of the Investments and Services in the Framework of Build, Operate and
Transfer Model (Law No: 3996). Following the tendering process, KGM has awarded Antalya-Alanya Otoyolu İnşaat Yatırım ve İşletme A.Ş. (AAOİAŞ or the Project Sponsor) with a Build, Operate and Transfer (BOT) contract for the implementation of the Project. Accordingly, AAOİAŞ will be referred as Project Sponsor[1] in the scope of this report. The main contractor for the Project has been designated as Limak and will henceforth be referred to as the Contractor (or EPC).

The Project is designed to connect the districts of Serik and Alanya via the Manavgat district of Antalya province. The Project will enhance the existing transportation network services with its surrounding provinces: Burdur, Muğla, Konya, Isparta, Karaman and Mersin. Various environmental, social, and technical studies have been conducted along the initial route of the Project tendered by the KGM. Based on these studies, the route was optimized, incorporating engineering practices and addressing environmental and social considerations, particularly issues of involuntary and economic resettlement, before being finalized. According to the most current design, the total length of the Motorway, which will be a dual carriageway of mostly 3 and partially 2 lanes (3x2 and 2x2) in each direction, is 117.8 kilometers including the main carriageway and the access roads.

1.1 Project Description

The Project starts at Serik Interchange (Km: 52+000) and then proceeds eastward, following the corridor at the foothills of the Taurus Mountains within the boundaries of Serik and Manavgat districts, ending at north of Konaklı neighborhood of Alanya District (Km: 136+000). From this point onwards, the route turns southward with a 2x2 lane connection road and connects to the D400 state road at the Alanya West Interchange.

As of April 2025, the current Project design includes a total of 117.8 kilometers of road, comprising 84 kilometers of main road (motorway) and 33.8 kilometers of access roads. Other structures to be built as part of the project are as follows:

- 16 viaducts,
- 22 bridges,
- 305 culverts,
- 25 interchanges,
- 56 overpasses,
- 43 underpasses, and
- 5 tunnels

The map showing the construction components and road route within the scope of the Project's construction activities is provided in Figure 1-1.

[1] The BOT Contract uses the term "Appointed Company" to refer Project Sponsor

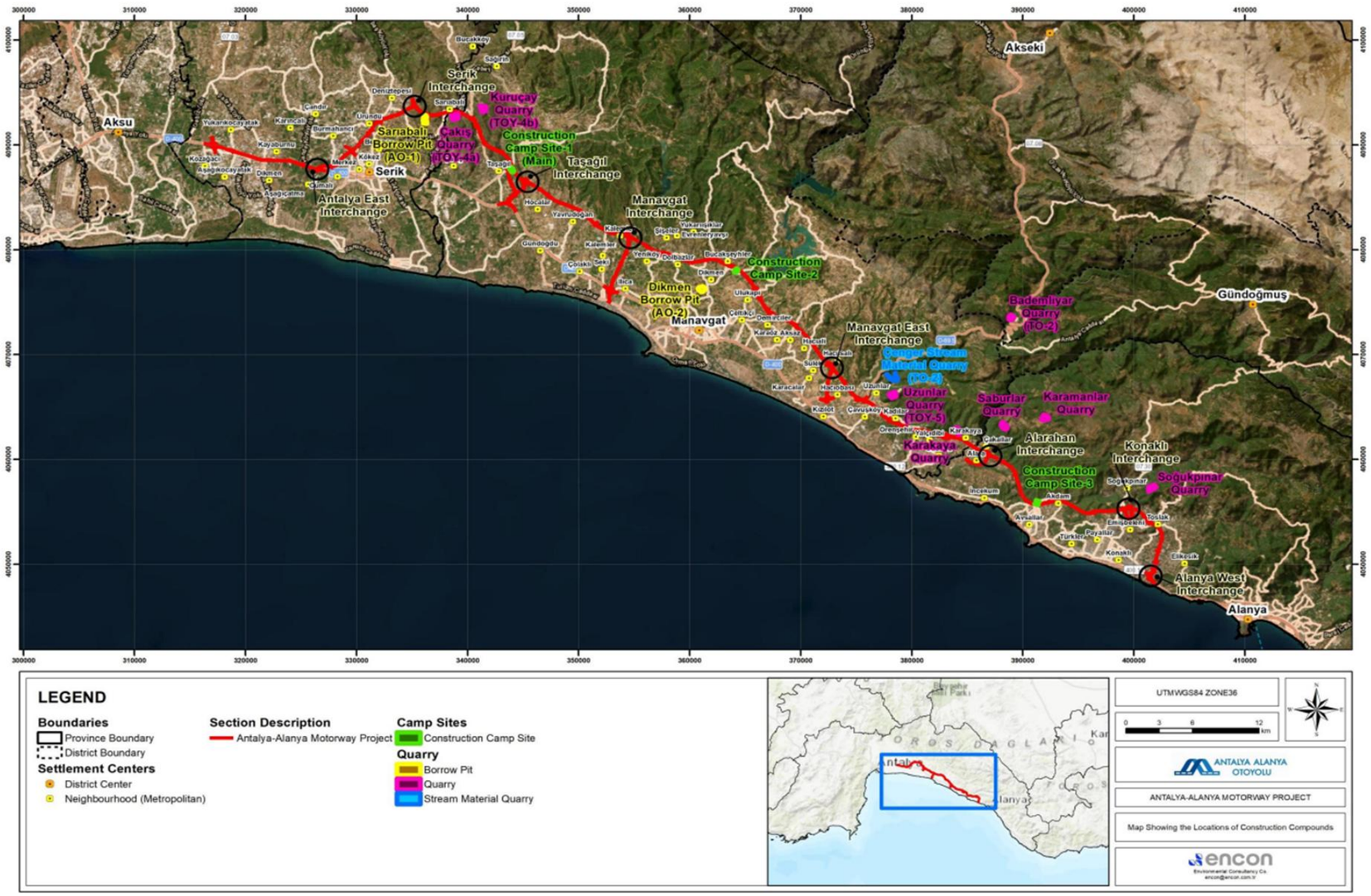


Figure 1-1.Map Showing the Locations of Construction Compounds

1. Purpose and Scope

The purpose of the Occupational Health and Safety Plan (OHSP) is to identify the actions and measures required for the general management of factors affecting the health and safety of the Project employees. This plan aims to:

- Provide general information about the applicable legislation and standards related to this procedure;
- Define roles and responsibilities;
- Incorporate the findings of the Environmental Impact Assessment (EIA, dated 17.08.2018), requirements foreseen by the Environmental and Social Impact Assessment (ESIA), international standards, the legislation of the Republic of Türkiye, requirements set by lenders, and project-specific permits into the procedure;
- Identify impact sources and mitigation measures;
- Define risk management;
- Define communication and training programs.

This plan is a living document developed with the best available information and will be reviewed and revised as necessary due to the nature of the construction and progress.

2. LEGISLATION AND STANDARDS

The Plan has been structured to align with both national and international requirements, including legislation, guidelines, and sectoral standards that define permissible emission levels and air quality thresholds. Accordingly, the following sources of reference will be used to guide the implementation and compliance procedures.

2.1. National Requirements

During the construction stage of the Project, National legislation will be followed and complied with by the EPC Contractor and its subcontractors. The key Turkish Occupational Health and Safety legislations are as follows:

- Occupational Health and Safety Law and all regulations
- Turkish Labour Law and all regulations

2.2. International Requirements

In addition to national requirements, the following international guidelines frameworks, standards and and agreements should be considered to ensure alignment with best practices and financial institution requirements:

To ensure responsible operations, AIIB adheres to policies addressing environmental and social impacts as outlined in its Environmental and Social Framework (“ESF”) document. Updated in June 2024, the ESF reflects AIIB's commitment to international standards and sustainable development practices. The ESF includes the Environmental and Social Policy (ESP), which sets mandatory requirements for all projects.

In addition to above following international requirements and standards, and Good International Industrial Practice (GIIP) regarding occupational health and safety.

- ISO 45001:2018 Occupational Health and Safety Management Systems
- IFC Performance Standards (2012), specifically:
  - Performance Standard 1: Assessment and Management of Environmental and Social Risks and Impacts

- Performance Standard 2: Labor and Working Conditions
- Performance Standard 4: Community Health, Safety, and Security

- Worker' accommodation: process and standards. A guidance note by IFC and the EBRD, 2009

- IFC Environmental, Health and Safety (EHS) General Guidelines (2007)
- IFC Guidance Notes (2012)
- Equator Principles IV (2020)
- European Union Road Safety Policy Guidelines and Directives=

- European Bank for Reconstruction and Development's (EBRD's) Performance Requirement (PR) 4 – Health, Safety, and Security (2019)
- Addressing Gender-Based Violence and Harassment – Good Practice Note for the Private Sector, December 2019 – Emerging Good Practice for Private Sector
- Addressing Gender-Based Violence and Harassment – Emerging Good Practice for Private Sector
- Asian Infrastructure Investment Bank's (AIIB's) Environmental and Social Framework (2021)
- Worker' accommodation: process and standards. A guidance note by IFC and the EBRD, 2009
- International Finance Corporation's (IFC's) Sustainability Framework (2012) and associated applicable Performance Standard (PS) 2 - Labour and Working Conditions
- Approved Code of Practice and guidance on regulations L8 (Fourth edition)
- The Lifting Operations and Lifting Equipment Regulations 1998 (LOLER)
- OSHA 1926.651 Specific Excavation Requirements
- OSHA 1910.252 Welding, Cutting and Brazing (Hot Works)
- ILO Safety and Health in Building and Engineering Work
- ILO Safety and Health in Construction, 1992Health and Safety in Construction, HSG150, 2006
- Health and Safety at Work etc. Act 1974

2.3. Linkage with Other Documents and Plans

In addition to the above, the following impact assessment reports prepared for the Project shall be used as reference documents:

- Antalya-Alanya Motorway ESIA Report;
- Antalya-Alanya Motorway EIA Report;
- The Environmental and Social Management Plan (ESMP)

The **" Environmental Legal Requirements Monitoring and Evaluation Procedure"** and the **" Occupational Health and Safety Legal Compliance and Evaluation Procedure"** will be implemented to ensure the continuous monitoring of legal regulations related to occupational health, safety, and environment, and to ensure that site practices are carried out in compliance with the relevant legislation. In order to evaluate compliance with applicable and current legal requirements in relation to the project activities. The performance regarding legal compliance is assessed based on this form, and the HSE Committees are informed and consulted accordingly.

Additionally, EPC Contractor has prepared its own project-specific HSE Management Procedure in Turkish listed below;

No	Procedure
1	Proje İş Sağlığı ve Güvenliği Planı (Project H&S Plan)
2	Acil Durum Müdahale Planı (Emergency Response Plan)
3	Risk Değerlendirme Prosedürü (Risk Assessment Procedure)

4	İSG İzleme, Ölçme ve Değerlendirme Planı (OHS Monitoring, Measurement and Evaluation Plan
5	ISG Yasal Mevzuat Takip Prosedürü (H&S Legislation Monitoring Procedure)
6	Çevresel Mevzuat Takip Prosedürü (Environmental Legislation and Monitoring)
7	Elektrik İşleri İSG Prosedürü (Electrical Safety Procedure)
8	İskele ve Yüksekte Çalışma Prosedürü (Scaffolding & Work at Hight Procedure)
9	Vinçler ve Kaldırma İşleri Prosedürü (Cranes & Lifting Procedure)
10	ISG Komitesi Prosedürü (H& S Commitee Procedure)
11	Toprak İşleri Kazı Güvenliği Prosedürü (Earthworks & Excavation Safety Procedure)
12	Yangın Güvenliği Prosedürü (Fire Safety Procedure)
13	NATM Tünel Çalışmaları İş Güvenliği Prosedürü (NATM Tunneling Procedure)
14	Patlatma Prosedürü (Blasting Procedure)
15	Yol ve Trafik Güvenliği Prosedürü (Traffic Management Procedure)
16	Bilgi Paylaşımı ve İletişim Prosedürü (**Procedure for Information Exchange and Communication)**
17	ISG Yıllık Çalışma Planı (OHS Annual Working Plan)
	ISG Yıllık Eğitim Planı (Annual Training Plan)
18	Çalışma İş İzin Prosedürü (Work Permit Procedure)
19	Ekipman kontrol ve bakım prosedürü (Equipment control and maintenance procedure)
20	Acil durumlara hazır olma ve müdahale prosedürü (Emergency preparedness and response procedure)
21	Olay Araştırma Yönetimi Prosedürü(Incident Management Procedure)
22	Malzeme/Ekipman Transfer Güvenliği ve Saha Giriş Prosedürü (Transfer control and site Access procedure)

The occupational health and safety participation plans and procedures for the Antalya-Alanya Motorway Project will also be used as reference documents:

- Solid Waste Management Plan
- Hazardous Material Management Plan
- Environmental Accident and Spill Response Management Plan
- Community Health and Safety Management Plan
- Construction Camp Site Management Plan
- Air Pollution and Emission Management Plan
- Water Quality, Wastewater and Storm Water Management Plan
- Noise and Vibration Management Plan
- Change Management Plan
- Emergency Response and Management Plan
- Human Resources and Labour Management Plan
- Security Management Plan
- Subcontractor Management Plan
- Training and Communication Management Plan
- Resource Efficiency Management Plan
- Excavated Material Management Plan
- Soil Management and Erosion Control Plan
- Stakeholder Engagement Plan

- Employment Policy

Environmental and Social Management Plan As part of the occupational health and safety management systems, the ISO 45001:2018 standard will be used as a reference document.

Unless otherwise stated, where two or more of the listed standards are inconsistent or conflicting, the Antalya-Alanya Motorway Project shall apply the standard that contains the most stringent requirements.

3. POLICY AND PRINCIPLES

AAOIAS INTEGRATED MANAGEMENT SYSTEM POLICY

As Antalya Alanya Otoyolu İnşaat Yatırım ve İşletme A.Ş,

The purpose of our Integrated Management System, which encompasses all construction and maintenance activities related to Quality, Environment, Occupational Health and Safety, and Road Traffic Safety, is to meet the needs and expectations of our stakeholders, fulfill our responsibilities to society, the environment, and our employees, and continuously improve our service quality.

To hereby commit that:

- *We will adopt high-quality production / service and customer-oriented work as a basic principle in all our projects,*
- *We will create a positive impact for our society and our world with a holistic approach to sustainability wherever we operate and in all areas where we operate with the awareness of our strategic and environmental and social responsibilities.*
- *We will fulfil the obligations of the Quality, Environment, Occupational Health and Safety, Road Traffic Safety regulations,*
- *We will establish and increase the awareness of Quality, Environment, Occupational Health and Safety, Road Traffic Safety of our employees, stakeholders and society,*
- *We will provide safe and healthy working conditions to prevent injuries and health deterioration related to work and/or traffic accidents,*
- *We will undertake activities to overcome hazards and mitigate all risks,*
- *We will ensure sustainable resource utilization for prevention of pollution and protection of the environment,*
- *We will provide the resources needed for the mitigation of climate change and the protection of biodiversity and ecosystems,*
- *We will use energy and natural resources efficiently,*
- *We will continuously improve our Integrated Management System performance,*
- *We will establish and adopt the awareness that all activities related to Quality, Environment, Occupational Health and Safety, Road Traffic Safety are shared responsibility of all employees, and also ensure the consultation and participation of all employees,*
- *Knowing that our most important asset is the human resources, we will keep the quality and satisfaction of our employees at the highest level by employing highly competent employees and continuously investing in our employees.*

The Occupational Health, Safety and Environmental Plan fully defines the actions to be taken in relation to the matters specified in this policy.

Antalya-Alanya Otoyolu İnşaat Yatırım ve İşletme A.Ş. has adopted **the Occupational Health, Safety and Environmental Principles** described below.

OCCUPATIONAL HEALTH, SAFETY AND ENVIRONMENTAL PRINCIPLES

- *To ensure the health and safety of all employees and the other persons who may be influenced by the activities.*
- *To implement control measures to prevent accidents/incidents and occupational diseases and/or to minimize the risk as low as possible by managing occupational health and safety risks in the workplace by risk assessments.*
- *To provide clear instructions, information and adequate training to ensure that all personnel are competent to carry out their works.*
- *To ensure that all employees are provided with active training to increase their awareness and participation in Occupational Health, Safety and Environment practices.*
- *To ensure and maintain safe and healthy working conditions - to provide equipment and facilities, carry out their maintenance operations and to ensure safe use, storage and disposal of all materials.*
- *To apply emergency response and evacuation procedures in case of fire, earthquake, landslide etc.*
- *To ensure that occupational health and safety conditions and standards are constantly updated and improved.*
- *To promote a culture that promotes occupational health and safety as its primary goal and aims to eliminate the hazards and health risks associated with its activities, by ensuring that Occupational Health and Safety is an essential part of every operation.*
- *To give priority to environmental protection and to ensure the prevention and/or proper mitigation of adverse environmental impacts associated with its activities through the implementation of effective environmental management practices.*
- *To conduct all of its activities in compliance with applicable environmental legislation and regulations as well as international standards and best practices that support the protection and improvement of environment.*
- *To sustain the commitment to reduce wastes at their own sources and prevent pollution and to implement these principles while carrying out its activities.*
- *To identify, evaluate and manage environmental risks and their impacts and minimize the likelihood of adverse environmental impacts.*

4. ROLES AND RESPONSIBILITIES

SPV General Manager

- Oversee the financial and legal wind-down of the SPV and ensure that all project activities comply with local laws, environmental regulations, corporate governance policies, and international best practices and lender requirements.
- Promote a culture of environmental and social responsibility across the SPV and its stakeholders.
- Define and implement the overall business strategy and direction of the SPV in alignment with shareholder and stakeholder expectations.
- Ensure the provision of necessary resources and organizational support for the implementation of all plans.
- Supervise and coordinate EPC contractors and subcontractors to ensure proper execution of construction, commissioning, and operational phases.
- Support the H&S Manager in preparing, disseminating, and implementing this plan. In case of non-compliance, ensure correct and preventive actions are taken in collaboration with the EPC and SPV's H&S Manager and other responsible parties.
- Make executive decisions on project budgeting, resource allocation including employee, and capital management to support project execution and sustainability, H&S compliance.
- Ensure the monitoring environmental, social and financial performance, reporting, and risk exposure of the SPV, ensuring transparency and accountability to all stakeholders, including SPV, stakeholders and investors.

SPV Health and Safety Manager

Duties of the SPV H&S Manager are as follows:

- Ensure the preparation, revision, and implementation of the health and safety-related plans and documents in accordance with the Project ESIA and EIA, SPV's corporate policies, regulatory obligations, international standards and lender requirements and are implemented by EPC and subcontractors through appropriate method statements and site practices.
    - Ensure that all construction site activities are carried out safely by EPC and subcontractors.
    - Ensure root causes are identified, documented, and that corrective actions are implemented and verified.
    - Ensure timely and appropriate resolution of complaints related to occupational health and safety.
    - Ensure safety inductions, toolbox talks, and job-specific training are conducted and recorded.

- Contribute to project risk assessments and job hazard analyses (JHAs) and ensure these are updated regularly.
- Collaborate with internal teams (e.g., E&S, Legal, Procurement) to integrate E&S criteria into EPC contract.
- Supervise the integration of safety controls into daily work permits, toolboxes, and field activities.
- Monitor the compliance of EPC and subcontractors with the safety, health, and community safety related plans, and applicable laws, international standards and lender requirements.
- Conduct regular inspections, audits, and hazard identification walkthroughs on construction sites.
- Conduct a comprehensive accident and incident investigation process.
- Support EPC and subcontractors in the development and delivery of site-specific H&S training programs.
- Provide technical support to EPC and subcontractors for the proper implementation of the health and safety plans.
- Ensure the accurate records of inspections, incidents, safety meetings, and training records
- Ensure the corrective actions process is followed up on by all parties strictly.
- Report on H&S performance, non-compliance, and corrective actions to the SPV General Manager and external stakeholders.
- Track and analyse safety performance metrics (e.g., LTIs, near misses, TRIR) and recommend corrective measures.
- Engage with regulatory authorities on inspections, audits, and compliance verification.

SPV HSE Specialist

The SPV HSE Specialist who will be reporting to SPV H&S Manager.The number of the H&S Specialist will be defined considering the existing workload, work locations and the work plan of the EPC Contractor.

The SPV HSE Specialist will be responsible for supporting H&S Manager and monitoring the compliance of all activities associated with the Project against the requirements of the ESMP and any other relevant health and safety legislation defined in this Plan. HSE Specialists will solely be responsible for the occupational health and safety issues.

- Support the execution of the safety, health and community safety related plans, and ensure site activities are carried out safely by EPC contractors and subcontractors in-line with applicable laws, international standards and lender requirements.

- Conduct regular site inspections, hazard identification, safety inductions, toolbox talks, and job-specific training,
- Ensure Maintain H&S documentation, including safety permits, incident records, and training logs, etc.
- Participate in accident and incident investigations, ensuring findings are documented and lessons are communicated across teams.
- Support H&S training delivery for all relevant site personnel and review contractor training records for adequacy.
- Ensure the construction site is properly demarcated and safety signage and barriers are in place and maintained.
- Assist in resolving complaints related to occupational health, site safety, and community safety in coordination with relevant teams.
- Contribute to the review and update of safety plans and procedures based on field experience and audit findings.
- Provide technical guidance to contractors and subcontractors to improve health and safety performance.
- Implement the integration of safety controls into daily work permits, toolboxes, and field activities.
- Assist to SPV H&S manager in monitoring the compliance of EPC and subcontractors.
- Assist to SPV H&S manager to improve safety performance metrics (e.g., LTIs, near misses, TRIR) and recommend corrective measures.

EPC Project Director

The EPC Project Director has the overall responsibility and accountability for the Project including delivery of the construction activities in line with applicable national and international standards. He/She ensures relevant activities are carried out in accordance with this OHSMP.

The EPC Project Director has the ultimate responsibility for ensuring the health, safety and wellbeing of all project personnel, sub-contractors, suppliers, visitors and members of the public that may be affected by the works that are being performed. He/She will also ensure the implementation of required corrective actions in response to identified nonconformities or incidents regarding to this Plan. He/she ensures periodical review of the OHSMP effectiveness.

The Project Director will ensure that necessary resources are allocated for the management of OHS including competent personnel and financial resources for implementing of risk mitigation measures such as engineering control measures, trainings, external sources, safety equipment and personal protective equipment, equipment and machinery.

- Ensure that all project activities comply with local laws, environmental regulations, corporate governance policies, and international best practices and lender requirements.
- Promote a culture of environmental and social responsibility across the EPC and its stakeholders.
- Define and implement the overall business strategy and direction of the EPC in alignment with SPV and stakeholder expectations.
- Ensure the provision of necessary resources and organizational support for the implementation of all plans.
- Supervise and coordinate subcontractors to ensure proper execution of construction and commissioning phase.
- Support the H&S Manager in preparing, disseminating, and implementing this plan.In case of non-compliance, ensure correct and preventive actions are taken in collaboration with the SPV and other responsible parties.
- Make executive decisions on project budgeting, resource allocation including employee, and capital management to support project execution and sustainability, H&S compliance.
- Ensure the monitoring environmental, social and financial performance, reporting, and risk exposure of the SPV, ensuring transparency and accountability to all stakeholders, including EPC, stakeholders and other related parties.
- Approval of project management plans (HSE, E&S, QA/QC, etc.) in line with company policies, legal frameworks, international standards, SPV and lender requirements.
- Ensure that all employees comply with the obligations specified in the project's management plans during activities.
- Serve as the primary EPC representative to the SPV, client, and key stakeholders.
- Maintain communication channels with SPV, subcontractors, and vendors to ensure alignment and compliance.
- Coordinate with regulatory authorities, community representatives, and auditors as required.
- Address stakeholder concerns proactively and transparently, particularly those related to safety, environmental, and social matters.
- Oversee risk management and mitigation strategies related to technical, health, safety, community safety, environmental, and social aspects.
- Supervise the preparation and approval of documentation related to claims, variations, and commercial issues.

EPC Construction Manager

The responsibilities of Construction Managers are as follows:

- Ensures the implementation of necessary precautions and give importance to OHS issues;
- Ensures that adequate considerations have been given to the provision of safe access;
- Ensures that all equipment is available, job-appropriate and certified;
- Ensures that works under their responsibility are conducted with due regard to OHS issues and industry practice;
- Ensures all staff have adequate tools and personal protective equipment (PPE) for the work;
- Shares lessons-learned assessment and implements program changes as required

EPC Line Managers

The Line Managers are responsible for the execution of activities in accordance with the standards and procedures at the worksites they are in charge.

Also, the Line Managers have the ultimate responsibility for the activities executed in their field of work and have the following duties:

- Ensure the preparation of job-specific method statements;
- Ensure that proposed methods do not conflict with standard operational practices;
- Understand Project health and safety requirements and implement mitigation measures defined in this Plan related with their scope of work;
- Evaluate the technical and OHS competence of all subcontractors prior to their engagement and OHS performance during work execution;
- Ensure that risks have been assessed adequately prior to commencement of activities and operations;
- Perform consultation meetings with ES&HS Manager on the nonconformities identified by the ES&HS team and determines necessary corrective/preventive action.
- Assist and/or participate in the investigation of accidents and incidents;
- Ensure that all personnel are allowed sufficient time from their activities to attend OHS trainings;
- Appoint department staff in sufficient numbers to correct nonconformities; and
- Ensure that department personnel are aware of the risks of the works they perform.

EPC Health and Safety Manager

The H&S Manager is responsible for health and safety management during the construction phase of the Project. Reporting to the EPC Project Director, he/she develops the necessary procedures, plans and training requirements for on-the-ground implementation of the related national and international requirements, standards, SPV's OHS commitments made in Environmental and Social Impact Assessment (ESIA), and this Plan.

Duties of the EPC H&S Manager are as follows

- Ensure the preparation, revision, and implementation of the health and safety-related plans and documents in accordance with the Project ESIA and EIA, SPV's corporate policies, regulatory obligations, international standards and lender requirements and are implemented by EPC and subcontractors through appropriate method statements and site practices.
- Ensure that all construction site activities are carried out safely by EPC and subcontractors.
- Ensure root causes are identified, documented, and that corrective actions are implemented and verified.
- Collaborate with internal teams (e.g., E&S, Legal, Procurement) to integrate E&S criteria into subcontractor contracts.
- Ensure timely and appropriate resolution of complaints related to occupational health and safety.
- Ensure the completion of the safety inductions, toolbox talks, and job-specific training, safety briefings, and daily pre-task planning meetings to reinforce safety culture and awareness on site.
- Contribute to project risk assessments and job hazard analyses (JHAs) and ensure these are updated regularly.
- Supervise the integration of safety controls into daily work permits, toolboxes, and field activities.
- Monitor the compliance of EPC and subcontractors with the safety, health, and community safety related plans, and applicable laws, international standards and lender requirements.
- Conduct regular inspections, audits, and hazard identification walkthroughs on construction sites.
- Conduct and lead a comprehensive accident and incident investigation process. Analyse trends from incidents and near-misses to identify systemic issues and develop long-term preventive strategies.

- Conduct the site-specific H&S training plans and programs for EPC and subcontractors.
- Provide technical support to EPC and subcontractors for the proper implementation of the health and safety plans.
- Ensure the accurate records of inspections, incidents, safety meetings, and training records
- Ensure the corrective actions process is followed up on by all parties strictly.
- Report on H&S performance, non-compliance, and corrective actions to the EPC Project Director.
- Track and analyse safety performance metrics (e.g., LTIs, near misses, TRIR) and recommend corrective measures.
- Engage with regulatory authorities on inspections, audits, and compliance verification.
- Maintain a site-specific risk register and ensure hazards are identified, assessed, and mitigated throughout the lifecycle of the project.
- Implement health, safety and community safety measures through site practices and method statements.
- Ensure the enforcement of behaviour protocols and community health and safety guidelines on and around the construction site.
- Coordinate emergency preparedness and response procedures, including drills and communication protocols, in collaboration with relevant departments.
- Prepare regular reports to Project Director summarizing H&S performance, compliance status, and key risks.
- Foster a safety-first culture by promoting active participation, feedback, and ownership of safety responsibilities at all levels of the workforce.

EPC HSE Chief

The EPC HSE Chief who will be reporting to EPC E&S Manager. The number of the H&S Chief will be defined considering the existing workload, work locations and the work plan of the EPC Contractor.

The EPC HSE Specialist will be responsible for supporting H&S Manager and monitoring the compliance of all activities associated with the Project against the requirements of the ESMP and any other relevant health and safety legislation defined in this Plan.

- Implement the safe execution of all construction site activities in accordance with project standards, procedures, legal requirements, international standards, lender and SPV requirements.
- Support all employees in fulfilling the conditions and obligations of this health and safety plans during project activities.
- Provide technical support to Contractor/subcontractors.

- Ensure the completion of the safety inductions, toolbox talks, and job-specific training, safety briefings.
- Monitor the compliance of Contractors/Subcontractors with the requirements of the health and safety plans and report non-conformities.
- Maintain a site-specific risk register and ensure hazards are identified, assessed, and mitigated throughout the lifecycle of the project.
- Monitor health, safety and community safety measures through site practices and method statements.
- Review and validate training records and related documentation from Contractor/Subcontractor.
- Participate a comprehensive investigation in the event of accidents, incidents, or near misses.
- Implement and monitor the development and follow-up of corrective and/or improvement actions to address safety-related gaps or risks.
- Prepare regular reports to H&S manager summarizing H&S performance, compliance status, and key risks.

EPC HSE Engineer

The EPC HSE Engineer who will be reporting to SPV HSE Chief. The number of the HSE Engineer will be defined considering the existing workload, work locations and the work plan of the EPC Contractor.

The EPC HSE Engineer will be responsible for supporting HSE Chief and monitoring the compliance of all activities associated with the Project against the requirements of the ESMP and any other relevant health and safety legislation defined in this Plan.

- Implement the safe execution of all construction site activities in accordance with project standards, procedures, legal requirements, international standards, lender and SPV requirements.
- Perform the implementation and compliance of the conditions and obligations specified in the H&S Plan during project activities.
- Support all employees in fulfilling the conditions and obligations of this health and safety plans during project activities.
- Provide technical support to Contractors/Subcontractors for the implementation of health and safety plans.
- Review and maintain a site-specific risk register and ensure hazards are identified, assessed, and mitigated throughout the lifecycle of the project.
- Review the health, safety and community safety measures through site practices and method statements.

- Monitor the enforcement of behaviour protocols and community health and safety guidelines on and around the construction site.
- Review and validate training records and related documentation from Contractor/Subcontractor
- Support a comprehensive investigations in the event of accidents, incidents, or near misses, ensuring findings are documented and corrective actions are implemented.
- Ensure the development and follow-up of corrective and/or improvement actions to address safety-related gaps or risks.
- Follow prompt and structured resolution of complaints related to public health, safety, and security.

EPC HSE Technician

The EPC HSE Technician who will be reporting to SPV HSE Engineer. The number of the HSE Tehcnician will be defined considering the existing workload, locations and the work plan of the EPC Contractor.

The EPC HSE Technician will be responsible for supporting HSE Engineer and monitoring the compliance of all activities associated with the Project against the requirements of the ESMP and any other relevant health and safety legislation defined in this Plan.

- Support the implementation of the Health, Safety, and Environmental (HSE) Management Plans on-site.
- Conduct field-level hazard identification and risk assessments under the supervision of the HSE Engineer or HSE Chief.
- Assist in the inspection of site conditions, equipment, and practices to ensure compliance with HSE protocols.
- Monitor proper use of PPE by workers and subcontractors and ensure daily compliance.
- Assist in the documentation of incidents, near-misses, and unsafe acts/conditions.
- Support the organization of safety toolbox talks and drills, and participate in site safety briefings.
- Assist in maintaining updated HSE records, permits to work, and site-specific risk registers.
- Coordinate with site teams to ensure safe work zones and adherence to safety signage and barriers.
- Escalate HSE issues and observations to senior HSE personnel for timely corrective actions.
- Promote a proactive safety culture through daily site presence and informal engagement with workers.

EPC HSE Worker

Duties of the EPC HSE Worker are as follows

- Perform routine safety checks and observations on construction activities to support accident prevention.
- Support field-level enforcement of basic HSE requirements such as PPE usage, housekeeping, and emergency access.
- Report unsafe behaviours, near-misses, or incidents to the HSE Technician or Engineer.
- Assist with basic safety logistics such as placement of safety signs, first aid kits, and fire extinguishers.
- Provide assistance during emergency drills and real-time evacuations if needed.
- Participate in on-site HSE briefings and serve as a communication link between labour teams and HSE staff.
- Support the distribution and collection of HSE materials, permits, and records.
- Assist in controlling site entry for compliance with safety rules (e.g., helmet, vest, ID badge).
- Support spill response and clean up efforts as guided by supervisors.

EPC Trainer and Document Controller

Duties of the EPC Trainer and Document Controller are as follows

- Develop and deliver HSE training modules tailored to job roles and risk levels in collaboration with the HSE Manager.
- Maintain training matrices, attendance records, and competency certifications for all EPC and subcontractor staff.
- Organize safety induction programs for new employees and visitors.
- Organize refresher trainings, emergency drills, and awareness campaigns (e.g., heat stress, confined space).
- Ensure that all training materials, method statements, and HSE procedures are up-to-date and properly archived.
- Manage document control systems related to HSE plans, permits, inspection reports, and safety data sheets.
- Ensure traceability of document revisions and compliance with audit requirements.

- Support internal and external audits by providing required HSE documentation and evidence.
- Contribute to the improvement of training content based on site observations and lessons learned

Site Doctor

Adequately experienced and certified Occupational Doctors will be employed as required according to national regulation requirements.

Duties of the Site Doctor are as follows

- Ensure and support the preparation, revision, and implementation of the health and safety-related plans and documents in accordance with the Project ESIA and EIA, SPV's corporate policies, regulatory obligations, international standards, disease control guidelines, industrial good practices, and lender requirements and are implemented by EPC and subcontractors through appropriate method statements and site practices.
- Provide on-site medical care, first aid, and emergency response to site personnel.
- Monitor the health status of workers through routine check-ups, Pre-employment or pre-placement examinations and undertake health assessments for fitness to work.
- Maintain accurate and confidential health records and incident logs.
- Identify and manage occupational health risks and recommend preventive measures.
- Ensure availability and readiness of medical equipment, first aid kits, and emergency protocols.
- Conduct health awareness sessions and support mental health and wellness programs.
- Coordinate with H&S teams to implement hygiene, sanitation, and disease control measures.
- Ensure compliance with local occupational health laws and project-specific health standards.
- Collaborate with external hospitals or clinics for referrals and medical emergencies.
- Participate in site inspections and contribute to health-related sections of HSE audits.
- Provide medical input to risk assessments, method statements, and H&S Plans.
- Support pandemic response procedures as needed.
- Detect occupational injuries and illnesses and prepare relevant prevention plans.
- Track of all health records of all employees including occupational injuries and illnesses.

Paramedic

Adequately experienced Paramedic will be employed for each shift.

Duties of the Paramedics are as follows

- Provide immediate emergency medical care, stabilize patients, and coordinate medical evacuation when necessary.
- Assist the Site Doctor in conducting health checks, maintaining patient records, and supporting follow-up treatments.
- Monitor the stock and condition of emergency medical supplies, medicines, and first aid kits.
- Respond to health-related incidents, accidents, or illnesses on-site and record incident details accurately.
- Participate in health and safety drills and emergency response exercises.
- Support hygiene monitoring and health awareness campaigns.
- Maintain clean, safe, and operational medical facilities and first aid stations.
- Contribute to incident investigations involving health or medical issues.
- Report health risks or trends to the Site Doctor and H&S Manager.

All Workers, Subcontractors and Suppliers

All workers including subcontractor's workers will fulfil the requirements of the OHS training that they receive and will take the necessary precautions in their work. In addition, all workers will report all dangerous situations and behaviours, accidents, injuries, and near-misses that occur in the worksite.

Visitors and Consultants

All visitors and project consultants will receive general OHS site induction before entering the site to recognize specific workplace hazards or potential hazards. No visitors will be allowed in the Project Area without general OHS training and an accompanying trained employee/guide with them.

5. COMMUNICATION

The EPC Contractor will develop and maintain clear lines of communication for keeping all parties informed of OHS issues. Matters to be communicated to all employees, subcontractors, the SPV will include but not be limited to;

- Requirements of the OHS Plan
- Site OHS rules
- Relevant OHS procedures and instructions
- Scheduled events (training, meetings, consultation sessions, toolbox talks, etc.)

- OHS induction and training requirements
- Emergency procedures and emergency contact numbers
- Safety notices
- Incident reports / lessons learned
- OHS hazards
- Safe work method statements
- Job Safety analyses
- Requirements from Safety Data Sheets
- Safety non-conformances and agreed corrective actions

The above matters and any other matter that needs to be communicated to employees; subcontractors will be communicated via the following mechanisms;

- Site inductions
- Pre-start briefing
- Toolbox talks
- Posting information on notice boards/safety boards
- Emails
- Flyers
- Formal and informal meetings

Relevant HSE matters shall also be communicated to the SPV. All contractually required statistics and information shall be submitted to the SPV periodically in the form of a report.

5.1. Relations with Legal Authorities

Official correspondence related to OHS shall be submitted to the EPC H&S Chief by the EPC Project Director. The initial evaluation regarding the subject will be carried out by the EPC H&S Manager, who will verbally inform the EPC Project Director, and further actions will be decided accordingly.

5.2. Complaints and Suggestions friom Relevant Stakeholders

Complaints and suggestions received from relevant stakeholders (client, neighboring facilities, citizens, all workers, etc.) shall be processed by the H&S Chief, and related correspondence will be handled by the Project Director. All workers shall be adequately informed about the scope of occupational health and safety legislation and their rights. Suggestion boxes will be placed at specific points on the construction site, allowing workers to submit complaints or feedback. All complaints and suggestions will be recorded and tracked.

5.3. Communication and Meetings with Subcontractors, Suppliers and Employees

Initial Monthly EPC & SPV OHS Meetings:

OHS personnel (H&S Manager, Environmental Engineers, H&S Specialists, HSE Foremen, and Community Liaison Officers) shall organize monthly internal meetings.

The decisions taken will be documented through a **Meeting Minutes Form** and distributed to all members and responsible parties. Follow-up of these decisions will be carried out by the H&S Chief.

AAOIAS shall be invited to the Antalya-Alanya Motorway Project OHS Department meetings via email notification that includes the meeting date, location, and agenda.

The agenda for these meetings will include at least but not limited:

- Status of the Project
- Open items on previous MoMs
- Accidents, incidents and near misses and lessons learned
- OHS Committee Meeting Decisions

New Subcontractor OHS Meeting (OHS Kick-Off Meeting):

An initial OHS meeting will be held with all new subcontractors (represented by their own management teams), attended by the relevant Linet Manager/Chief and the H&S Manager/Chief. The agenda for these meetings will include at least but not limited:

- Project OHS Rules
- HSE Requirements per the Contract
- Project HSE Plan
- HSE organizational structure
- Documentation requirements (employees, equipments, materials, etc.)
- Employees onboarding and assignment procedures
- Provision of protective controls and necessary resources for high-risk activities (qualified personnel for OHS topics, supervision and inspection requirements, emergency equipment, etc.).
- Noise restriction, including local requirements
- Interfaces with other subcontractors
- Reporting of incidents and accidents and near misses.
- Permit to Work System – administration and requirements
- Any other specific anticipated hazards related to the new work scope
- Environmental considerations

Limak will ensure that all subcontractors comply with the Occupational Health and Safety (OHS) requirements outlined and in applicable national and international standards. Prior to mobilization, subcontractors shall submit their site-specific OHS plans and risk assessments for review and approval. Limak HSE Department shall conduct on boarding audits and site inspections to verify readiness. During construction, subcontractor performance shall be monitored through regular inspections, safety performance evaluations, participation in joint toolbox talks, and review of incident records. Non-conformities shall be documented and followed by time-bound corrective actions. Repeated or serious non-compliance may result in work suspension or termination in accordance with contractual provisions. Monthly compliance reports shall be submitted by each subcontractor and consolidated by Limak for reporting to lenders and relevant authorities. All contractor-related HSE documents shall be kept on file for a minimum of five years and made available upon request.

In addition, all subcontractors shall prepare and submit their site-specific Occupational Health and Safety (OHS) Plans prior to mobilization for review and approval by the Limak's HSE Department. These plans must align with the overarching Project OHS Management Plan, relevant Turkish legislation (6331 sayılı Kanun), and applicable international standards including IFC EHS Guidelines. The review process

shall assess risk identification, mitigation measures, emergency preparedness, training plans, and roles and responsibilities. Subcontractors shall not commence any site activities without formal written approval of their OHS Plans. Once approved, subcontractors are required to submit monthly OHS compliance reports, including leading and lagging indicators (e.g., training sessions conducted, near misses, incidents, inspections, and non-conformities). These reports shall be reviewed by the Limak HSE Department, consolidated, and included in periodic lender reporting. Limak reserves the right to suspend or terminate subcontractor operations in case of serious or repeated non-compliance.

Biweekly Antalya-Alanya Motorway Project – Subcontractor OHS Meetings:

These meetings will be held following the weekly OHS site visits. The agenda will include current OHS issues, observations from site visits, and OHS topics for upcoming tasks.

Weekly Site Walkdown
The EPC Contractor conducts weekly HSE walkdowns to monitor site HSE performance. It is going to be performed by the attendees of EPC HS Department, EPC Construction Manager, SPV HS Department and Subcontractor Site Lead HSE representative and Subcontractor Site Manager. Within 2 days of the walkdown, A Walkdown Report will be prepared with in 2 days after the site tour. The Report will be prepared by EPC HS Manager with the observation and corrective actions. The Report Distribution List shall be included as a minimum to;

- SPV General Manager and all Line Manager also HS Team
- EPC Project Director and all Line Manager also HS Team

All Subcontractor Project Management Team *OHS Committee and Meetings*

The EPC Contractor will establish an OHS Committee “Committee” to bring together management and workers to help create and maintain a safe workplace. The Committee will participate in the development, implementation and monitoring of health and safety policy and procedures. The committee will receive safety concerns from workers and help investigate and resolve them.

The size of the committee will depend on the total number of workers and in compliance with the Regulation on Occupational Health and Safety Committees. The Committee should have representation from both management and workers, as well as from all departments and shifts.

The committee will hold regularly scheduled meetings, at least once every month. The committee should be of sufficient size and number to provide for effective representation of the workforce.

The members of the committee will include, but not limited to:

- Project Director,
- H&S Manager,
- H&S Chief
- Site Doctor,
- Human Resources Chief,
- Construction Manager,
- Security Manager,
- Workers’ Representatives from each subcontractor and from each shift.

The H&S Chief is responsible for the committee secretariat. The Worker's Representative shall be elected by open vote at a meeting attended by more than half of the foremen, supervisors, or masters. If an election cannot be held, the representative shall be appointed by the Project Director. When determining the candidates for Worker's Representative, the Communiqué on the Qualifications of the Occupational Health and Safety Employee Representative and the Procedures and Principles of Election shall be taken into consideration.

SPV will conduct an OHS Committee Meeting Training on below items to all members of the Committee:

- Organisation Chart of the Project
- Duties and rights of the Committee
- Regulations on HSE
- Common accidents and their root causes on construction sites
- Industrial hygiene rules
- Behavioral trainings
- Emergency procedures
- Occupational illnesses
- Specific risks about the construction sites
- Grievance mechanism

The responsibilities of the safety committee will be to:

- Review and annually approve the Health and Safety Policy,
- Review the procedures, working practices and performance regarding health and safety and recommend improvements as are considered appropriate,
- Receive reports from the HS team as to health and safety performance including workers' wellbeing, and specifically any major health and safety incidents, so as to ensure that management identify and implement any corrective action considered appropriate in order to achieve compliance and raise performance where required,
- Ensure that all department managers are kept informed of their health and safety responsibilities and duties as necessary,
- Ensure that the alignment with any regulatory changes in relation to health and safety and the impact such changes may have on the Project,
- Monitor the resources provided by EPC Contractor in relation to health and safety and where appropriate receive reports from independent advisers,
- Review the main risks faced by the EPC Contractor in relation to health and safety,
- Communicate with employees regarding safety committee activities,
- Review incidents, injuries and illnesses,
- Review of accident statistics and trends, so that reports can be made to management on unsafe and unhealth conditions and practices, together with recommendations for corrective actions,
- Record and review any complaint and/or recommendations from workers, and discuss the actions to be taken against those complaints and/or recommendations.

OHS Minutes of Meeting will be prepared and shared with EPC and subcontractors via e-mail and safety Boards. OHS Committee meeting invitations shall be sent via e-mail, WhatsApp, and safety boards at least 48 hours prior to the scheduled meeting date.

Pre-Work and Safety Meetings

To increase OHS awareness and enhance the effectiveness of training programs, a daily pre-work meeting will be conducted. The pre-work meeting will be organized by the H&S Manager/Chief and subcontractor representatives for their respective workers. In the absence of the H&S Manager/Chief, the responsibility for conducting the meeting will rest with the OHS personnel, whose main responsibility includes supporting the H&S Manager/Chief. The H&S Manager/Chief must notify their absence at least two days in advance.

In addition to the daily pre-work meeting, a weekly safety meeting (at least 20 minutes) will be held for all workers and documented using the OHS Safety Meeting Form. The safety meeting agenda will be distributed by the H&S Manager/Chief at the beginning of each week to all parties.

Subcontractors shall submit their own safety meeting forms to the H&S Manager/Chief on a weekly basis.

Monthly SPV and EPC Coordination Meeting

Monthly Coordination Meetings are held to review and discuss the Contractor's progress reports and any other relevant topics. These meetings take place as soon as possible after the submission of the monthly report. All meetings are held at locations as deemed appropriate by the SPV.
Meeting participants are defined by each Party depending on the topic under discussion.
The EPC suggests a meeting agenda be commented on or completed by SPV. The Monthly Coordination Meetings are held with the EPC Project Director and Construction Manager and H&S and E&S Manager, SPV General Manager, H&S Manager, E&S Manager, Expropriation Manager, and Line Managers to review all aspects of construction, including planning, coordination, and environment, safety and resourcing.
The EPC records the minutes of the meeting. The MoM will be reviewed and signed at the end of the meeting by all Parties for agreement on wording.

6. TRAINING

All safety training programs, including site inductions, task-specific training, toolbox talks, and emergency response drills, shall be provided to all personnel—including subcontractor and third-party workers—in a language they fully understand. Limak shall ensure that all training materials, verbal instructions, and written assessments are delivered in the worker's native language or in a language that ensures full comprehension. Where diverse languages are spoken on-site, multilingual trainers or interpreters shall be engaged to prevent any misunderstanding of critical safety procedures. Attendance and comprehension shall be verified through sign-in sheets and, where applicable, practical demonstrations or assessments. Training records shall be maintained for each individual and subject to audit by the HSE Department. No worker shall be allowed to commence site activities without having completed the mandatory safety training in an appropriate language.
Level 1, Level 2 and Level 3 trainings are an obligation for all employees in accordance with the Regulation on Worker Health and Safety Training.

7.1 Level 1 Training Programs and Visitor Information

Level 1 Training, which will last at least 2 hours, is also called "OHS Initial Training/Site Induction" and is given by the H&S Manager/HSE Chief/HSE Technician to cover all Antalya-Alanya Motorway Project, subcontractor and supplier employees. Those who have not received this training are not allowed to enter the construction site or work in the field. The content of the training and revisions are subject to the approval of the H&S Manager/Chief.

The topics covered in this training are as follows:

- Integrated Management System Policy
- OHS and Environmental Principles
- OHS and Environmental standards, rules and practices
- Risk assessment
- Emergency preparedness and response
- Any special hazards associated with the activities
- Incident/accident management, near misses
- Traffic safety
- Environmental awareness
- Pollution prevention
- Waste management
- Proper use and maintenance of personal protective equipment (PPE)
- Correct use of machinery and electrical equipment
- Brief description of the project and the works covered by the project
- Basic legal requirements regarding OHS
- Legal rights and responsibilities of employees
- Antalya-Alanya Project's HSE rules
- Project OHS Plan
- Project OHS rules and employees' responsibilities
- Project emergency management practices
- Grievance Mechanism

Short-term visitors who will not be working on the construction site are subject to the short version of this training program (initial briefing) given by the H&S Manager/Chief/Expert. Visitors who do not attend this briefing session cannot enter the construction site.

7.2 Level 2 Training Programs

Level 2 Training programs are also called "job-specific OSH training" and are provided due to the risks associated with the work to be performed. Subcontractors and suppliers are responsible for providing these training programs for their own employees and training records will be submitted to the OSH Manager/Chief.

7.3 Level 3 Training Programs

Level 3 Training includes "advanced OSH training programmes" that are required for advanced qualifications or are specific to the task to be performed (first aid personnel or emergency management team member training, etc.).

The Annual OHS Training Plan is prepared by the H&S Manager and Site Doctor every January. The Project Manager is responsible for the approval of the Annual OHS Training Plan. This Training Plan covers all training which is specified under the Regulation on Occupational Health and Safety Training of Employees.All training activities, including Initial Training and Visitor Information, will be recorded.

In order to obtain feedback from the participants, a training evaluation form will be used for half-day or longer programs. Subsequent activities will be monitored by the H&S Manager/Chief after analyzing this feedback. Following the training programs, relevant tests will be applied to measure the level of understanding of the participants.

7.4 Qualification Assessment

To ensure that relevant training programs are effective and that workers have the skills, experience, abilities and knowledge required to perform their jobs safely, their competence should be assessed. The methods for this assessment are:

Training Tests: After all trainings, tests will be distributed to measure the understanding and knowledge level of the participants. The main topics of the tests will be:

- What are the dangers
  - The impact of hazards and how they can affect people
  - How to assess risk and decide on appropriate controls
  - Basic elements of this plan
  - How occupational health and safety law applies to the workplace

- Daily Field Observations: The H&S Manager/Chief and representatives will conduct daily field observations. While conducting these observations, they will check whether the employees are performing their duties in accordance with the occupational health and safety rules and measures. If a non-conformity is detected, they will warn the employee and may also instruct the relevant training to be given again. In addition, they will randomly ask questions to the employees about the occupational health and safety rules and measures and conduct interviews with them.
- Identified Hazards: Employees will be encouraged to report any hazards they identify during work. These hazards will be assessed by the H&S Manager/Chief and their representatives, and the quantitative and qualitative identification of hazards will be an indicator of competence.

7.5 Toolbox Trainings

When a new work commences on the site or when the site conditions or hazards/risks change significantly; Site chiefs and supervisors or the OHS and Environment Manager/Engineer shall provide toolbox training to announce the work-related information and instructions, the work-specific hazards/risks and control measures necessary to eliminate/mitigate these risks. Training shall take place between small groups of employees assigned to carry out a private work and the content of the training shall include the following:

- The hazards/risks associated with such works and the control measures necessary to eliminate/mitigate these risks
- The deficiencies or omissions identified on site OHS and environment audits
- Use of PPE
- Any accidents/incidents in the past and the lessons learned from them
- General arrangement and organization
- Acting in accordance with the warning signs and warning signboards/tags.

The employees are always preferred and encouraged to tell about their past experience regarding the work.

The records for each toolbox training shall be kept indicating that it is a toolbox training and shall be maintained by the OHS and the Environment unit.

7.6 Basic OHS and Environmental Training

It is mandatory to receive Basic OHS and Environmental Training before being assigned to any work site. Employees who do not attend this training, including Subcontractor employees, will not be allowed to work on site. Basic OHS and Environmental Training will be renewed periodically to refresh the information.

Visitors will also be given a Visitor Training covering basic topics such as general field OHS and Environmental rules, emergency preparation, use of PPE in the field, etc. before entering the field. The safety rules that all visitors to the work areas must follow are defined in **the Visitor Safety Instruction.**

All OHS and Environment related trainings to be given to employees are planned and recorded in **Annual Training Plan**. Each training conducted will be recorded and evaluated with **Training Participation Form**. All records will be kept by OHS and Environment unit.

7. GENERAL MANAGEMENT OF HAZARDS AND RISKS

The purpose of the Risk Assessment is to define the hazards related to the operations and work activities within the Antalya Alanya Motorway Project, to determine the risks for each hazard and to rate the risk magnitudes with the risk analysis method explained in **Occupational Health And Safety Risk Analysis Procedure**; to determine the relevant risk control methods and improvements to be made in order to eliminate or reduce the risks in question and to reduce the risks to an acceptable level.

Risk analyses cover the activities of all departments, supplier and subcontractor activities, and the hazards that all employees, visitors and those in neighboring areas may be exposed to.

7.1. Potential Hazards

According to the Project ESIA Report, hazards and risks to occupational health and safety are defined as follows:

- **Health and safety risks due to general occupational health and safety hazards:** A large workforce will be employed during the site preparation and construction phase of the Project. The activities of field personnel will carry the typical construction risks encountered on construction sites, such as risks arising from moving equipment, working at heights, working on water, excavation, confined spaces, working with electricity, etc.

- **Health and safety risks due to physical and chemical hazards:** Physical hazards refer to the possibility of accidents, injuries or illnesses that may occur due to repeated exposure to mechanical movement or work activity. Construction and maintenance personnel may be exposed to physical hazards during the land preparation and construction phase of the Project. Dust generated during excavation works, exhaust emissions produced by numerous construction machines, and harmful substances used for painting and paving activities are among the main sources of chemical hazards for the workforce carrying out construction work.

- **Health and safety risks from construction traffic:** Poorly trained or inexperienced drivers will increase the risk of accidents with other vehicles, pedestrians and equipment. In addition, heavy equipment operators have very limited visibility near the machines they are using and may therefore not see pedestrians in the vicinity of their vehicles.

- **Health and safety risks due to emergencies:** Emergency situations such as accidents, fires, natural disasters, etc. may occur during the land preparation and construction phase of the Project. If these are not managed appropriately, risks related to the health and safety of personnel working in the Project may cause concern.

- **Health and safety risks due to poor accommodation conditions:** No significant number of workers, including permanent or contracted workers, will be used in the land preparation and construction phase. Accommodation will be provided in the Camp Sites within the scope of the

Project. Therefore, the promotion of safe and healthy working conditions and the provision of good working and accommodation conditions will be important in this phase of the Project

8.2 Mitigation Measures

Potential hazards will be managed appropriately during the construction phase by implementing risk mitigation measures for each hazard as outlined below.

8.2.1 General Occupational Health and Safety Measures

- Project Sponsor will ensure that qualified first-aid can be provided at all times at the working/construction sites.
- Adequate lightning (that would not distract drivers' sight) will be provided for works to be conducted at night-time. Lightning system will be moved forward in parallel to the progress of works.
- Good cooperation will be ensured with local medical services.
- A system will be established for the reporting and recording of occupational accidents and dangerous occurrences/incidents.Personal protective equipment will be selected based on the specific hazards and risks involved in the task to be performed and will be properly maintained to ensure that they are effective and functional throughout their lifespan. It should be noted that personal protective equipment should be considered as a last resort. All other necessary active and embedded control measures should be taken first. The approach of the Antalya-Alanya Motorway Project envisages not to rely solely on personal protective equipment.
- Personal protective equipment/devices (PPE/PPD) and seasonal working outfits, meeting the requirements of the relevant Turkish regulations and good site practices, will be provided to all construction personnel by the Project Sponsor at no cost. Effective use of the PPEs/PPDs by the construction personnel will be monitored and ensured by the Project Sponsor.
- Sub-contractor workers will also be strictly required to use necessary PPEs/PPDs by means of contractual stipulations to be done with the sub-contracting companies.
- Orientation training will be given to all newly hired personnel.
- In addition to orientation training, all permanent and contract workers will receive relevant training before starting their new duties (change of workplace/task, change of machinery and equipment worked on, introduction of new technologies, etc.).
- Employees assigned to rescue and first aid will be given special training on this subject.
- In addition to having first aid equipment and a doctor in the campsite, it is recommended to make agreements with private hospitals in the surrounding area, as these measures may not be enough in possible situations.
- Through appropriate contract specifications and monitoring, service providers and contract and subcontracted workers will be ensured to receive adequate training before starting work.
- A visitor orientation and control program will be established to ensure that visitors do not enter danger zones without an escort. In this regard, relevant checkpoints and record keeping practices will be used to ensure the safety of both business and visitors.
- Properly maintained construction machinery, equipment and vehicles shall be used to ensure that all alarms, brakes, lights, seat belts and other general safety devices are operating normally and that tyre pressures, windows, mirrors and closed circuit camera systems (if any) are in working order. Accordingly, relevant users shall perform quick checks prior to use, for example by testing the brakes for operation and checking that lights are on.
- Construction equipment will not be left in any enclosed space close to the work area. Concrete pumping operations shall be conducted under a valid Permit to Work (PTW), particularly in areas near excavations, live traffic, or overhead power lines.
- All operators must be trained, competent, and certified, and possess equipment-specific knowledge (in line with EN 12001 and ISO 21573)
- Concrete pump trucks must be parked on stable, level ground, with outriggers fully deployed on load-distributing plates to ensure stability.

- Daily pre-operation checks will be conducted and recorded, including inspection of pump stability systems, hoses, clamps, and couplings, remote controls and emergency stop buttons.
- All maintenance or cleaning of the hopper must be performed only after power is locked out, and hopper guards must never be bypassed or removed.
- Warning signs and physical barriers will be placed around the boom's swing radius to restrict unauthorized access.

8.2.2 Measures againts Physical Hazards

- Safe work zone will be established to separate workers on foot from the traffic.
- For the construction works to be conducted at location where traffic exists, safe work zones will be established by taking relevant measures (closure of roads, diversion of traffic, use of protective barriers, cones, warning lights, etc.)
- Dedicated traffic management plans shall be developed and implemented
- Unauthorized entry will be prevented by barricading the area where elevated work is being done, and personnel on elevated structures will avoid working underneath them.
- Cranes and lifting equipment shall be classified and properly maintained, and operators shall be trained in their use. Lift platforms shall be maintained and operated in accordance with established safety procedures, including the use of fall protection measures (e.g., guardrails), equipment movement protocols (e.g., moving only when the lift is in the retracted position), ensuring repairs are performed by qualified personnel, and the installation of locks to prevent unauthorized use by untrained persons.
- Ladders shall be used in accordance with established safety procedures regarding proper placement, climbing, standing and use of extension pieces.
- When working at heights, appropriate fall protection measures shall be applied. Safety belts of suitable thickness and made of suitable materials providing sufficient strength shall be used. Rope safety belts shall be replaced before signs of wear and fraying become too apparent. When operating power tools at heights, workers shall use a second (spare) safety belt.
- Personnel exposed to high levels of noise will be required to use personal hearing protection devices/equipment, which will be provided free of charge. If required for specific tasks, job rotation programs will be implemented to reduce cumulative exposure.
- Weather forecasts will be monitored for outdoor work to provide early warning of unusual weather conditions and plan work accordingly. Protective clothing will be used when necessary.
- Work above 2 meters must not be performed without a valid Permit to Work (PTW) and fall protection measures.
- Use of full-body harnesses connected to certified anchor points is mandatory.
- Scaffolding must be erected, inspected, and certified by competent personnel before use (in line with Turkish Regulation on Work Equipment).
- All trenches deeper than 1.2 meters must have shoring, benching, or sloping based on soil classification (per Regulation on Occupational Health and Safety in Construction Works).
- A competent person must inspect excavations daily and after any weather event.
- Access and egress ladders must be provided every 7 meters.
- Confined spaces shall be identified, registered, and marked with appropriate warning signs at all entry points.
- Entry is only permitted under a valid Confined Space Entry Permit (CSEP) issued by a competent person, and the permit must be renewed daily.
- All personnel involved (entrant, attendant, supervisor) must be trained and authorized for confined space operations.
- Entry points must be unobstructed and large enough to allow for emergency rescue, as per Turkish regulations.
- A trained attendant shall remain outside the confined space at all times, maintaining communication with the entrant.
- A dedicated Confined Space Rescue Plan shall be prepared for each space, and rescue drills shall be conducted at least every 6 months.

- An entry logbook shall be maintained at each entry point, showing times of entry/exit and atmospheric test results
- All trenches deeper than 1.2 meters must have shoring, benching, or sloping based on soil classification (per Regulation on Occupational Health and Safety in Construction Works).
- A competent person must inspect excavations daily and after any weather event.
- Access and egress ladders must be provided every 7 meters
- Life vests must be worn near open water.
- Emergency rescue equipment for working over/near water (lifebuoys, throw ropes) will be available.
- Rescue drills for working over/near water will be conducted.
- All tools and equipment must have CE certification and maintenance records.
- Only trained personnel are authorized to operate tools/machinery.
- Daily pre-use checks for tools/machinery will be logged.
- Lone workers must carry emergency communication devices.
- In ısolated works "check-in/check-out" protocol will be implemented by supervisors.
- High-risk lone work is prohibited unless supervised or with a buddy system
- Hot work permits are required and will be issued daily.
- Fire watch and fire extinguishers will be present.
- Gas cylinders will be stored upright, away from ignition sources, and fitted with flashback arrestors
- For cold or hot weather, work-rest cycles will be defined.
- Shade and hydration will be provided in summer; thermal clothing and warm shelters in winter.
- Concrete pump boom arms and delivery lines must not operate within 5 meters of overhead power lines unless officially isolated and confirmed by utility authorities.
- All pipes and hoses for concrete pump will be securely clamped and equipped with restraint cables or chains to prevent hose whipping or accidental disconnection.
- Concrete pump operators will test emergency stop devices and pressure release valves before beginning operations.
- In case of pipe blockage for concrete pump; pumping will stop immediately, pressure will be relieved before disconnection or flushing and only trained personnel may intervene using proper tools and PPE.
- Concrete pump’s vertical delivery systems will include non-return valves and support structures to prevent collapse or uncontrolled material discharge.
- Mechanical and hydraulic components for concrete pump (hoses, cylinders, fittings) will be inspected regularly for wear, corrosion, and leaks.
- All electrical systems associated with the pump shall comply with EN 60204-1 and include fail-safe remote control systems.

8.2.3 Measures againts Chemical Hazards

- Properly maintained construction machinery, equipment and vehicles will be used to minimize air emissions.
- Engine idling time will be reduced in construction sites.
- Direct diesel exhaust will be properly disposed of to minimize operator exposure.
- Interior work areas where vehicles or engines will be operated shall be ventilated or exhaust gases shall be diverted appropriately.
- Lead-containing paints containing shall be avoided and appropriate respiratory protection shall be worn when cutting galvanized steel
- Dust masks will be used by relevant personnel in work areas where dust levels are excessive.
- Hazardous materials will be replaced with a less hazardous substitute whenever feasible.
- Engineering and administrative control measures will be performed in order to prevent or reduce the release of hazardous materials into the work site. Level of exposure will be kept below internationally established or recognized limits.
- The number of workers to be exposed will be kept in minimum.

- Hazardous materials will be labelled and marked properly considering national and international regulations and guidelines. Materials Safety Data Sheets (MSDS) will be prepared. All written communication will be readable and available to workers to be exposed and first-aid personnel.
- Workers will be trained in use of information related to hazardous materials (MSDSs etc.), safe work practices and appropriate use of PPE.
- Before entry, atmospheric testing shall be performed using calibrated detectors by trained personnel.
- Continuous gas monitoring is required during confined space activities, with immediate evacuation if limits are exceeded.
- Mechanical forced ventilation must be used to control the concentration of hazardous gases and ensure adequate oxygen levels. Personnel working in atmospheres with residual chemical vapors or insufficient oxygen shall use SCBA (Self-Contained Breathing Apparatus) or equivalent.
- Containers or vessels previously used for storing hazardous substances must be cleaned, inerted, and certified gas-free before entry.
- SDSs (Safety Data Sheets) for all chemicals used or previously stored in the confined space must be reviewed before work begins.

8.2.4 Measures againts Emergencies

- An Emergency Response Plan will be prepared and implemented that includes:
    - Emergency response in cases such as spills, accidents, earthquakes, floods
    - Procedure for reporting incidents for staff and subcontractors and investigation, correction and protective actions for such incidents
    - Regular emergency response training, including on the use of spill response equipment
    - Emergency Communication Procedure, including with local communities and authorities

8.2.5 Measures againts Construction Traffic

- A safe work area will be created to separate walking workers from traffic.
- For construction work to be carried out in areas with traffic, safe working areas will be created by taking the relevant measures (closing roads, directing traffic to another direction, using protective barriers, cones, warning lights, etc.).
- Weather forecasts will be monitored to provide drivers with early warning of unusual weather conditions and plan work accordingly.

8.2.6 Measures againts Workers Accommodation Conditions

- The accommodation provided will be clean and safe, will meet the basic needs of the workers and will provide each worker with a minimum amount of space for sanitation, laundry and cooking facilities. Overcrowding will be avoided.
- Heating, air conditioning and ventilation facilities will be suitable for climatic conditions and will provide a comfortable and healthy environment for workers to rest and spend their free time.
- The drinking water to be provided for the project workforce and the water to be supplied for food preparation, washing and bathing areas will meet the requirements stipulated in the Regulation on Water Intended for Human Consumption.
- Sufficient toilet facilities (toilet, urinal, sink and shower) shall be provided according to the number of people expected to work in the facility and signs shall be available indicating whether

the toilet facility is “Occupied” or “Vacant.” Toilet facilities shall also be equipped with sufficient hot and cold water, soap and hand drying devices.

- Domestic wastewater and wastes from the Camp Sites will be managed and disposed of in accordance with the requirements set forth in the relevant Turkish regulations and good site practices.
- First aid and medical facilities as well as safety equipment against possible dangers (fire, etc.) will be provided in the Camp Sites.
- Residents of the Camping Sites will be informed about the rules regarding accommodation.
- There will be an infirmary, a domestic wastewater processing facility and a social facility in the construction site.
- Project’s Grievance Mechanism to be established will provide means to the Project personnel to express their complaints. Project Sponsor will ensure that the workers are informed of the grievance mechanism at the time of recruitment and make it easily accessible to them.

8. GENERAL RISK MANAGEMENT

The OHS management process of the Antalya-Alanya Motorway Project is implemented in accordance with the document Risk Assessment Procedure.

According to the Risk Assessment Procedure, OHS hazards will be determined from mobilization to job completion; relevant risks for jobs and facilities will be analyzed, relevant risk control methods will be determined and will be implemented on site and in relevant places accordingly.

Throughout the project, the risk assessment process will be carried out in 4 categories:

- General OHS risks (known risks, facilities, etc.)
- Risk assessments related to field works of Antalya-Alanya Motorway Project
- Risk assessments related to activities performed by subcontractors (prepared by the subcontractor and submitted to the Antalya-Alanya Motorway Project)
- OHS risk assessments related to non-routine field activities before the start of the field activity
- The risk assessment process will be recorded using the risk assessment form and will be communicated to the Antalya-Alanya Motorway Project subcontractor and supplier responsible persons.

8.1. Risk Assessment Method

The risk assessment methodology is based on the ISO 31000:2018 guide.

The risk score is calculated using the following basic risk assessment approach:

Risk Score (Risk) (R) = Likelihood of Occurrence (L) * Consequence (C)

Both likelihood of occurrence and consequence parameters are set to 5*5 quantitative grading method such that:

Scale of Likelihood of Occurrence (L):

Value	Level	Definitions / Criteria
A	Very unlikely	Not any event of this kind is known to have occurred but may rarely happen
B	Unlikely	The detected failure may cause damage in case of a simultaneous occurrence of several hardly probable independent events.

C	Possible	The detected failure may cause a damage only in the event of possible circumstances
D	Likely	The detected failure may cause a damage, even though not automatically or directly
E	Very Likely	There is a direct relation between the failure detected and the occurrence of assumed damage to the workers

Scale of Severity (S):

Değer	Seviye	Definitions / Criteria
1	*Negligible*	*Only first aid or near miss cases*
2	*Slight*	*No lost work day cases*
3	*Moderate*	*Lost work day cases*
4	*High*	*Injury or acute exposure event with effects of partial invalidity* *Chronic exposure with irreversible and/or partial invalidation effects*
5	*Very High*	*Injury or acute exposure event having lethal effects or total invalidity* *Chronic exposure with lethal and/or total invalidation effects*

The representation of the risk matrix is as follows:

LIKELIHOOD	CONSEQUENCES				
	Insignificant (1)	Minor (2)	Moderate (3)	Major (4)	Catastrophic (5)
(E) Very Likely	M 11	H 16	H 20	E 23	E 25
(D) Likely	M 7	M 12	H 17	H 21	E 24
(C) Possible	L 4	M 8	H 14	H 18	H 22
(B) Unlikely	L 2	L 5	M 9	M 13	H 19
(A) Very Unlikely	L 1	L 3	M 6	M 10	H 15

As indicated in above matrix, risks are classified in three levels and subsequent actions are as follows:

Very High Risk (Red Area): Stop work; immediate action required

High Risk (Yellow Area): Proceed work short time according to procedure under close supervision

Medium Risk (Blue Area): Corrective and/or preventive actions to be scheduled in the short-term

Low Risk (Green Area): Acceptable risk, existing risk control methods are to be and reviewed

8.2. Risk Activities and Management

As stated in Section 1.1, this Plan document covers only the construction phase of the Antalya Alanya Motorway Project and is valid for all activities of the Antalya-Alanya Motorway Project and its subcontractors (including sites subcontracted to third parties (quarries, borrow pits, etc.)). Therefore, the scope of influence is limited to all Project activities related to the construction process.

8.3. Job Specific Risk Asessments

Job Specific Risk Asessments / Job Safety Analysis (JSA) is a formal process to identify the dangers of specific job tasks in order to reduce the risk of injury to workers. It involves breaking down the steps of performing a job, identifying hazards at each step, and creating controls to keep workers safe while performing that task.

On the other hand, risk assessment is a formal process to identify potential hazards related to an activity or operation, analyse the level of risk associated with those hazards, and propose controls to reduce the level of risk. Oftentimes, a risk assessment will use a risk scoring system to assign numerical value to each risk depending on the severity and likelihood it will occur.

The key difference between job safety analysis and risk assessment is the scope. Job safety analysis has a much narrower scope, as it involves only job-specific risks. Risk assessment, on the other hand, gives a big picture view of all operational risks including environmental hazards, storm water and waste management, equipment maintenance, and more.

Job safety analysis will be completed by the immediate supervisor. The supervisor observes a worker perform the job and takes notes about potential hazards. By contrast, a risk assessment can be completed by anyone in the organization depending on what it's for. It can either be a self-assessment or completed by a third party such as a supervisor or EHS specialist.

JSA will be carried out for the following types of jobs, but not limited to:

- Jobs with the highest injury or illness rates,
- Jobs with the potential for severe injuries or illness,
- Jobs in which one error could lead to a severe accident,
- New jobs, or those that have undergone changes in processes and procedures,
- Complex enough to require written instructions.

Risk assessments, on the other hand, will be conducted any time a hazard is identified or there's a change to operations or methodologies that could introduce new risks.

9. MONITORING- MEASUREMENT AND INSPECTIONS

9.1. Monitoring and Measurement Activities

The parameters having significant impact on the OHS and environment due to the activities construction sites shall be periodically monitored, measured and/or controlled by taking into account the provisions of the legislation. The monitoring and measurements to be performed shall be recorded. The measurement period and the persons in charge shall be indicated.

The persons in charge shall convey the records established after the necessary monitoring and measurement to the OHS and Environment Unit. In external measurements, the accredited and or qualified organizations or companies shall be preferred. All monitoring and measurement records shall be kept by the persons in charge of the competent unit and the OHS and Environment Unit.

In case of a tendency to act against the legislation during the inspections carried out within the specified periods, the control frequency of such parameters may be increased by the OHS and the Environmental Unit. If significant deviations from the targets are detected as a result of the monitoring or if the results

non-compliant with the legislation are obtained, the necessary actions shall be initiated by the OHS and Environment Unit

The parameters given below, which vary depending on the characteristics of the project being implemented and are not limited to these, are monitored, measured and/or controlled

- Periodic inspections of the equipment used
    - Pressure equipment: The inspections of the pressure vessels shall be carried out and reported by a qualified mechanical engineer/technician or by an accredited organization within the periods and under the conditions in accordance with the provisions of the legal legislation.
    - Lifting and moving equipment: The inspections of the lifting and moving equipment shall be carried out and reported by a qualified Mechanical Engineer/Technician or by an accredited organization within the periods and under the conditions in accordance with the provisions of the legal legislation. The reports and periodical inspections shall be followed-up by the OHS and Environment Unit.
    - Inspections of the electrical installations, lightning rods and groundings: The inspections of the electrical installations, lightning rods and groundings on the site shall be carried out and reported by a qualified Electrical or Electrical-Electronics Engineer/Electrician within the periods and under the conditions in accordance with the provisions of the legal legislation.
    - Firefighting equipment: The inspections of the firefighting equipment shall be carried out and reported by a qualified Mechanical Engineer/Technician or by an accredited organization within the periods and under the conditions in accordance with the provisions of the legal legislation.
    - Fire extinguishers: The inspections of the fire extinguishers shall be carried out through the **Fire Extinguishers Control Form**.
- Personal exposure measurements (personal noise, personal dust, personal vibration): Personal exposure measurements shall be carried out by accredited laboratories within the periods specified in the legislation.
- Workplace environment measurements: Workplace environment measurements such as thermal comfort, lighting, noise, dust must be carried out by authorized institutions at the beginning of the activity and compared with the limit values, and in case the results exceeding the limit are determined, necessary actions must be determined and performed to make them suitable. These measurements shall be repeated in case of changes in activities or placements.
- Environmental Measurements (Ambient noise, emission): Environmental measurements must be carried out by authorized institutions at the beginning of the activity and compared with the limit values, and in case the results exceeding the limit are determined, necessary actions must be determined and performed to make them suitable. These measurements shall be repeated in case of changes in activities or placements.
- Drinking/service water quality: Drinking/service waters shall be analyzed, monitored and controlled within the periods specified in legal regulations.
- Discharge Water Quality
- Waste quantities (Hazardous wastes, solid wastes, etc.)
- Natural resource consumption (Electricity, water, natural gas, LPG, etc)

9.2. Audits and Reporting

Audits shall be planned and applied according to the YS-P11 Internal Audit Procedure.

The F-11.1 Internal Audit Plan, including audit frequencies, shall be prepared to assess and monitor the compliance with existing policies and procedures and their effective implementation on the site.

When one or more non-conformances are detected during the audits, the process shall be started according to the YS-P12 Non-Conformity and Corrective Action Procedure. At the end of the audit, the auditors prepare the "F-11.3 Internal Audit Report".

The results of the audit shall be evaluated by the H&S Manager and be communicated to the management.

9.3. Routine Site Inspections

The OHS and Environment Department shall routinely audit the work site. All inspections will aim to verify the effective implementation of health and safety risk mitigation measures.

During inspections, the OHS and Environmental Department carries out procedures in accordance with the **YS-P12 Nonconformity and Corrective Action Procedure** for the nonconformities it identifies and reports the nonconformities using the **F-16.5 Weekly OHS-Environmental Activity Report Form.** Two types of actions are envisaged for identified nonconformities.

1. Elimination of detected nonconformity as soon as possible
2. Minimize the likelihood of re-encountering the nonconformity by identifying and eliminating the root cause causing the identified nonconformity.

For the nonconformities identified with the **Weekly OHS-Environmental Activity Report Form**, responsible parties are determined, and a deadline is set for the closure of the nonconformity. If the nonconformity is closed by the deadline, the closure date is recorded on the form. Nonconformities that remain unresolved are subject to the reopening of the Nonconformity Report (DFI).

10.3.1. Reporting

9.3.1.1. Daily Reporting

HSE Department will prepare a Daily **OHS-Environmental Activity Report Form** including daily HSE issues and on-site observations and submit them to HSE Manager at the end of their shifts. HSE Manager will be responsible for the follow-up of the issues specified in the report.

9.3.1.2. Weekly Reporting

Every week, one of the OHS Responsible Persons will prepare a Weekly HSE Report including weekly HSE issues and on-site observations and submit them to HSE Manager at the end of the week. HSE Manager is responsible for the follow-up of the issues specified in the report.

9.3.1.3. Monthly Reporting

Monthly Project HSE Statistical Report will be prepared by HSE Manager and sent to related department by e-mail.

9.3.1.4. Annual Reporting

As a legal requirement, in every January, **Annual OHS Assessment Report** of the previous year will be prepared by HSE Department and submitted to Project Director for approval.

Table 9.3.1.4-1.Key Performance Indicator

Parameter	Monitoring Station / Location	Monitoring Method	Monitoring Frequency	Responsible Parties
-Number of work incidents/accidents/near misses -Number of personnel who are infected with an infectious disease -Source and quality of drinking water	-Project office -Camp Sites	-Document review	Weekly	-SPV -EPC
-Use of PPEs -Health and safety signs -Fire safety equipment/systems -Accommodation conditions	-Camp Sites -Road construction sites - Quarries	-Site audit -Visual observation	Daily	-SPV -EPC
Number of health and safety trainings provided	Construction camp and administrative offices	-Document review	Monthly	SPV EPC
-Number of drills conducted	Project office	-Document review	Semi-Annual	SPV EPC
-Grievance mechanisms for Project personnel -Grievances received from Project personnel	Project office	-Document review	Weekly	SPV
Number of trainings conducted related to traffic	Construction camp and administrative offices	Tracking the number of Project personnel and contractor workers who have received training	Quarterly	-SPV -EPC

10. NONCONFORMITY AND CORRECTIVE ACTIONS MANAGEMENT

Procedures will be conducted according to the **YS-P12 Nonconformity and Corrective Action Procedure** in relation to nonconforming conditions and behaviors that may arise during the execution of tasks. In the event of nonconformity detection, the **F-12.1 Nonconformity and Corrective Action Form** will be used, and all identified nonconformities will be documented, with their root causes investigated.

Additionally, if the nonconformity poses a high risk, work in the area where the nonconformity occurred will be immediately halted until the nonconformity is rectified. Necessary safety measures will be implemented at the work site, and on-the-job training will be provided to the personnel involved in the nonconformity. Following the resolution of the nonconformity and an inspection by the Occupational Health and Safety (OHS) and Environmental Unit, work will resume.

The OHS and Environmental Unit also fills out the **Weekly OHS-Environmental Activity Report Form** for all nonconformities identified in the field.

11. REPORTING THE ACCIDENT/INCIDENT

All incidents/accidents, occupational diseases and near-miss events in the workplace shall be recorded, investigated and reported.

Incidents occurring in the workplace that have the potential to cause damage to employees, the workplace, or equipment/materials, but do not result in injury, illness, or death, and/or may cause environmental pollution, are recorded through written statements of the victim(s) and any witnesses using the **Incident Statement Form**, and then reported using the **Near Miss Report.**

All incidents/accidents that occur in the workplace and cause injury, illness or death, damage to equipment/materials and/or environmental pollution are reported using the **Incident/Accident Investigation Report.**

The Root Cause Analysis shall be performed by using the **F-16.7 Incident/Accident Investigation Report** in order not to repeat the incidents/accidents or occupational diseases in the workplace. The following stages shall be followed during the incident/accident investigations;

Stage 1: Collection of Information

Stage 2: Analysis of information

Stage 3: Determination of primary causes and root causes as a result of analysis

Stage 4: Identification of appropriate corrective actions

Stage 5: Planning and implementation of corrective actions

The nonconformities identified as a result of the root cause analysis shall be recorded using the **F-12.1 Nonconformity and Corrective Action Form** and necessary planning shall be carried out to ensure that the nonconformity and/or corrective actions are realized and necessary measures shall be taken to prevent recurrence of similar incidents/accidents.

Information that incident/accident reports must include;

- Date and place of accident/incident
- Those involved (person and/or equipment)
- stages of occurrence accident/incident
- Accident/incident details
- Nature of injuries / damage / cost estimate
- Witness statements
- Scene of incident photos
- Immediate (primary) causes
- Root causes
- Measures to be taken
- Corrective actions

Occupational accidents shall be notified to the relevant legal authorities within the periods specified in the legislation.

All incidents/accidents, near-misses and other cumulative data related to occupational health, safety and environment shall be recorded with the **Monthly HSE Performance Indicators** form and be reported. Details of fatality cases and lost time incidents (LTI's) shall also be recorded with the **Monthly HSE Performance Indicators** form.

12. EMERGENCY MANAGEMENT

In the event of any emergencies and unexpected situations that may occur, the operations carried out in order to ensure the safety of people, workplace, environment and equipment, to minimize the effects of the situations having damage potential and to systematically perform the necessary activities are within the scope of emergency management.

The following basic principles shall be applied in emergency management and planning.

- To identify hazards and problems in advance and make necessary preparations,
- To develop effective and correct response methods in advance to minimize the effects and to be well-prepared at all times,
- To perform the necessary responses in a coordinated manner and not respectively, and to minimize the duration and effect of the incident,
- To make necessary interventions for the protection of all those concerned,
- To disseminate Corporate Culture by conveying the lessons and doctrines gained to all field personnel to prevent the recurrence of the events,
- To constantly make the necessary improvements to have a better system.

12.1. Emergency Response

The emergency response system essentially consists of 6 main elements;

1. Prevention, Minimization
2. Emergency Preparations,
3. Emergency Response Methods,
4. Emergency Exercises,
5. Rescue,
6. Briefing.

12.1.1. To Prevent and Minimize

All studies, practices and machinery and equipment used are evaluated for possible hazards and risks and a risk analysis study is conducted. As part of the risk analysis prepared, necessary measures are taken to prevent and minimize, they are continuously controlled and all legislation and standard requirements are followed and fulfilled. These studies ensure that the necessary studies are carried out systematically beforehand in order to prevent the emergence of dangerous situations.

12.1.2. Emergency Preparations

These are the preparations and measures to be carried out in order to minimize the negative effects of the emergencies that may occur and shall be coordinated by the employer or the employer representative (Project Director/Site Chief) as the Emergency Manager. Emergency Preparations;

- Organization of Emergency Teams.
- Field personnel, emergency teams and site management to receive theoretical and practical training on emergencies, emergency plans and safety measures and exercises to be organized within particular periods.
- Supply of equipment to be used in emergencies.
- Establishment and efficient use of quality internal and external communication networks.
- Communication and coordination with external emergency teams.
- Conducting emergency exercises and identifying the deficiencies identified during exercises and making necessary improvements.

12.1.3. Emergency Response Method

Emergency response is the activities to be applied in case of unexpected situations. it involves eliminating, minimizing the source of the harmful impact and subsequently, the restoration activities when an emergency occurs. Personnel in Emergency Teams are the persons who have sufficient knowledge and experience about the required interventions according to the type of incident. Negative harmful impacts are minimized by effective and correct interventions.

12.1.4. Emergency Drill

An important part of emergency preparedness is performed through exercise. The above-mentioned teams shall meet at least once a year and perform the exercises. Scenarios shall be built in line with natural and non-natural disasters during the exercises. As part of these scenarios, practices shall be performed and suggestions for being prepared for possible disasters, also the solution of problems that may be encountered during disasters shall be brought and evaluated and solutions shall be provided. All information about the solution shall be shared with the employees. The effectiveness assessment of emergency exercises shall be recorded by the **Training Participation Form** and the **Emergency Drill Report**.

12.1.5. Rescue

This is to intervene to the persons, equipment and buildings that are negatively affected or about to be affected as a result of emergencies, to provide necessary assistance and support, to carry out improvement works and to ensure that the effects are eliminated or minimized and taken under control. Rescue activities include the pre-planned and tested practices to minimize the duration and impact of emergencies.

12.1.6. Briefing

After each serious and dangerous incident, it is important to provide the necessary information/briefing and explain the causes and consequences. The necessary corrective and remedial activities are determined by ascertaining which systems are working properly and which deficiencies are identified in relation to the incident and all personnel are informed about this issue.

12.2. Preventive and Restrictive Measures Taken for Emergencies

The **Emergency Plan** shall be prepared in accordance with the provisions of the legislation for emergencies that may occur at the Head Office and Construction Sites considering the characteristics of the activities and the site.

All personnel are given the **"Things to Do In Case Of Emergency and the Measures to Be Taken"** training once a year about identified emergencies. It is ensured that Emergency teams receive the necessary trainings (certified first aid trainings, etc.) through authorized institutions. Emergency exercises are recorded at least once a year, the deficiencies are identified and the response and performance of the personnel in case of extraordinary situations are measured. Firefighting equipment, first aid equipment and alarm systems are checked once a month and their competencies are reviewed. The machinery and equipment that may cause emergencies are subject to measurement and assessment every year and additional maintenance is performed when necessary. Emergency direction signs and emergency exit doors being opened outward and their inspections are performed in accordance with the provisions of the legislation.

12.3. Emergencies Determined

The emergencies that may occur in the workplace have been determined by taking into account the following:

a) Risk assessment results.
b) Emission and explosion probability arising from fire and hazardous chemicals
c) Incidents requiring first aid and evacuation.

d) Probability of natural disasters.
e) Probability of sabotage.
f) Wild animal attack, snake bite, scorpion sting.

Emergency situations that may occur in the company according to the mentioned issues,

Natural Disasters

a. Earthquake
b. Flood-Water Deluge
c. Lightning
d. Avalanche
e. Landslide
f. Storm

Other Emergency Situations

a. Fire
b. Natural Gas Fire
c. LPG Fire
d. Electricity Fire
e. Burst and Explosion
f. Sabotage, Terror and War
g. Spillage of Chemicals
h. Epidemics
i. Traffic Accident
j. Poisoning
k. Electric Leakage
l. Work-related accidents

12.4. Emergency Teams

12.4.1. Organization of Emergency Teams

The employer, under the legal legislation, shall establish teams for the following matters consisting of appropriately equipped persons considering the number of employees.

a) Emergency response and firefighting,
b) Search, rescue and evacuation,
c) First aid,
d) Protection

Those assigned for these teams shall be listed in the **Emergency Team List** and **Emergency Plan** posted in areas where everyone can see and reach them.

12.4.2. Duties of Emergency Teams

Emergency Teams;

- Participating in training and drills related to emergencies.
- Calling the Emergency Manager when an emergency alarm is heard to obtain information about the situation and coordinate.
- To carry out the necessary interventions in the most effective and correct way in line with the training they have received until the professional teams arrive.
- Coordinating the people in the assembly area and directing people to the assembly areas.
- To fulfill the responsibilities in the job descriptions.

Emergency Response and Fire Fighting Team: They are supposed to make the first response to emergencies that may occur in the workplace, to respond immediately in case of fire and prevent the expansion of fire, to completely or partially disable electricity, natural gas and similar systems that may create a danger to intervene in the fire and to extinguish fire if it is capable.

Search, Rescue and Evacuation Team: They are assigned to determine the places of the persons and materials which need to be removed from the site during fire and other emergencies, remove the

determined elements from the scene of accident, ensure that all employees reach to emergency gathering points in a controlled way and take the necessary precautions to prevent the emergency from growing and evacuate persons safely.

First Aid Team: They are supposed to inform the medical teams and to apply the necessary first aid interventions to the wounded brought to the safe zone by the search, rescue and evacuation team until the medical teams arrive. The team consists of employees with First Aid Certificates.

Protection Team: They are supposed to protect the materials and documents recovered by the search, rescue and evacuation team in an emergency, to prevent possible panic and confusion.

Security Officers:

- To inform the emergency manager when witnessing events that occur in the field or that may occur outside and affect the site,
- To inform professional teams (ambulance, fire department, police),
- To meet the out-of-site teams and accompany them on site,
- To guide the vehicles and people in the most proper manner until the emergency event ends,
- To bring the exit-entry points under control,
- To serve in assistant position to emergency teams,
- To participate in emergency trainings and exercises.

12.5. Emergency Assembly Area

It is a pre-determined assembly area as a safe area for the employees to gather in case of emergency. Emergency assembly area:

- Shall be designated as a place where the employees shall not be harmed by environmental conditions in emergency situations,
- The movement of response vehicles such as ambulance and fire brigade shall not be restricted,
- People shall not be exposed to electrical and chemical hazards,
- Which can be quickly evacuated in case of mass evacuation,
- All employees can locate with the help of emergency signs.

Depending on the works, the number of employees in the workplace, the differences in the work locations and the emergency hazards in the workplace, more than one emergency assembly area shall be determined if necessary.

Emergency exits within the working area shall be determined under the legal legislation.

The evacuation arrangements, emergency exits, emergency response and first aid equipment, alarm systems and emergency assembly areas that can be monitored to ensure that personnel can go to a safe place in case of emergencies shall be shown in the **Emergency Equipment and Evacuation Plan** and they shall be hung on the suitable places so that employees can easily see them.

12.6. Emergency Equipment

12.6.1. Fire Cabinet

Fire cabinets to be used in the workplace and construction site shall be selected suitable for the need and in sufficient numbers and be placed in the required places in accordance with the provisions of the legislation.

12.6.2. Fire Extinguishers

Considering the possibility of fire in the workplace, fire extinguishers and their number shall be determined based on fire classes and be placed in appropriate places. The locations of fire extinguishers are specified in the **Emergency Equipment and Evacuation Plan**.

The inspections of the fire extinguishers shall be carried out through the **Fire Extinguishers Control Form**.

Class A Fires
These are the solid matter (wood, paper, cotton etc.) fires. These are controlled and extinguished by cooling and removal of combustible material. Multi-purpose dry chemical powder or water fire extinguishers are used in this kind of fires.

Class B Fires
These are the fires caused by combustible liquids (petrol, benzene, oils, oil paints, tar, etc.). Dry chemical powder, carbon-dioxide or foamy fire extinguishers are used in this kind of fires.

Class C Fires
These are the fires caused by combustible gases (Methane, propane, LPG, acetylene gas etc.). Dry chemical powder or carbon-dioxide fire extinguishers are used in this kind of fires.

Class D Fires
These are the fires caused by flammable light metals and alloys (sodium, potassium, titanium, magnesium, etc.). Dry metal powder fire extinguishers are used in this kind of fires.

Class E Fires
These are electrical fires. For fires caused by electricity, a fire extinguisher shall be used according to the type of objects burning after the electrical current is cut.

12.6.3. First Aid and Medicine Cabinet

First aid and/or medicine cabinets shall be available in the facility for emergency use. The contents of the cabinets are arranged according to the working conditions and the work performed.

The locations of fire cabinets are specified in the **Emergency Equipment and Evacuation Plan**. The contents of the medicine cabinets shall be checked by the Administrative Supervisor and Workplace Physician at regular intervals.

12.7. Emergency Equipment and Evacuation Plan

The **Emergency Equipment and Evacuation Plan** shall be prepared on the layout plan according to the sections of the workplace and construction site and shall be hung on suitable places for the employees to see them easily. In this evacuation plan;

- Locations of firefighting vehicles,
- Emergency equipment and their locations,
- Locations of the first aid materials,
- Evacuation roads and emergency exits,
- Emergency assembly areas

shall be shown.

12.8. Emergency Flow Diagrams

The **Emergency Flow Diagrams** have been prepared concerning the following subjects according to the sections of the workplace and construction site.

- Earthquake flow diagram,
- Work accident flow diagram,
- Sabotage flow diagram,
- Leakage and spillage flow diagram,
- Fire flow diagram,
- Explosion flow diagram,
- Flood and landslide flow diagram,
- Terrorist attach flow diagram,
- Poisoning flow diagram

13. HEALTH SERVICES

The **Occupational Hygiene Instructions** has been prepared to provide a healthy working environment to the employees, to identify and control the health hazards and risks in the workplace, and which includes hygiene conditions related to the working environment and personal hygiene issues for the employees.

1. The provision of the personnel health files in accordance with the legislation is essential. Employees shall be subjected to general health examinations under the following circumstances;
   a) Upon recruitment.
   b) In work changes.
   c) When they request to return to work after recurrent suspensions form work due to work accident, occupational disease and health status.
   d) They must be renewed periodically during the course of the work.
2. The personnel cannot be hired without a health report showing that they are suitable for the job.
3. Health examinations shall be performed and reported by the Workplace Physician.
4. It is important for the health personnel to be involved in night works to indicate that "they are suitable for night work".
5. Hygiene trainings shall be given to all personnel working in the work area such as tea-makers, camp staff, cooks etc. and their records shall be kept. The trainings received shall be checked by the Workplace Physician.
6. The Inspection reports shall be treated as confidential information. Access other than the units/persons responsible for monitoring and control is prohibited.

13.1. Monitoring Health Status of Employees

1. The personnel to be employed shall be examined by the Workplace Physician before the work and be recorded in the **Pre-Employment/Periodic Examination Form**.
2. Employees are required to be examined by the Workplace Physician within the periods specified in the legislation.
3. Medical examination of the employees who come to orientation training must be completed in order to be accepted.
4. The personnel who have lost their workforce must be examined by the Workplace Physician before starting the work again and the **Pre-Employment/Periodic Examination Form** must be renewed.
5. In the case where those who left the job starts to work again, the examination procedures must be repeated again even if the interval is short.

13.2. Workplace Health Unit

A workplace health unit (infirmary) shall be established in the company and construction site close to the office area, which shall be equipped with medical equipment and materials in accordance with the legislation. A Workplace Physician in compliance with the requirements of the legislation and, if necessary, a nurse or health officer shall be appointed to the health unit.

Hospitals and ambulance services in the region shall be used until the health unit is established. Necessary contact information for the nearest hospitals and ambulance services shall be provided to the employees.

Health units, together with occupational safety specialists, shall each year prepare the **Workplace Health and Safety Unit Annual Work Plan and Assessment Report** regarding the health services carried out in the workplace.

In addition to the health units, a sufficient number of personnel complying with the requirements of the legislation shall be certified by receiving "First Aid Training" from the authorized institutions.

14. GRIEVANCE MECHANISM

14.1. Recording Grievances

Communication Procedure has been established for written and/or verbal grievances (complaints and suggestions) from employees, visitors, subcontractors, suppliers, customers, legal and other authorities within the scope of Quality, Environment, Occupational Health and Safety. **Complaint and Suggestion Form** is used for complaints and suggestions. Received complaints and suggestions are evaluated by the Project Director, Site Manager and OHS and Environment unit. Complaint and Suggestion status are evaluated by the person who fills out the form.

Depending on the severity of the grievance, the following actions are taken in the Complaint Status section:

- If the grievance is caused by a non-conformity which harms the property and/or health of the parties concerned, creates financial loss, damages the environment and is caused by the products and services, then its severity is marked as “**high**”. A corrective action (CAR) is initiated, actions are planned and realized as soon as possible.

- If the grievance is caused by a non-conformity arising as a result of the non-satisfaction of the requirements of the parties concerned, then its severity is marked as “**moderate**”. A corrective action (CAR) is initiated and action will be taken depending on its urgency.

- If the grievance is caused by a very rare non-conformity that does not belong to the system, then its severity is marked as “**low**”. No corrective action is initiated for the grievances with low severity.

Grievances are recorded in **Complaint and Suggestion Follow-up List**” and evaluated at regular intervals. Complaints with high and moderate severity and suggestions to be answered must be recorded in the follow-up list. The parties concerned are notified verbally and in writing.

14.2. Closing Grievances

Complaints recorded in the Complaint and Suggestion Tracking List are followed up with the opened DFIs. If the person following the complaint finds the activity sufficient, he/she closes the record. If he/she does not find it sufficient, he/she marks the “Needs Monitoring” section and assigns a responsible person and continues to monitor the nonconformity that the complaint originates from. Complaints and suggestions are discussed and evaluated in the Management Review meetings, OHS and Environmental Board Meetings.

14.3. Reporting Grievances

OHS and Environment Unit shall assess and report the Complaints and Suggestions records every 6 months regarding the receipt of grievances, severities, CAR’s initiated and closing of grievances.

15. REWARD AND PUNISMENT PRACTICES

15.1. Punishment Practice

In case of non-compliance with the OHS and Environment rules and practices in the work are, verbal and written warnings shall be given to inappropriate employees and sub-employers based on the determinations to be made by the OHS and Environment Unit. The employees and sub-employers who do not take verbal and written warnings seriously shall be fined by the OHS and Environment Committee. Such penalties shall provide deterrence for the individuals and organizations against non-compliance with the most common rules on construction sites and the challenges faced by the OHS and Environment Unit. The OHS and Environment Unit shall notify the supervisor of the relevant unit and the sub-employer agent in writing about the termination of the employment contract of the employees who receive three warnings during the year. However, the persons who show the behaviour that jeopardizes the safety of themselves or their colleagues are strictly not allowed to work and if such an act is detected, their employment contract shall be terminated immediately.

The authority on how to use the financial income obtained after the penalty deduction has been given to the OHS and Environment Committee within the scope of legal legislation. The Committee shall decide on the use of the income obtained by paying regard to the legal requirements. The list of penalty imposition shall be established and applied by the OHS and the Environment Committee.

15.2. Reward Practice

In addition to penalties, the employees are given Reward practice for their strict observance of all Occupational Health, Safety and Environment rules and practices and working without jeopardizing the safety of others and themselves.

For the reward practice, the "OHS EMPLOYEE OF THE MONTH" shall be selected among all employees, including the sub-employer employees. The reward to be given shall be discussed in the OHS and Environment Committee and be unanimously decided. The selection criteria are listed below.

1. Not to be subjected to verbal warnings and penalties by the OHS and Environment Unit with zero nonconformity in monthly studies,
2. Not to act in any way that may jeopardize the safety of others or him/herself,
3. To inform the OHS and Environment Unit about occupational safety's inappropriate conditions and behaviours that occur on the site,
4. To use the personal protective equipment delivered to him on the site completely and continuously,
5. To participate fully and actively in the OHS and Environment trainings

16. PERSONAL PRPTECTIVE EQUIPMENT (PPE)

Personal protective equipment (PPE) is used where the risks cannot be prevented or fully limited by technical measures to ensure collective protection or by work organization and working methods. PPE is used to prevent occupational accidents or diseases, to protect employees from health and safety risks, and to improve health and safety conditions.

The procurement unit must receive information from the OHS and the Environment Unit concerning the minimum characteristics and standards of the PPE to be supplied. The conformity of the PPE to the standards shall be controlled by the OHS and Environment Unit. The use of the PPE without CE marking is strictly forbidden. The PPE conforming to the legislation and standards, the works to be carried out and the work environment, material safety Data Sheets and the risk assessments shall be delivered to the employees with the **Submission Form.**

All employees are provided with training on the correct use and maintenance of PPE in accordance with **the Annual OHS Training Plan**. In these trainings, employees are informed that they must replace PPE that is worn out and has lost its properties by reporting it to the OHS and Environment Unit. In addition, warning labels and signs indicating which type of PPE should be used are hung in work areas.

As a rule of thumb, the helmets, protective footwear and reflective vests, are mandatory in the work areas, including the visitors. If necessary, additional PPE shall be provided in accordance with the work to be performed, the work environment and the climatic conditions. These are:

- Eye and face protectors: The goggles, face shields and masks are used for welding, chemical work, grinding, etc., where there is a risk of part jumping.
- Ear protectors: Earplugs and earmuffs are used for high-noise work.
- Head protectors: Hardhats, caps and helmets are used to protect against falling objects and strike.
- Respiratory system protectors: The equipment such as respirators, gas and dust masks are used in dusty, confined environments, where oxygen is insufficient.
- Foot and leg protectors: Shoes, boots, leggings and knee guards, etc. are used to protect against electricity, temperature, slip, and the objects falling, splashing and stinging.
- Hand and arm protectors: Gloves and armbands are used to protect against the risks such as the cuts, puncture and burns that might be caused by the elements like chemicals, electricity, temperature, vibration.
- Body protectors: Protective clothing, vests and safety belts are used as protectors against dust, temperature, electricity, radiation, chemicals and falling down from height Protective clothing (overalls, coats, aprons, etc.) and vests must be of high visibility to ensure that users are recognized in their environment.
- Full body harness: These are protective equipment consisting of full protection body-type belts and ropes that are used to prevent the worker from falling down from height and to protect against falling in places where there is a risk of falling.
- Parachute type safety belt: These are protective equipment consisting of fully protected body type belts and ropes used to prevent workers from falling from heights and to protect against falls in places where there is a risk of falling.

Personal protective equipment (PPE) appropriate to the risks associated with electrical works will be provided to personnel engaged in such tasks. In work situations that require special safety precautions -such as working alone or near water- supervisors will be required to exercise due diligence and ensure that all relevant safety measures are fully implemented.
In areas where heavy machinery is operated, visible safety measures will be implemented to reduce risks of collision or crushing. These include placing warning signs and safety barriers around active machinery zones and assigning flaggers to guide operations. Additionally, all machinery operating in reverse will be equipped with audible warning systems, and spotters will be deployed in low-visibility areas. Records related to PPE use, safety briefings, and trainings will be kept up to date and monitored regularly. Any nonconformities identified will be promptly corrected, and occupational health and safety practices will be continuously improved.
The Project will be carried out in compliance with the Turkish Law on Occupational Health and Safety and the Regulation on the Use of Personal Protective Equipment in Workplaces, which is aligned with relevant European Union Directives. All PPE will bear CE certification and meet EU standards.
The use of PPE will be tailored to different work areas and job types across the site. For example, workers on high structures such as bridges and viaducts will use double-hook safety harnesses and fall arrest systems; those working with hot asphalt or welding will wear heat-resistant gloves, welding masks, and fireproof aprons. Tunnel workers will be equipped with gas masks and headlamps, while reflective vests and proper lighting systems will be used for night shifts
All PPE is regularly inspected, properly maintained, and replaced when damaged, worn, or expired. PPE items must meet applicable national and international standards (e.g., EN or ISO) and be matched to the specific task and risk level. A PPE register shall be maintained to track issuance, inspections, and replacement intervals. Supervisors are responsible for monitoring PPE compliance during routine

worksite inspections, and all personnel shall be subject to disciplinary action in cases of non-compliance. PPE refresher training shall be provided as part of periodic safety training, and proper use and maintenance shall be verified through visual checks and record reviews. Subcontractors shall be held to the same PPE standards and will be subject to regular audits.

17. GENERAL WARNING SIGNS AND LABELS

The warning signs and labels to be used in the work areas are listed below in subject headings.

17.1. Color Codes for Warning and Labels

Importance and/or purpose	Instruction and information
Prohibited	Hazardous action or behavior
Hazard	Stop, shut down, activate emergency stop, evacuate
Fire fighting equipment	Indication of equipment location
Warning	Be cautious, inspect, take precautionary measures
Mandatory,Order	Specific behavior or action required
	Use personal protective equipment (PPE)
Safe to use	Can be used appropriately for its intended purpose
No hazard	No harm under normal conditions
Emergency escape, First aid	Emergency exits, First aid equipment

17.1.1. Mandatory

17.1.2. Warning

Radioactive Material

Overhead Load

High Voltage

Heavy Machinery Operating

17.1.3. Prohibition

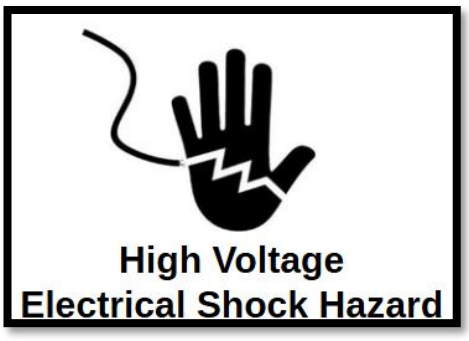
Smoking and
Naked Flames Forbidden

No Smoking

No Entry

Not Drinkable

Hot Surface
Do Not Touch



Inhalation Hazard

Do Not Extinguish With Water

Do Not Touch

17.1.4. Informing

17.2. Color Codes Regarding Monthly Inspections

The devices and equipment listed below are routinely checked every month and are labeled every 3 months with labels prepared in easily visible sizes in the month color specified below or are taped with tape appropriate to the color code. Labeling means that the control for that month has been performed. In this regard, the OHS and Environment Unit checks whether the labeling has been done in routine controls. In case of any non-conformity detected during the controls, the **General Safety Instruction for Power Tools** is followed.

Device type	Description	The personnel in charge of control
Lifting equipment	Strap, chain, lifting eye etc.	The operator of the lifting equipment in which the equipment is used
Electrical panel/panelboards	Main distribution boards, sub-boards, on-machine panelboards, etc.	Electrical technical personnel responsible for its maintenance and installation
Scaffolding, Platform and stairs	-	The personnel responsible for its maintenance and installation

Color Codes

January-February-March		Blue
April-May-June		Yellow
July-August-September		Green
October-November-December		White
Out of use, faulty or scrap		Red

The personnel performing the inspection will stick labels with the color of the month in which the inspection was carried out, in a clearly visible manner, on the devices/equipment that they have checked and have not detected any problems.

18. LOCK OUT TAG OUT

Lock Out Tag Out: It is a method developed to correctly disconnect or isolate the connection to the energy source, to provide a safe working environment, to prevent unauthorized persons from interfering during these operations, or to prevent the use of unsuitable facilities, machinery or equipment in case of any maintenance, repair, installation, facility addition etc. operation on the facility, machinery or equipment.

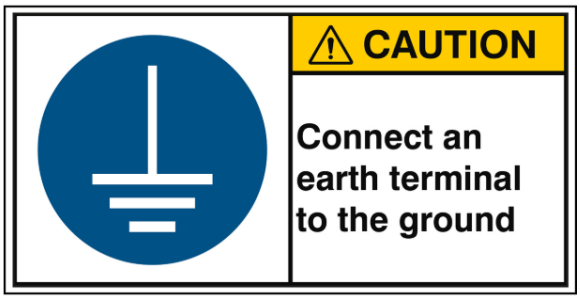
The plates and tags to be used as part of the Lock Out Tag Out system are indicated below.

Safe for use label

Unsafe for use label

Out-of-use label for maintenance

Connect an earth terminal to the ground



Mandatory labels;

19. WORK PERMIT SYSTEM

EPC Contractor will develop a safe system of work that results from a systematic examination of a working process, that identifies hazards and specifies work methods designed either to eliminate the hazards or controls and minimize the relevant risks.

Prior to execution of work, the EPC Contractor will establish a Job Safety and Permit-to-Work system for the Site.

The EPC Contractor will develop Method Statements, including the relevant Risk Assessment for high-risk activities at least listed below;

- Steel erection/heavy crane lifts
- Hot work (Cutting/Welding)

- Entry into confined spaces and restricted areas
- Transport, storage and handling of explosives
- Blasting
- Working at height
- Excavation work
- Transport, earth moving and materials – handling equipment
- Working along unstable slope
- Working near heavy machinery
- Working in dusty environment
- Working on asbestos surface (ıf any)
- Grouting
- Concrete Works
- Demolition Works
- Operation of heavy equipment or machinery

The matters subject to the work permit system are as follows.

A. Working with electricity
B. Hot Works
C. Working at height
D. Excavation works
E. Working in enclosed areas

The work permits related to the aforementioned matters are issued through work permit forms, the details of which are explained below. The relevant checks are carried out and recorded by the OHS and Environment Unit. The work permit forms are also signed by the responsible supervisor.

19.1. Electricity Work Permit

Since electrical works are under the high-risk activities group, they must be carried out under a permit audit. The yellow colored **Electrical Work Permit Form** shall be used for Electrical Works. Such tasks may be one of the following;

- Studies related to isolated electrical equipment
- Installation
- Grounding
- Maintenance and repair

19.2. Hot Works

The Hot Work permit is issued for the tasks to be performed using open flame or ignition sources. This permit shall be used if the task assigned generates a possible source of ignition or poses a risk to it.

The red coloured **Hot Work Permit Form** shall be used for Welding works. Welding may be carried out only by the personnel with the appropriate welding certificate.

The use of mobile phones in hazardous areas is strictly not permitted even if the Hot Work Permit has been obtained.

19.3. Working at Height

The works carried out at height are subject to the work permit system since they are under the high-risk activities group. The purple coloured **Working at Height Work Permit Form** shall be used in the works at the height.

Work at height work permit form shall be performed prior to operation during the installation of first scaffold/platform and the inspections shall be periodically renewed during the economic life of the scaffold/platform. When working at height work permit form is issued, a copy shall be attached to the controlled scaffold appropriately (not to be affected by environmental conditions, not to fall).

Appropriate measures shall be determined to minimize the risks involved in the structure of the work equipment, depending on the type of work equipment selected. If necessary, protectors to prevent falls shall be built. These protectors shall be of suitable structure and sufficient strength to prevent falling down from height and not to injure the employees. Protectors for collective protection which prevent falls may only be interrupted on the top of the mobile or fixed ladders.

In the cases where the protectors for collective protection to prevent falls are to be temporarily removed for the purpose of performing a particular work, other safety measures shall be taken to ensure the same protection. Work shall not be carried out until these measures are taken. Once this particular work has been completed temporarily or finally, the protectors shall be placed again.

Temporary works carried out at height shall be performed at feasible atmospheric conditions that shall not endanger the health and safety of the employees.

19.4. Excavation Work Permit

Excavation works are subject to the work permit system. The green coloured **Excavation Work Permit Form** shall be used for excavation works. This permit includes the following works;

- Deep Excavations
- Wells
- Ground openings, holes and sharp edges

Many hazards exist when personnel are required to work below ground level some are obvious, others less so. To prevent harm to personnel or damage to equipment a risk assessment and a permit-to-work system must be used as essential control tools.

- No deep excavation or digging shall be performed within a facility without a written permit to work.
- When personnel are working in a trench, one or more ladders must be securely placed in the trench to provide routine and emergency exit from the bottom to the surface.
- Excavations and trenches must be shored or sloped appropriately based on soil conditions in an approved manner.
- No materials including spoil banks, shall be stored closer than 1 meter from the edge of any trench or excavation.
- Excavated areas must be closed with barriers, such as guardrails made from scaffold tubes, steel or equivalent materials. These barriers must be located at least 2 meters from the edge of the excavation.

- Suitable barriers, handrails, signals or other warning devices must be provided protect personnel from any hazardous operation or excavation. If handrails or ails or barriers are not in place, open trenches or excavations must be securely covered.
- In conditions of darkness, trenches or similar openings must be illuminated with electrical lamps and physical barriers must be installed to prevent accidental entry.
- A competent person must inspect excavations and trenches prior to the start of any work and as necessary thereafter. If any signs of slippage or collapse are observed, work must cease until appropriate safety precautions have been implemented.
- Trench inspections must be conducted daily before to entry is allowed.
- In areas where underground cables or pipes are known or suspected to be present, exploratory holes must be dug by hand. Mechanical excavation is strictly prohibited of any identified underground utility.
- Before any personnel may enter an excavation, either the sides must be graded to the angle-of-repose or proper shoring must be installed to prevent wall collapse.

19.5. Working in closed areas

The areas that are not designed for continuous operation and have limited entry/exit are considered closed areas. The term areas that require closed area permit covers the areas that are subject to health and safety hazards provided below.

- Which are dangerous or potentially dangerous,
- Which contain material/chemicals/exhaust gas to be hazardous to inhale for a person entering the environment,
- Which contain insufficient oxygen (Lack of oxygen causes loss of consciousness and death very quickly. Since the lack of oxygen can be seen in all closed spaces, it appears to be the most dangerous factor in closed spaces),
- Inward-closing doors or downward-sloping walls,
- The walls that narrow into a smaller area, which may cause the person to suffocate or get stuck,
- Temperature stress.

Working in closed spaces is subject to the work permit system. The blue coloured **Confined Space Work Permit Form** shall be used in the works carried out at closed areas.

If entry to the closed area cannot be avoided, it must be ensured that a safe system is available for working in the closed area. Risk analysis must be carried out in order to determine the existing hazards in the closed area and necessary measures must be taken according to the structure of the closed area and related risks pursuant to the risk assessment. A safe working system, including the measures taken, must be established, developed and applied. The matters that need to be considered within a safe working system are listed below.

1. Appointment of an observer
2. Suitability of the persons to work
3. Insulation
4. Cleaning before entering the closed area
5. Providing ventilation
6. Making necessary measurements in the closed area
7. Special equipment and lighting
8. Breathing apparatus
9. Emergency plans
10. Rescue harnesses

11. Work Permit System
12. Personal Protective Equipment (PPE)
13. Training of the employees

19.6. Working Over/Near Water

Working over or near water is considered a high-risk activity and shall not be carried out without a valid Work Permit. The permit shall be issued following a detailed risk assessment and approval by the H&S Manager. The work area must be clearly marked with physical barriers and warning signs to prevent unauthorized access. A life-saving plan shall be developed before work begins, and it shall include designated rescue personnel, equipment locations, and emergency communication protocols.

All personnel working near or over water shall wear EN ISO 12402-compliant life jackets, safety helmets with chin straps, high-visibility vests, and non-slip footwear. Fall protection equipment must also be used where there is a risk of falling from height. A safety standby person, trained in water rescue and first aid, must be assigned and positioned to maintain constant communication with the work team.

The permit shall only be valid for the specific time period and task defined, and weather conditions must be assessed before and during the activity. Operations must be suspended in case of strong currents, high waves, storms, or poor visibility. Rescue equipment such as lifebuoys, throw ropes, and ladders must be located within easy reach of the work area. No worker shall enter the water unless specifically authorized and properly equipped.

19.7. Working on Live Roads

Work on live roads involves construction or maintenance activities conducted in areas with ongoing vehicular traffic, posing significant risks to both workers and the public. A Work Permit is required prior to starting any such activity. The permit shall be issued only after the implementation of a site-specific Traffic Management Plan (TMP), prepared and reviewed by the H&S Manager in coordination with relevant authorities, if applicable.

Before commencing the work, appropriate traffic control measures shall be installed, including reflective road signs, warning boards, traffic cones, light beacons, and barriers. Flaggers and traffic spotters must be assigned as needed, especially during reversing or lane closures. The work zone shall be separated from live traffic lanes with physical barricades, and alternative routes for vehicles and pedestrians shall be arranged.

All workers in the area shall wear, safety helmets, gloves, and steel-toed boots. Night work requires additional lighting and reflective gear. Activities shall be suspended during poor weather conditions that affect visibility, such as fog, rain, or snow. The Work Permit shall define the task, location, duration, and responsibilities of all parties involved. Any deviation from the approved traffic plan shall require immediate reassessment and reauthorization of the permit.

19.8. Concrete Pumping

Concrete pumping is a high-risk operation involving pressurized delivery of concrete through fixed or mobile pipeline systems, and shall not be conducted without a valid Work Permit. The permit shall be prepared in coordination with the Pump Operator, Site Engineer, and H&S Manager. Before issuing the permit, a comprehensive inspection must be conducted to confirm that the concrete pump, booms, pipes, couplings, and all safety devices are in good working condition and conform to relevant standards.

The pump shall be placed on level and stable ground with fully extended outriggers secured on base plates. The pumping area must be cordoned off with warning signs, and only authorized personnel shall be allowed to enter. A signal person shall be assigned to communicate between the pump operator

and receiving crew. The hopper guard must remain in place and shall never be removed during operation. Emergency stop buttons and pressure release systems must be tested and confirmed operational.

All personnel involved in concrete pumping shall wear appropriate PPE, including safety helmets, face shields or goggles, chemical-resistant gloves, rubber boots, long-sleeved clothing, and hearing protection. In case of a blockage, pumping must be stopped immediately, pressure must be relieved, and only trained personnel shall be allowed to intervene. The Work Permit shall specify the scope of work, equipment to be used, emergency contact information, and the validity period. The permit must be signed and approved by both the Site Manager and the H&S Manager.

As part of the work permit system, the EPC Contractor shall ensure that all personnel assigned to safety-critical activities meet the required competency criteria. Competency shall include appropriate education, role-specific experience, valid licenses or certifications (e.g., for working at height, confined space entry, hot works, lifting, blasting), and completed safety training. A centralized competency tracking process shall be maintained to verify and document each worker's qualifications, training dates, and certification validity. This system shall be regularly updated and reviewed by the HSE Department. Supervisors shall confirm that assigned workers meet the competency requirements before permitting them to conduct high-risk tasks. Subcontractors shall also be required to report and maintain up-to-date competency records for their workforce.

20. VEHICLE AND ROAD TRAFFIC SAFETY

The **Road Traffic Safety Procedure and/or Traffic Management Plan** shall be applied for the implementation of vehicle and road traffic safety issues. In case of transportation work on traffic roads, sufficient safety distance shall be provided for the other persons using this road or the appropriate protective measures shall be taken. Roads shall be marked visible. Necessary markings and precautions shall be taken in relation to overhead lines and similar barriers along the route of traffic roads.

Necessary measures shall be taken by taking into account the following criteria in the areas where personnel and material transportation is carried out within the site and on the main roads and also on access roads to be used by the Project vehicles and heavy equipment.

- Drivers and operators must be licensed and certified
- Vehicles and construction equipment must be overhauled and in suitable condition for use
- Traffic safety rules must be observed:
  - Traffic signs (speed limits, other restrictions and warnings etc.)
  - Traffic control
  - Rules of night drive
  - Vehicle requirements for personnel transport
  - Maximum load, securing the load
  - Ensure access on public roads with particular attention to vulnerable road users (school children, pedestrians, bicycle riders).
- Safety standards of construction sites
  - Road width considering maximum vehicle widths and traffic direction (one/two-way)
  - Maximum slope
  - Roadside barriers
  - Protection against landslides, loose slopes, rockfalls and avalanches
- Controlled access to site roads, control of driver and vehicle standards
- Applying appropriate driving restrictions according to weather conditions:
  - Harsh weather conditions, flood, avalanche risk
  - Slope instability hazards

21. WORKS AT HEIGHT

Works at height are classified as risky activities. All personnel who shall work at height shall be provided with Working at Height Training, which includes entry-exit, safe working systems and fall protection systems (proper use, protection and maintenance of seat belts etc.).

Secure access to all business areas shall be provided. Adequate barriers shall be placed in all elevated work areas to prevent people, equipment or materials from falling. In cases where the risk of falling cannot be eliminated, the measures (safety net etc.) to minimize the fall distance and its possible consequences shall be applied.

Full body harness shall be provided to the personnel who shall work at heights and this harness shall be fastened to a secure fastening point by means of a fastening device. In severe windy and rainy weather conditions, installation/dismantling of scaffolding, platform etc. shall not be performed.

The installation, dismantling and inspection of scaffolds and platforms may be carried out by trained personnel and shall be considered safe for operation only after checking and "tagging". Scaffolds and platforms shall be checked before the use by personnel and may be used if the "suitable" (green) tag has been attached. Informing the personnel who shall work at height about tagging (where yellow, red tag attached scaffolds and the scaffolds without green tag shall not be used) is included in basic OHS training, working at height training and routine toolbox trainings.

21.1. Scaffolds and Platforms

1. The suitability of the scaffold area shall be checked before installation. Earth compaction against sinking and collapse must be performed, and if the earth is not stable, it must be strengthened by the appropriate method.
2. Installation, grounding and anchoring must be performed in accordance with its instructions and standards supplied from the manufacturer.
3. To prevent it from moving, it must be ensured that the scaffold is fastened or fixed to the building or structure at appropriate distances.
4. Grounding plate shall be hung on the grounding place.
5. The width of the work platform must be sufficient for the work to be performed on that platform.
6. Balustrades, toe boards and floorboards shall be placed in accordance with their standards.
7. A ladder must be provided for access to the work platforms and the ladder must be placed appropriately as a precaution against tipping over.
8. The scaffold must not be overloaded. No material must be loaded on the platform unless it is specifically designed for that purpose.
9. If mobile scaffold is to be installed, the appropriate wheel and lock system shall be installed. When it is required to work on the mobile scaffold, the wheels of the scaffold must be locked before starting work.
10. The mobile scaffold must never be climbed on unless its wheels are locked on a flat surface.
11. The mobile scaffold must absolutely not be moved while any work or material is carried out on it.
12. Before dismantling, the necessary measures shall be taken in accordance with its manual and the “scaffold is out of use” tag shall be attached.

21.2. Ladders

The **Ladder Use and Safety Instructions** has been prepared in order to define the proper and safe use of the ladders to be used in the work areas. All ladders must be checked before use and any ladder not deemed appropriate for use must be removed.

1. Handrails and suitable wainscots must be placed on the platforms to be climbed on for the fixed construction ladders.
2. Wooden steps to prevent slipping or falling shall be built to the reinforced concrete staircases with no steps and suitable railings shall be attached to the edges of the bucket gap.
3. Ladders steps made of flat sheet metal or metal material shall be covered with non-slip material.
4. The slope of the ladders shall be at least 20 and at most 45 degrees to the base, except those used for maintenance works. In the workplaces where a slope of less than 20 degrees from the base is required, ramps shall be constructed, and fixed ladders in the form of service stairs with railings shall be installed in the cases where a steep of more than 45 degrees is required.
5. The ladders shall have overhead gaps and the height of these gaps shall not be less than 220 centimeters.
6. The width of the steps shall not be less than 22 centimeters, except for the maintenance ladders and shall have a height of minimum 13 centimeters and maximum 26 centimeters.
7. Each ladder with more than four steps shall have a balustrade and a handrail.
8. There must be a separate handrail in the middle of the ladders exceeding 225 centimeters in width.
9. In two-hand ladders, it shall be connected by hooked iron bars or shackles on both sides so that the legs do not diverge from each other.

22. LIFTING MOVING WORKS

Lifting and moving works shall be classified as risky activities. The inspections of the lifting and moving equipment shall be carried out and reported by a qualified Mechanical Engineer/Technician or by an accredited organization within the periods and under the conditions in accordance with the provisions of the legal legislation. The reports and periodical inspections shall be followed-up by the OHS and Environment Unit.

The wind speed limit in this project is 45 km/h. It is strictly forbidden to lift loads and people above this limit. However, if the maximum working wind speed limit determined by the manufacturer is below 45 km / h for the equipment (Tower Crane, Mobile Crane etc.), work will not be carried out above the limit determined by the manufacturer. If the maximum working wind speed limit determined by the manufacturer of the equipment is above 45 km/h, these load lifting equipment can work up to the specified limit with the approval of the project management. In any case, personnel will not be allowed to work in the Load Basket of the Cranes above 45 km/h.

1. Lifting and conveying equipment must be checked by appropriately certified operators before each start of work, steel ropes, chains, hooks, slings, brakes and automatic stoppers must be periodically reviewed and those found unsuitable for use must be removed from use immediately.
2. Since some work accidents that occur in lifting and transmission operations are the result of rope, chain and sling breaks, loads falling off the hooks, and brakes and automatic stoppers malfunctioning, these periodic checks should never be neglected and the machine should not be put back into operation before the malfunctions detected during the check are eliminated.
3. Lifting, lowering or carrying of loads on lifting machines must be done according to hand and arm signals given by trained maneuverers (signallers) or by radio assistance. In cases where more than one employee is on duty during a lifting operation or when the operator cannot see the load, a signaller must be used and the signaller must be positioned where he can be easily seen by the operator. The operator must obey every stop signal, regardless of who gives it.
4. Loads must be lifted vertically. In cases where it is necessary to lift them inclined, manoeuvres must be carried out under the supervision of a responsible person and necessary precautions must be taken against load swings and dangerous situations of the load.

5. Before giving the signal to pull the ropes that are slinging from under a lowered load, the signalman must ensure the safety of the workers. Operators must not leave their machines unattended while there is a load hanging from them.
6. When the electric magnet crane is at rest, the magnets should not be left hanging high on the crane. They should either be dropped directly onto the ground or lowered onto platforms designed for this purpose. The magnets should be removed from the crane when not in use.
7. Only authorized persons should be present in moving crane cabins or on crane cars, and crane operators should not allow anyone to ride on the load or hang on empty ropes or hooks. In cranes operating on rails in the open air, the effect of wind should be taken into account, and they should be wedged, tied and equipped with a sliding safety system.
8. In cranes operating on rails, there must be chocks at both ends of the rails on which the crane and the crane trolley travel and at least as high as the radius of the wheels. In overhead and suspended cranes, there must be appropriate hand, arm and foot protectors on the wheels of the bridge and crane trolley.
9. In case of operation of two cranes to lift the same load, each crane operator should be given command by only one signalman and special measures should be taken to ensure harmony in the movements of the cranes.
10. Signalmen and workers assigned to carry loads suspended from cranes must go in front of the loads, check the rail switches and ensure that the loads are carried at a height where they will not hit anyone or any obstacles.
11. In motorized cranes, audible and visual warnings should be given when the load is lifted or the crane is moved, their headlights and stop lights should be turned on during night work, and the cabins should be illuminated appropriately.
12. The mobile crane must be installed on solid ground and kept in a horizontal position, and load-distributing bases (wooden blocks) must be used under the crane legs. During the installation phase, appropriate safety distances must be maintained from the construction site excavation slopes and excavation edges.
13. A safety distance of half a meter must be left between the mobile crane's moving parts and the surrounding stationary objects (scaffolding, material lifts, etc.). If the safety distance cannot be maintained, the dangerous area must be closed off or the current work (scaffolding and other work) must be temporarily stopped.
14. The operator must be careful about open power lines and work with a safe distance.
15. When the load is being lifted or lowered, no one will be under the load and there will be a safety latch on the hook. Carrying people with a crane is prohibited.

23. ELECTRICAL WORKS

The periodical inspections of the electrical installations, lightning rods and groundings on the site shall be carried out and reported by a qualified Electrical or Electrical-Electronics Engineer/Electrician within the periods and under the conditions in accordance with the provisions of the legal legislation.

The potential electrical work on the site shall be carried out only by the personnel with a professional competence certificate. All electrical equipment to be used on the site must bear the CE marking. The use of electrical equipment and devices that do not comply with CE norms is prohibited.

The points that are taken into consideration in the inspections of electrical devices/equipment are as follows.

1. Particularly the parts of the electrical device/equipment that protects the electrical components shall be checked for physical deterioration. Necessary repair/maintenance works shall be initiated in case of reparable defects. Damaged devices that do not seem reparable shall be removed from the work area.
2. The Electrical cables shall be checked for signs of wear and darkening/hardening after overheating. The physically damaged cables shall not be allowed to be repaired with electrician tape, etc, and the damaged part of the cable shall be repaired by cutting and in case the cable

distance does not allow, the cable shall be replaced with a cable of equivalent characteristics and cross-section.

3. Grounding connections of metal body and components shall be checked. Loose, worn connections shall be tightened or replaced.
4. Plug, socket components shall be checked for signs of wear and darkening/hardening after overheating. Worn, corroded plug/socket components shall be replaced with new plug/socket with equivalent amperage characteristics.
5. The device to be controlled shall be operated and whether it fully fulfils its functions and the presence of problems such as excessive vibration, noise and heating shall be investigated. The devices/equipment identified with such problems during normal operation shall not be allowed to be used until the malfunction is corrected. Damaged devices that do not seem reparable shall be removed from the work area.
6. Repair/maintenance works may not be carried out by anyone other than the personnel with a professional competence certificate.

Devices with a fixed energy connection (directly supplied from the panel/panel board, not using plugs/sockets) and the power panels/panel boards must be de-energized for maintenance and control. In that case, according to the lock out tag out system, the device must be directly disconnected from the switchgear (fuse, etc.) to which it is connected and the panel/panel board to which it is connected must be locked and tagged in order to prevent unauthorized operation during maintenance and control operation. Tags must be secured so that they cannot be displaced due to the environmental impacts.

The out of use tag must be affixed on the device/equipment that is not approved for use as a result of the inspections so that it can be easily seen by the authorized personnel performing the inspection. Equipment that do not seem reparable must be removed from the work area as soon as possible.

Electrical motors, transformers and fixed facilities and fixed electrical heavy equipment shall be provided with protective grounding and the efficiency of the system shall be checked by periodic measurements.

Likewise, the lightning rod grounding level must also be measured and reported periodically. The resistance value limit for the lightning rod grounding line is assumed to be 10 ohms.

During the control and maintenance of electrical equipment, the personnel with professional competence certificate shall use the following protective elements.

1. Isolated gloves (Fully insulated protective gloves that shall not limit finger and hand movements)
2. Isolated mop (The personnel in charge shall carry out all work on the isolated mop.)

Control and maintenance work shall not be carried out in rainy weather and wet areas.

24. HAND TOOLS AND ELECTRICAL HAND TOOLS

24.1. Use of Hand Tools

1. The hand tools that shall be used at the workplace shall be made of materials compatible with the work to be performed and shall only be used in works specific to their build. Their wooden handles shall be made of knot-free, good-type and fibre wood, in compatible form and dimensions, the edges shall be rounded and smooth, free from splinters.
2. Hand tools that shall be used in areas where sparks would be hazardous shall be made of materials that do not cause sparks and any tools that are not of this nature shall not be used in these areas.
3. Hammer, sledge hammer, chisel, cutter, punch and similar tools shall be made in compliance with their standards, from good quality steel and the damaged or burred heads of these shall be smoothed by honing or filing.

4. The hardening or whetting and pressing and repair works of hand tools shall be made by qualified personnel and their sharp edges of tips shall be suitably protected while they are not being used.
5. Hand tools shall not be left outside on ladders, passages or any other areas that the employees may use as passages; and suitable cabinets, hanging panels or shelves with at least 2 centimetres skirting shall be made for these.
6. These shall not be released from the hand without taking necessary precautions against falling from above the head heights.
7. Hand tools such as axes, adzes, choppers shall always be kept sharp, their handles shall be inserted into the tools tightly and sturdily and shall be kept in cases, slings, enclosures against abrasion.
8. In chisels, cutters (cutters with handles), punches and similar hand tools, the chisel tips, cutter blades and punch tips shall be in shape compatible with the work to be performed and always be sharp, and suitable shields or screens and similar protectors shall be available when these are being used.
9. Levers and similar tools shall not be left as propped on the ground or the bench or perpendicularly when they are not being used, they shall be left in the horizontal position.
10. Rasps and files shall have sturdy handles with metal rings or other types of handles, and these shall not be used without a handle.
11. Rasps and files shall not be used in operations such as opening a case, removing a nail and hitting a hard object, these shall not be hit by a hammer or a similar tool, and tools such as chisels, cutters and punches shall not be made from old rasps.
12. Handle cases made of fibre, leather or stainless steel shall be made on the handles of knives when necessary, or finger grasps or shield shall be placed.
13. The tips of knives used to cut rubber shall be compatibly rounded.
14. Lifting jacks shall be placed sturdily and perpendicularly on the ground when lifting a load and after the loads have been lifted to the desired height, any work shall not be performed under or above these loads unless the lifting jacks are supported by sturdy ad compatible wedges, and necessary precautions shall be taken while lowering loads with a lifting jack.
15. When cutting taut wires, springs or similar wires by pliers, wire cutters and nippers, one of the ends of the wire that shall be cut shall be appropriately fixed.
16. Suitable wrenches shall be used to tighten or loose nuts; pliers and similar tools shall not be used for these purposes.

b. Use of Electrical Hand Tools

1. The handles of portable electrical hand tools shall be coated by a non-conductive material of adequate type and thickness or shall be made from such materials, and there shall be circuit breakers with springs that need to be kept pressed in order to keep the circuit closed.
2. Electrical hand tools used at construction sites and other outdoor workplaces shall be operated by low voltage or voltage supplied by safety transformers (dis-connector transformer) with 1/1 ratio and separated windings, or shall be manufactured specially, with double insulation. In case a safety transformer is used, only one electrical hand tool shall be connected to the output circuit.
3. Safety automats that break the electrical circuit supplied to the hand tool before the leakage that may occur on electrical hand tools reach a hazardous level shall also be accepted as compatible occupational safety measures. On grounded hand tools, the presence of a contactor that breaks the electrical circuit in case of a break in the grounding circuit shall also be accept as applicable.
4. Grounding of portable electrical hand tools shall be made by special plugs and sockets with grounding elements, there shall also be a switch on high amperage sockets, the cables that

supply current to these tools shall not be scattered and shall be routed from above in passages. Tools shall be grounded by a special grounding conductor in the supply cable

5. Electrical hand tools shall not be used in areas where flammable, explosive substances are handled and stored.
6. Portable electrical tools that are required to be used as suspended shall be suspended from the end of a spring or cable or chain and kept in balance with suitable weights.
7. Portable, heavy hand tools shall be moved from one place to another using special slings or straps and these slings, straps shall not be used during operation.
8. Workers, who work with portable hand tools, shall not wear loose apparel with wide skirts, and shall not wear any gloves other than rubber.
9. The electrical hand tools shall be checked by authorized individuals prior to use, and those with faulty grounding, with high sparking motors, with damaged sockets, plugs, switches and connection cables shall not be allowed to be used.
10. Portable electrical lamps shall only be used in areas where continuous lighting cannot be made adequately, the lamp sockets and live parts shall be inside non-conductive, protective meshes and lamps shall be inside glass protection in areas where organic dusts of explosive substances are available and in humid areas.
11. Compatible personal protective equipment must be used during operation. (Goggles and face protection against spattering substances, ear protectors against noise, dust mask against hazardous dusts, and a glove and hardhat according to the work performed).

25. EARTHWORKS AND EXCAVATION WORKS

1. On excavation areas, the presence of electrical cables, gas pipes, waterways, sewerage and similar installations shall be investigated in advance and necessary measures shall be taken accordingly.
2. If it is discovered that there is poisonous and suffocating gas during the excavation, the employees shall be removed immediately; gas shall be prevented and excavation works shall not be started unless the accumulated gas is discharged.
3. Measures shall be taken by supporting the excavation surfaces with horizontal shoring bars for collapse and demolition.
4. Bevelled excavation is necessary to prevent the collapse and demolition of soft surfaces during excavation.
5. Proper entry-exit facilities shall be provided for the employees to climb up and down in excavations exceeding 1.5 meters in depth. It is forbidden to use the shoring device and its supports for climbing up and down.
6. Personnel shall not work in case of rain during excavation works. The work can be restarted after rain stops and safety measures are taken.
7. Appropriate wellington boots shall be provided to the employees in the cases where it is necessary to work on the water. Water exceeding the length of the knee must first be drained by motors.
8. During the excavations done by excavators, bulldozers and similar machines, no personnel can be assigned within the range of motion of these machines. No one other than a licensed driver may operate on these machines.
9. Ramp slopes shall be created to enable the vehicles to carry the excavated soil out enter an exit the excavation site easily.

26. UNDERGROUND AND TUNNEL WORKS

26.1. General Tunnel Safety

Tunnelling works involve complex and high-risk operations due to confined working environments, geotechnical instability, use of heavy machinery, and potential for hazardous gas accumulation. All tunnel activities must be carried out in accordance with the national mining safety regulations and in alignment with the IFC EHS Guidelines for Construction and Hazardous Materials Management.

Method Statements shall be prepared which are include OHS measures before construction begins. This plan must identify location-specific hazards, outline mitigation measures, assign responsible personnel, and define communication and evacuation protocols. Entry to tunnel works shall be restricted to authorized personnel only, and all workers must receive tunnel safety induction and confined space training prior to mobilization.

26.2. Blasting in Tunnels

Blasting activities within tunnels must be planned and executed under strict supervision and in line with applicable laws and engineering standards. A licensed blasting engineer shall prepare a daily blasting plan specifying the charge layout, hole depth, delay timing, type and quantity of explosives, safety distances, and firing procedures.

Explosives and detonators must be transported to the site using certified vehicles and in compliance with the regulation on the transport of dangerous goods.

Before blasting, exclusion zones must be clearly marked and evacuated. Warning signals shall be given before and after firing. Misfires must be treated as emergencies, with access restricted until the area is declared safe by a blasting expert. All blasting records, including quantities used and anomalies, must be logged daily and reviewed by the HSE team.

26.3. Gas and Air Quality Monitoring

Tunnelling operations must include continuous atmospheric monitoring to ensure safe working conditions and prevent incidents related to poor air quality or gas build-up. Gas detectors (portable or fixed) shall be used to monitor for methane (CH_4), carbon monoxide (CO), hydrogen sulfide (H_2S), and oxygen levels.

Gas measurements must be taken:

- Prior to the start of each shift,
- During all confined or enclosed work,
- After blasting or ventilation stoppages.

If any measurement exceeds safe limits, work must stop immediately. The tunnel must be evacuated and ventilated before re-entry. All gas detection equipment must be calibrated regularly and operated by trained personnel. Records of all readings must be documented.

26.4. Structural Stability and Support

To prevent collapses or rock falls during tunnelling, geotechnical conditions must be assessed regularly by competent engineers. Excavation sequences shall be designed to minimize unsupported areas. Support systems—such as steel arches, rock bolts, lattice girders, and shotcrete—must be installed in accordance with geotechnical risk assessments.

Scaling of loose materials must be performed after each blast and at the beginning of every shift using long-handled tools from a safe distance. The tunnel face and roof shall be inspected continuously. Unstable areas must be closed and reinforced immediately. All support installations must be documented and reviewed periodically.

26.5. Emergency Preparedness in Tunnels

Tunnels must be equipped with clearly marked and illuminated emergency escape routes leading to safe areas or exits. At regular intervals, refuge chambers or safe havens must be installed, stocked with water, communication devices, breathing apparatus, and first aid kits.

An emergency response plan specific to tunnel works shall be developed and made available on-site. It must include evacuation procedures, roles and responsibilities, assembly points, rescue protocols for trapped or unconscious personnel, and communication flow. Workers shall be trained in tunnel-specific emergency scenarios, including blasting accidents, gas exposure, and collapse response.

Communication systems (e.g., landlines, two-way radios) must be functional throughout the tunnel at all times. Emergency drills, including evacuation and rescue simulations, must be conducted at least every six months and evaluated for improvement.

The safety measures to be taken during the tunnel works are detailed in the **Tunnel Works Safety Instructions**.

1. As for the underground works, necessary measures shall be taken against collapse and item falls and floods.
2. Adequate and appropriate ventilation installations shall be provided in underground works to protect the health and safety of workers during exerciseing and digging.
3. No open-flame lamps or devices shall be used in underground works where various gases may form an explosive mixture with air.
4. Necessary measures shall be taken in the brick walls or concrete reinforcement of wells, tunnels, galleries and similar sections.
5. In underground works requiring rock excavation, hydraulic exercise machines shall be used or other necessary measures shall be taken in order to prevent dust damage to workers' health.
6. In the roadway works carried out in the area where flooding is possible, the exit points shall be provided to ensure the quick evacuation of the workers, or appropriate measures shall be taken, such as the construction of a sufficient number of elevated cells.
7. The barriers that pose a hazard or congestion to the employees such as gaps, level differences, narrowing passages, low arches, vehicle roads used and crossings used in the roadways' bases shall be adequately and properly illuminated.
8. Indoor underground and tunnel works are subject to work permit system. Therefore, the works to be carried out in these areas may only be carried out after the necessary measurements and inspections by OHS and the Environment Unit.

27. DRILLING WORKS

1. Before starting work in the work area, natural gas, electricity, wiring, sewerage and transmission lines shall be identified and be displaced and marked by the authorities.
2. Drilling and boring machines shall be used in accordance with the rules of use specified by the manufacturer.
3. Unauthorized persons shall not be allowed in the work area. If stopping in a hazardous area is unavoidable in some cases, additional safety measures are necessary. If the machine operator does not have sufficient visibility, a banksman must be assigned.
4. When drilling on unsound surfaces, measures must be taken to prevent the materials from collapsing down.
5. It is necessary to create safe work areas and to use additional devices in order to connect the exercise pipes to each other during drilling.
6. The pile holes must be covered or surrounded by barriers after drilling against falling and there must warning sings there.
7. When using drilling machines, it is necessary to use the appropriate ear protectors, taking into account the high noise.
8. The personnel working alongside the anchorage machines shall be provided with the appropriate personal protection against dust and noise.

28. FORMWORK, CONCRETE AND IRON WORKS

a. Installation and Disassembly of Formworks

1. It shall be ensured that the metal or concrete carcasses and their parts, temporary supports and buttresses and prefabricated construction elements are planned, designed, installed and protected to withstand the loads and stresses falling on them.
2. Lifting, loading, transportation, installation and disassembly operations of metal or concrete carcasses and their parts, temporary supports and buttresses and prefabricated construction elements and steel construction elements shall be carried out by the employees who have professional competence certificate and under the supervision of competent person in accordance with the project. The cranes to be used in lifting operations must have high lifting capacities.
3. It is essential that the strength and other properties of all main carriers, subcarriers and fastening materials to be used in steel constructions comply with the standards according to the loads to be carried and that the corroded and deformed materials are not be used in such constructions unless necessary measures are taken.
4. The surrounding area of the installation site shall be marked with a safety tape. The signs indicating that installation is being made around this area shall be hung and the entrance and exit to the installation site shall be prohibited except for the employees in charge.
5. Necessary measures shall be taken to protect the employees from the risks arising from the temporary instability and fragility of the construction.
6. Work platforms must be placed in such a way that they are suitable for the nature of the work to be carried out and the load to be transported and safe works and passes shall be possible. Work platforms must not be overloaded.
7. Guardrail systems shall be installed around work platforms to prevent falling from height.
8. Access to the work platforms shall be provided with the most suitable roads and equipment (scaling ladders, etc.), taking into consideration the frequency of passes, the height of the said place and the periods of use.
9. Workers must be provided with appropriate work equipment during the disassembly of the formwork, the lowering of the formwork material or the lifting of the formwork material.
10. The person other that the employees in charge must be prevented from entering the area during disassembly.
11. The disassembled formwork materials must be stacked appropriately.
12. During the manufacturing of viaduct legs, wind speed limits will be observed. In the use of scaffolding ladders, the wind speed limits recommended by the manufacturer will be followed. If we can use scaffolding, we can also work at height.
13. During formwork installation and removal operations with cranes, work will not be carried out without providing an environment where the formwork does not oscillate.

b. Concrete Casting

1. All personnel working during concrete casting must wear appropriate personal protective equipment. In concrete castings (columns and partitions) performed higher than 3 meters and covering edges, side railings must be built against falling from height and safety harnesses must be used.
2. The vibrator used during concrete casting must be electrically grounded and the extension cables used must not be in a damaged or exposed condition.
3. The personnel must not stand under the pump during concrete casting.
4. The worker holding the hose during the concrete casting is required to use the hose after the concrete comes up. It is known that in the work done higher than the pressure to occur when the concrete comes to the end of the hose, falls occur due to loss of balance.
5. The personnel holding the hose during concrete casting shall wear protective goggles against cement splashes.
6. Adequate artificial lighting is required for night castings.

7. In balanced cantilever reinforced concrete productions, suitable lifelines will be created so that all workers are connected to horizontal lifelines independent of the formwork.

c. Iron Works

1. All personnel involved in iron works must wear appropriate personal protective equipment.
2. The irons shall be prepared and installed in accordance with their projects.
3. There shall be no more than enough iron on the formwork and the irons shall not be placed unbalanced on the formwork.
4. During the joint work with the concrete team, there shall be a cooperation in a way that shall not hinder the rise of the formwork.
5. The disarrangement of the binding wire and irons in the formwork shall be prevented.
6. It shall be checked if the iron to be used on the stand has been prepared beforehand and the formwork shall not be disrupted.
7. The workers who perform iron mounting at high places shall definitely use safety belts.

2. WELDING WORKS

1. Welding and cutting works shall not be performed near flammable, combustible and explosive materials. It shall be investigated whether there is a fire risk in the immediate environment before such works are carried out. If there is such a risk, such works shall be performed by taking special fire precautions.
2. Drums and metal cans, which have previously been put in place with flammable or combustible materials, shall never be welded or cut even if they are empty. These operations may be carried out after cleaning their interiors with hot water vapor and filling them with water or pressing gases such as carbon dioxide or nitrogen into them, and with the ventilation hatchs open.
3. Clean air shall be pressed in welding works to be done in closed places such as boilers and tanks and furthermore, welding gases and vapors heavier than air shall be sucked out near the base and discharged. In addition, the employees shall wear respirators with suitable filter elements.
4. The connections and sockets of electric welding machines shall be made or replaced only by the authorized electricians.
5. The competent welders with professional competence certificate be employed for all kinds of welding works.
6. The locations where the electric welding is performed shall be at least 2 meters above the working area of the other workers and shall be separated by fireproof and lightproof immovable or portable screens.
7. The electrical rectifiers of the electric welding and cutting machines or the metal parts of the transformers shall be properly grounded against leakage currents.
8. One pole of the output ends of the electric welding and cutting machines or the welding circuits shall be grounded in the workpiece against leakage currents.
9. In narrow and confined volumes such as boilers, as well as in the welding works in damp and wet areas, only direct current shall be used to reduce the risk of electric shock.

Measures to Be Taken in the Works Carried Out with Oxy-acetylene Welding apparatus:

1. There shall be no gas cylinders other than the gas cylinders in use present in the welding areas.
2. The gas cylinders shall be upright at the time of operation and necessary measures shall be taken by the link chain in order to prevent them from falling over and shall be tied in such a way that they can be easily dismantled in case of danger as specified in the legal legislation.
3. Special wheeled vehicles shall be used for the transport of gas cylinders and when these cylinders are not in use, their valves shall be closed and the caps protecting these valves shall be fitted. Gas cylinders shall be made under a shelter or sunshade built to avoid the sunlight
4. Oxygen cylinders shall not be held with greasy hands, and the valves, manometers and other equipment of the cylinders shall not be lubricated.
5. The gas and oxygen pipes in the workshop and the hoses that feed the welding torch shall be in separate and distinguishable from other facilities.

6. The welding torches shall not be hung on an operating gas cylinder or other equipment and shall not be left unless the gases are completely shut-off.
7. The welding torches must have check valves on them. Any gas backflow shall be prevented by a check valve placed at the gas inlet. One end shall be attached to the hose and the other end to the welding torch inlet.

Measures To Be Taken In the Works Carried Out With Welding Machine:

1. The electrical wiring shall be checked by the authorized electrician and examination shall be performed for leaks. It shall be started after making sure there are no leaks.
2. Grounding of the machine shall be checked and if grounding is connected, power shall be supplied.
3. The personnel in charge shall wear rubber shoes, rubber gloves, goggles and fireproof suit or protective clothing. The personnel using the machine shall put an insulating stand under their feet.
4. Attention shall be paid for the material ends to be welded to be clean and rust-free. The copper shoes of the welding machine shall be cleaned periodically.
5. The machine shall not subject to unnecessary over-arching.
6. The energy given to the machine shall be cut by the electrician at the end of the work; the machine shall be protected against rain and water.
7. In case a failure is detected, the related persons shall be notified.

a. Storage of Gas Cylinders

1. The oxygen cylinders in the storehouse must be kept separate from other gas cylinders.
2. Cylinders must be stocked upright and attached to the wall, lined up on the shelf or the racks.
3. One must not enter the storehouse with naked flame where the gas cylinders are kept and must not smoke, and the cylinder storehouses must be ventilated constantly.
4. In infirmaries, dining halls, social facilities and other places where LPG is used, the LPG cylinders must be kept upright outside the building and under a sunlight protection compartment, and the valves must be closed when the use of the cylinders ends.

b. Transportation of Gas Cylinders

1. Special hooks must be used for short-distance displacement of the cylinders or the cylinders must be circled on the base.
2. If the cylinders are transported over long distances, the cylinders must be tied and placed securely in the vehicle.
3. Cylinder cap must be fitted before the displacement to prevent damage to the valves.
4. Cylinders must be protected from abrasive and corrosive substances.
5. Cylinders must not be left under the impact of the sun or other heat sources.
6. Cylinders must not be used as supports, rolls or wedges and must not be dragged or rolled on the ground during transport.
7. Cylinders must be tied upright and tightly or kept inclined on a vehicle or support.
8. After a long period of operation, the valves of the cylinders must be closed. (Blow pipe may be left open).
9. Before the hood is mounted on the cylinder, it must be checked whether its screw has been loosened or not. The snow and ice of the hood must not be melted with flame.
10. Special connections must be used, these connections must be fixed with sleeves and fastened with bond or reinforcement ring.
11. No modifications on the cylinders or accessories and no maintenance and painting works on the cylinders must be performed.
12. Oxygen cylinder valves and welding torch taps must not be lubricated and must not be opened and closed with oily rags.
13. The leaks in the cylinders must not be inspected by flame.
14. The leaks in the cylinders must not be left under the influence of corrosive substances and shocks as well as sun and heat.

15. Oxygen gas must not be used to clean and blow the material and to start diesel engines.
16. In case of fire and after extinguishing the fire, the heated acetylene cylinder must be cooled by soaking for a long time with plenty of water.
17. Acetylene cylinders must not be heated to accelerate gas output at low pressure.
18. No smoking in and around the workplace.

29. MATERIAL STORAGE

The safe storage of materials and equipment in warehouses is described in the **Warehouse Safety Instructions**.

1. When stacking, piling up the materials or placing the devices, they shall be placed in such a way that they shall not fall apart.
2. The height, width and length of the stacks must be proportional.
3. Obstacles must not be created by placing material on walkways or entry-exit doors.
4. Stack spacing must be sufficient for the required works.
5. The materials shall be taken from the top row and thus they shall be prevented from falling apart. Obstacles must not be created by standing in front of the pipes and similar materials when they are being transported.
6. After a height of 120 cm, for each 30 cm height to be stacked, the stack must be 25 cm from the edge.
7. In particular, there shall be definitely no stacking in front of emergency exit doors and fire cylinders and hoses.
8. Stacking of the materials must not exceed 3 meters.
9. Heavy sacks and bags shall be stacked with four corners diagonally and minus 1 bag once every 5 rows at most.
10. Rods and pipes shall be stacked on suitable shelves or stands, or where they cannot be provided, on a base made of planks and both sides of the stack shall be supported by durable piles.
11. Large and long parts must be at the bottom when stacking.
12. Stacking and storage must be in a manner that does not constitute an impediment for production. The carrying capacity of the base on which the stacking is performed must be known.
13. The weight of the stacking load must be known. The items with the same properties must be stacked together. Stacking must not be done near electrical installations.

30. CHEMICAL SUBSTANCES AND THEIR STORAGE

The use and storage principles of the chemical substances to be used in the work areas without damaging the environment and human health and safety are specified in the **Chemical Substance Use and Storage Instructions**.

1. All chemicals shall be stored in the designated storage areas, separately, on firm grounds, and in sealed pans and tagged.
2. It shall be ensured that the safety and security measures specified in the Material Safety Data Sheets are taken for the chemical substances to be used and stored on the site.
3. It is necessary to act in accordance with the Material Safety Data Sheets and Emergency Plan concerning the storage activities and emergencies that may occur during use.
4. Special precautions against fire, spills/leaks are defined for potentially hazardous substances such as explosives, oils, petroleum products, solvents, reducing agents.
5. Flammable substances are tagged and stored in compliance with the legislation requirements in fire-proof rooms.
6. In areas where work is being conducted, the leak-eliminating equipment and the absorbent required for intervention when a spill occurs shall be kept ready in a temporary tank. The area contaminated with the chemical substance is covered with sand, sawdust or other absorbents in case of a spill.

7. Radioactive sources, if used, are tagged and stored in compliance with the legislation. The appropriate permits are obtained for the use, storage and tagging of such materials.
8. It is ensured that substances with asbestos additives are not kept on site or used as construction materials.
9. Hazardous chemical substances are stored in compliance with the legal legislation in force.

Oil and Fuel Storage Tanks

1. All oil and fuel storage tanks are placed at a distance of at least 20 meters from stream beds, surface and underground water masses and wetlands, and at least 3.5 meters or further away from buildings, borders and any type of other explosive and flammable substances.
2. A secondary reservoir is provided for all oil and fuel tanks. Such secondary reservoirs are constructed of impermeable materials or coated so as to ensure impermeability, complete with base and walls and have a capacity to hold 110% of the tank contents.
3. The tank filling and discharge connections are located within the reservoir. Wherever possible, tanks and secondary reservoirs are covered to protect them from rainwater.
4. Drainage taps shall always be kept closed and be only opened to discharge clean, uncontaminated rain water and the water is pumped outside.
5. In any event, contaminated water shall be collected and disposed of in compliance with the regulations concerning waste oils.
6. Spills that occur during filling activities shall be promptly intervened in and the materials and equipment that shall be used during intervention are stored in areas close to the tanks.
7. Compatible absorbent materials (sand, sawdust, etc.) are kept available at the area in adequate quantities.
8. A compatible, leak-proof container is provided to store oiled equipment (filters, tray contents and oil replacements, etc.). The contents shall be delivered to licensed disposal facilities.
9. Fuels and oils shall be stored in tanks or drums with tightly closed lids and protected from the effects of outdoor air. The safety and fire protection precautions shall be closely complied with.

Mobile Tanks

1. It shall be ensured that mobile oil and fuel tanks are stored and kept under control, in order to prevent seepage and spills to the soil and water sources.
2. The tank is placed on firm ground and the ground must have the adequate strength to support the weight of the tank and the tank contents.
3. Adequate precautions are taken to prevent any seepage while filling any tanks. An adequate number of fire extinguishers shall be kept at a close distance to the tank.
4. Safety signs with “No Smoking”, “Bare lights prohibited“, “Hazard” etc. inscriptions shall be provided and the requirements of the related legislation shall be complied with. The product contained in the tank shall be clearly written on the tank.

31. USE AND STORAGE OF FLAMMABLE MATERIALS

1. The acquisition and use of the explosives by persons other than the authorized persons is prohibited.
2. Use of explosives in the workplace must only be performed by the qualified persons.
3. The licensed fireman shall see the work order at the beginning of the shift and take the necessary orders. He/she shall take the necessary amount of explosives s/he takes from the warehouse to the workplace (where the explosion takes place) by filling it in his/her locked chest. He/she shall fill the prepared holes here and fire. Shall keep a record of consumables related to the explosives used and have it signed by the authorities.
4. The fireman is responsible for the tools and materials he uses, and he/she must place the dynamite only in the spot indicated by the site manager or the engineer in charge.
5. Explosives and capsules must not be transported in the same chest, and the fireman must not put anything other than explosives in their chest.

6. No one must get on the transport vehicle of the fireman carrying explosives.
7. Necessary measures must be taken to prevent the capsules from falling down or other objects falling onto them.
8. If there is no electricity in the explosives warehouse, flashlights shall used. It is also forbidden to use the flaming lighting devices such as lighters, matches and lanterns.
9. Warehouses must be ventilated in hot weathers and protected from humidity in cold weathers.
10. In warehouses, dynamite chests must not be stacked more than 2 rows, and nitrate bags more than 3 rows.
11. The first explosive material to be stored in the warehouse must be used first.
12. The warehouse record book and the stock status that must be kept in each explosive warehouse must always be kept under control.
13. Necessary safety measures must be taken when the explosives are brought to the explosion area. They must protected against sun and rain as much as possible.
14. When ignition, the area must be equipped with the guards with whistles and flags as required (Being outside the ignition range).
15. The heavy equipment shall be taken out of the impact area before ignition and their back sides shall be turned towards the ignition area.
16. Necessary safety measures shall be taken for the ignition and then, the ignition shall be done followed by an intermittent three-time siren or any other warning.
17. Ignition must be carried out during meal breaks, shift changes and in broad daylight.
18. After ignition, the site shall be examined by the fireman and with the permission to be given after the conclusion that all the holes have exploded, the operation shall be started at the explosion area. Otherwise, it is strictly forbidden to enter the site.
19. If an unexploded hole is detected in the examination after the ignition, the site chief or the engineer in charge shall be notified of the situation. First, the ignition cable shall be checked and reconnected to the unexploded holes and ignition shall be made by means of a magneto at least three times. If it does not explode this time either, if the cable is found to be broken in the hole;
    a) A new hole shall be drilled 1 m away from the unexploded hole and the explosive material shall be filled and ignited.
    b) Water amounting 2–3 tankers shall be introduced from the cracks around the hole and after the firemen have ensured that the discharged water thoroughly degrades ammonium nitrate, eliminating the possibility of detonation, the removal of the loosened portion shall begin and in the meantime, a watchman shall be assigned here, no one shall approach the loading area. First, both sides of the exploded hole shall be emptied. The work, starting from the bottom of the hole, must be carried out in such a way as to ensure that the dynamite falls into the bucket of the digger without causing the bucket tabs to touch the dynamite. This event shall be carefully observed, and if the dynamite is found, a fireman shall take out the capsule by shielding with a wooden plate without shaking the dynamite and breaking the hole into which the capsule has been placed. The capsule and dynamite shall then be disposed of in a safe pit by taking the necessary measures. These operations shall be carried out during the daylight and shall not be continued after getting dark.
    c) The material consumable report shall definitely be kept after each explosion.
    d) Explosive ignition operations shall be performed by the licensed firemen.

c. Measures To Be Taken for the Storage of Explosives

1. Residual explosives that remain after the explosive ignition shall be returned to the warehouse immediately.
2. The personnel working in the warehouse shall strictly comply with the provisions of the legislation concerning explosives.
3. Explosives may not be stored in the warehouse in the quantities more than written on the permit.
4. Lighting with open flame is not permitted in warehouses. In this respect, warning signs must be hung indicating that no one shall approach with open flame.

5. Employees are not allowed to enter the warehouse except for warehouse personnel. However, the personnel and carriers who are not the warehouse personnel may only bring explosive packs to the warehouse's door. They shall also take the ones to be removed from the warehouse from the warehouse door again.
6. Ignition of the explosives shall be performed by the licensed firemen with a fireman's certificate of competency. Ignition is prohibited for those without certificate of competency.
7. It is forbidden to store the flammable substances, such as fodder, paper, gasoline, gas, spirit and diesel, which can easily ignite on their own or by any effect.
8. It is forbidden to enter the warehouse with the materials such as lighters, matches, etc., which may create a fire at the entrance to the explosive warehouse.
9. Care shall be taken to keep the inside of the warehouses clean. It is forbidden to keep empty packages such as chests, barrels, boxes, tools and other foreign materials in the warehouse.
10. You cannot enter the store with spiked shoes. In addition, warehouse employees may not use the clothing such as nylon and perlon, which can generate static electricity.
11. Explosive material packages in warehouses shall not be disposed of, dragged, drawn, crashed, and care shall be taken not to drop them.

d. Precautions for Use of Inflammable Materials

1. Combustible, flammable and explosive materials in the places where they are necessary to be kept shall be kept away from heat and in safe containers.
2. Not flaming tools shall be used (matches, lighters, candles, etc.) during the filling or emptying of fuel tanks and in the control of gasoline and oil of motor vehicles.
3. Tanks, reservoirs and pipe connections where flammable and explosive liquids and substances are placed shall be properly grounded against static electricity.
4. Dispensing ports of the containers with hazardous liquid shall be upside and kept at cool places.
5. High voltage lines shall not be passed over the places where flammable, combustible and explosive materials are stored.
6. Special safety rules and warning signs shall be posted in the places visible to the employees in the areas where flammable, combustible and explosive materials are stored.
7. In the event of any danger in the workplace that operates with flammable, combustible, explosive, dangerous and harmful materials, measures shall be taken to ensure that the employees can be evacuated immediately, in a planned and regular manner.
8. In the buildings where flammable, combustible, explosive, dangerous and harmful materials are produced, processed and stored, operation must be stopped in whole or in part before starting construction, maintenance and repair work, such materials must be taken out of the danger zone, if any, after the proper cleaning of its residues, the construction, maintenance and repair must be provided under the constant supervision of a technical, authorized personnel in charge.
9. Whether various flammable, combustible, explosive, dangerous and harmful chemicals exceed the limit in the workplace air shall be determined by measuring at certain and required time intervals and the ventilation installation shall be checked by the authorized personnel.
10. The repair work shall be carried out under the supervision of a competent team and technical personnel in charge during elimination of the breakdowns in tools, devices and piping equipment operating with flammable, explosive and dangerous materials.
11. In the presence of flammable, combustible, explosive, dangerous and harmful materials, the appliances, devices and systems which rise to the temperature that may ignite these materials or their vapor and gases and produce sparks and high flames shall not be used.
12. Adequate amount of fire extinguishing equipment and materials shall be kept in the places where such substances are stored and necessary measures shall be taken against fire, natural disaster, theft and sabotage.

e. Precautions To Be Taken in Flammable Liquid Tanks

1. Tanks and pipe connections where flammable liquids are stored shall be properly grounded against static electricity.
2. When filling and emptying the tanks with flammable liquids, grounding line connection between the vehicle and the tank shall be made and measures shall be taken against static electricity.

Tankers moving on rubber wheels shall not be entered into filling points unless they are completely free of static electricity loaded.

3. Aboveground tanks shall be placed on solid bases and surrounded by suitable safety walls.
4. The entrances and exits to the places where flammable materials are kept or stored shall be kept under control and their surroundings shall be cleaned up to 30 meters against fodders and other flammable materials
5. Persons other than the ones in charge of furnace rooms shall be prevented from entering and exiting, the operating instructions and warning signs shall be posted and adequate fire extinguishing devices shall be kept available.
6. Maximum attention shall be paid to cleanliness in furnace rooms, a minimum number of electrical appliances and devices shall be kept, and these shall be grounded.

32. HEAVY EQUIPMENT

An inspection and preventive maintenance program shall be established and implemented for all site equipment, machinery, tools, scaffolding, lifting devices, vehicles, and temporary structures. Inspection schedules shall be developed based on manufacturer recommendations, legal requirements under Turkish Regulation on Health and Safety Conditions in the Use of Work Equipment, and site-specific risk assessments. Preventive maintenance shall be conducted at defined intervals to avoid equipment failure and ensure operational safety. All inspections and maintenance activities shall be recorded in a central register maintained by the EPC HSE Department and corrective actions arising from deficiencies shall be tracked to closure. Only certified personnel shall be permitted to carry out maintenance activities. Equipment or structures deemed unsafe shall be tagged and withdrawn from service until remedial actions are completed. Periodic internal audits shall verify compliance with the maintenance program and summary data shall be included in monthly HSE reports.

Maintenance and inspection of the Equipment (Heavy Equipment, Trucks, Vans etc.) shall be carried out by the workshop unit.

1. When riding on the machine, it must be checked for any obstructions.
2. Heavy Equipment shall not be used by the personnel without appropriate operator certificate.
3. Operation shall be performed outside the location designated on the construction site. In the event of a danger in the workplace, the supervisor must be notified of the dangerous working situation.
4. No person other than the operator must be allowed into the operator's cab during operation. No person must be allowed on the steps and the bucket while the machine is active.
5. The lubricant must not be allowed to maintain or check anything during operation. After the maintenance is complete, no movement or rotation must be made unless it is ensured that the lubricant or repairman is away from the machine.
6. Before making in a narrow space, the lubricant must check the back of the machine. Even if it is a short distance, the operator must not reverse without looking back.
7. No one must be allowed underneath when the bucket is full. When lifting or transporting, one must make sure that it is safe.
8. The works other than for construction and use purpose of the machine must not performed.
9. Traffic and road rules must be followed when on the road.
10. Machine maintenance and the control cards must be kept regularly and their periodical maintenance must be done according to these cards.

33. HOLE DRILLING AND BLASTING INSTRUCTIONS

Drilling and blasting operations are classified as high-risk activities due to the use of explosives and potential impacts on worker safety, structural stability, and nearby communities. All such activities shall be conducted in accordance with national legislation including the “Regulation on Health and Safety in Mining Workplaces,” the Explosives and Firearms Law, and in alignment with the IFC Environmental, Health and Safety Guidelines for Construction and Hazardous Materials Management.

A site-specific drilling and blasting plan must be developed and approved by a licensed blasting engineer. The plan shall include details of the blast area layout, type and quantity of explosives, initiation method, sequencing, safety distances, and communication procedures. The use, transportation, storage, and disposal of explosives must be carried out by authorized personnel only, with appropriate documentation and in secure facilities complying with legal storage requirements.

Prior to each blasting activity, exclusion zones must be established and cleared of all personnel. Adequate warning signals shall be used before and after detonation. Misfires or anomalies must be immediately reported, the area evacuated, and the issue investigated by competent personnel. Emergency response equipment and first aid provisions must be available near all blasting sites, and all staff involved in such operations must be trained in blasting safety and emergency procedures.

The following instructions shall be followed by all site personnel involved in drilling and blasting activities:

1. Procurement, transportation and use of explosives must be carried out under the supervision of the person responsible for blasting.
2. Matches, cigarettes, lighters that may create an open flame shall not be used near the explosive depot or during the transportation of explosives. The use of substances such as etc. should never be allowed.
3. Mobile phones and other radio-like devices should not be used and should be turned off during the transportation and use of explosive materials in the storage area.
4. Wooden tools should be used to open explosive crates.
5. Explosive crates or boxes should not be opened inside explosives storage or in closed areas.
6. Explosives and detonators should not be carried together.
7. Explosives and detonators should not be carried together with metallic tools.
8. Explosives and detonators must be kept separate from each other until the final ignition moment.
9. Filling of explosive materials into sewer holes will be done under the supervision of the blasting officer.
10. Explosives should not be forced into the hole.
11. Only wooden sticks should be used when filling and tightening sewer holes.
12. If a stick of dynamite gets stuck in the sewer, it should be removed using wooden materials.
13. There should be no knots or bends in the electric capsule wires. The wires should be kept away from the capsule while being straightened.
14. Before firing, a sufficient and clear warning signal must be given, a siren or whistle must be sounded to prevent anyone from entering the firing area.
15. Lookouts should be placed on all roads leading to the firing area. The fireman should fire after making sure that everyone, including himself, has entered safe places.
16. No one should enter the firing area immediately after the firings. Against unexploded manholes, this period should not be less than 5 minutes for electric firings and 30 minutes for others.
17. If safety wicks must be used, no more than 5 pieces should be used as per the legal warning.
18. The person responsible for blasting will check the sewers and give permission to work after it is seen that there is no unexploded sewer left.
19. Sewage filling and firing shall always be carried out in daylight and in weather without rain or lightning.

34. ENVIRONMENTAL PROTECTION

The main principle of environmental protection is prevention of pollution. Pollution prevention refers to the elimination, modification or reduction of operating activities that cause interference of waste to the soil, air or water.

a. Prevention of Water Pollution

All activities shall be carried out in such a way to prevent the interference of solids, contaminants, construction residues and other hazardous pollutants and wastes into surface waters or dry stream beds and groundwater resources. All necessary measures shall be taken to prevent contamination of surface waters and groundwater resources around the work site. To minimize potential negative impacts on surface waters and groundwater:

- No construction site must be located within a 10 m area (measured from the nearest shore) around a surface water and all construction works within the 30 m surrounding area of surface water must be minimized as far as possible.
- Storage areas must be located at least 50 m away from any surface water or drainage channel.
- The existing vegetation along the surface waters shall be protected as much as possible and shall function as a sediment filter.
- Refueling, washing or maintenance-repair work for any construction site or machine must not be carried out in, on and next to a drainage or surface water, or in areas where groundwater is high.
- Discharge of wet concrete or cement into or near any surface water must be prevented.

b. Prevention of Air Pollution

During the course of the work, appropriate and effective measures shall be taken as often as necessary to reduce the dust-related discomfort and prevent dust emitted from the activities carried out. Exhaust emissions above the limits must be avoided by keeping the machines in a maintained state at all times.

Dust emissions originating from the construction site activities or vehicle traffic shall be minimized by measures such as good traffic management, low speed, irrigation, dust source units and over-current activities.

Dust reduction measures shall be taken to prevent erosion and pollution originating from dust. Dust production and airborne dust level shall be monitored visually. In case of excessive dust formation in windy weather conditions or upon visual monitoring, dust preventive measures must be applied on exposed areas. Dust prevention measures shall include:

- Irrigation on bare surfaces and stone crusher operations.
- Covering the stock areas.
- The vehicles carrying dusty material (excavation soil, etc.) shall be covered in such a way as to prevent dust emission.
- The wastes originating from the activities shall not be burned on the site.
- Dusty works must be performed in the closed system according to technical facilities or such works must be isolated from the others.
- The dust amount in the workplace air must not exceed the amount specified in the legislation.
- In dust-producing works, the workplace base shall be kept wet according to the characteristics of the work and the technical possibilities; in drilling works, wet methods shall be applied to prevent the generation of dust.
- Personal protective equipment and masks shall be provided to the personnel working in dust-producing works according to the nature of the work and of the dust.

c. Prevention of Noise Pollution

The measures to be applied in the prevention of noise pollution originating from activities, not limited to the following, are:

- General construction works must be performed during agreed working hours decided as primary hours.

- The explosion activities to be carried out within the 1 km area around the villages and construction camps shall be carried out primarily during the daylight hours. The inhabitants in the area shall be informed at least 12 hours in advance that the explosion shall be carried out and information shall be provided on the estimated time and number of explosion operations.
- In case of working during the night hours, the working hours shall be determined in advance.
- All facilities and power equipment shall be maintained to minimize noise emissions and, if appropriate, silent facilities shall be selected for site use.
- Where the facilities have been designed to work with engine covers to reduce noise, the engine covers shall always be used and kept closed during the period of operation of the facility.
- All facility units that do not require continuous operation on the site shall be kept in the closed state unless they are used.
- Routine checks shall be carried out to detect equipment that causes noise emission above acceptable limits or are in an uncomfortable sound characteristic, and the noise emitted by these equipment may be reduced with appropriate maintenance and repair.
- If excessive noise emissions are detected in any facility or equipment due to a defective muffler, broken or loose engine cover, etc., the facility or equipment shall be immediately take out of service and subjected to adequate maintenance, repair or rehabilitation.
- The facilities shall be located away from residential areas as far as possible and, where necessary, sound shielding elements suitable for reducing noise levels in sensitive receiving environments shall be used. Noise barriers shall be used where severe noise effects are seen.
- Facilities that are known to generate a strong noise emission towards a particular direction shall be directed, where possible, away from noise sensitive areas.
- Trainings for proper use and maintenance of machinery and equipment and positioning of the machinery on the site in such a way as to reduce the impact of noise emissions on neighboring settlements shall be provided to the site personnel.
- Effective communication shall be established with the affected communities.

Additional noise measurements may be carried out, if necessary, in noisy activities, sensitive points and in the cases where complaints of local people are received. Additional measures shall be taken if the legal noise level limits are exceeded. If it is determined that any workplace exceeds the noise limit, ear protection devices shall be provided to the personnel working in the affected area as a short-term measure, or the operation shall be stopped until appropriate measures are taken to reduce noise levels.

d. Prevention of Soil Pollution

Matters to be taken into consideration in the prevention of soil pollution:

- All fuels, petroleum and chemicals shall be stored in protective sets capable of holding 110% of the maximum amount stored.
- All storage areas must be located in such a way that any leakage could be easily maintained and the possibility of overflow could be avoided.
- All areas that shall be affected by the storage or use of Hazardous Substances (Workshops, Repair Shops & Storage Areas) must be designed as closed areas so that they shall not affected by rain water and the drainage system must be connected to dump wells.
- Concrete wastes and the wastes originating from cleaning of concrete plants/mixers shall be disposed of in accordance with the legislation.
- Mud and debris must not be kept on highways and pedestrian roads.
- Intervention must be performed with regard to the information contained in the MSDS (Material Safety Data Sheet) regarding the cleaning of leaks/spills and the elimination of subsequent wastes.

e. Cultural Heritage

If any cultural resources or artifacts of archaeological, religious, cultural or historical value are found during the performance of the activities, the operations shall be stopped immediately and the competent authorities shall be informed. No artifacts, objects or materials in the findspot shall not be deformed or

removed from the findspot. The artifact, object or material found shall be kept safe and protected until it is delivered to the competent authorities. Construction activities shall be carried out after appropriate conservation measures have been taken for the protection of cultural heritage.

35. USE OF NATURAL SOURCES

In order to reduce the environmental impacts of natural resources by increasing their use efficiency, consumption of natural resources such as energy, fuel and water are monitored and measures are being developed to encourage their efficient use.

Energy, electricity and water consumptions shall recorded, monitored and reported with the **Monthly HSE Performance Indicators** form.

Measures to be taken to increase the efficiency of natural sources:

- Taking into account the unit energy and water consumption values and energy efficiency assessments during new material, equipment purchase and/or workplace designs (including transportation and carrying) or in current material, equipment renewal
- Increasing efficiency in heating, cooling, air conditioning and heat transfer
- Minimizing heat losses with proper thermal insulation
- Prevention of losses in electricity consumption
- Minimizing human factor with automatic control applications
- Minimizing pollutant air emissions
- Using energy-saving lighting
- Using sensor lighting system
- Switching off unused lighting systems
- Use of small motor vehicles
- Shutting down unused vehicles and engines
- Closing unused taps
- Repair of dripping taps, faulty valves and pipes
- Calibration of the meters such as electricity, gas, water etc.
- Prevention and control of over-consumption of the consumables such as paper, toner, etc. and using them consciously
- Ensuring the recycling of wastes (paper, plastic, metal, etc.) as much as possible
- Supplying materials as close to the site as possible to minimize transport and transport impacts
- Placing appropriate warning signs to promote the efficient use of natural resources
- Organizing trainings on the efficient use of natural resources.

36. HOUSEKEEPING

All work areas in the field must be kept clean and tidy at all times. Entrance and exit roads must be free of construction debris and materials and all areas must be cleaned regularly to prevent waste and unused material accumulation. All waste and unnecessary materials must be disposed of in accordance with applicable legislation. All wastes suitable for reuse or recycling must be sent for reuse or recycling, and the wastes classified as hazardous must be disposed of in accordance with the legislation in force.

Housekeeping and providing a clean working environment are the responsibility of all employees.

RESOURCE EFFICIENCY MANAGEMENT PLAN

REVISION STATUS		
Revision Date	**Rev. No**	**Explanation**
16.06.2025	00	This plan is prepared according to TS EN ISO/IEC 9001:2015, TS EN ISO/IEC ISO 14001:2015, TS EN ISO/IEC 45001:2018 and IFC Performance Standards
08.09.2025	01	Revision as per Environmental and Social Due Diligence comments

RESOURCE EFFICIENCY MANAGEMENT PLAN

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LIST OF ABBREVIATIONS

AAOİAŞ	Antalya-Alanya Otoyolu İnşaat Yatırım ve İşletme A.Ş.
REMP	Resource Efficiency Management Plan
CLO	Community Liaison Officer
CO	Carbon Monoxide
E&S	Environmental and Social
EHS	Environmental, Health, and Safety
EPC	Engineering, Procurement and Construction (Limak İnşaat Şanayi ve Tic. A.Ş.)
ESIA	Environmental and Social Impact Assessment
ESMMP	Environmental and Social Management and Monitoring Plan
ESMS	Environmental and Social Management System
EU	European Union
HC	Hydrocarbons
HSE	Health, Safety and Environment
H&S	Health and Safety
IFC	International Finance Corporation
KPIs	Key Performance Indicators
Limak	Limak İnşaat Şanayi ve Tic. A.Ş.
NO_x	Nitrogen Oxides (NO_2 and NO)
PM	Particulate Matter
RCA	Root Cause Analysis
SPV	Special Purpose Vehicle (Antalya-Alanya Otoyolu İnşaat Yatırım ve İşletme A.Ş.)
SO_2	Sulfur Dioxide
VOCs	Volatile Organic Compounds
WHO	World Health Organization

I. INTRODUCTION

Ministry of Transport, and Infrastructure (former Ministry of Transport, Maritime Affairs and Communications), General Directorate of Highways ("KGM" or "the Administration"), as the owner of the Antalya-Alanya Motorway Project, has tendered for a contract in accordance with the Law on Implementation of Some of the Investments and Services in the Framework of Build, Operate and Transfer Model (Law No: 3996). Following the tendering process, KGM has awarded Antalya-Alanya Otoyolu İnşaat Yatırım ve İşletme A.Ş. (AAOİAŞ or the Project Sponsor) with a Build, Operate and Transfer (BOT) contract for the implementation of the Project. Accordingly, AAOİAŞ will be referred as Project Sponsor[1] in the scope of this report. The main contractor for the Project has been designated as Limak and will henceforth be referred to as the Contractor (or EPC).

The project is designed to connect the districts of Serik and Alanya via the Manavgat district of Antalya province. The Project will enhance the existing transportation network services with its surrounding provinces: Burdur, Muğla, Konya, Isparta, Karaman and Mersin. Various environmental, social, and technical studies have been conducted along the initial route of the Project tendered by the KGM. Based on these studies, the route was optimized, incorporating engineering practices and addressing environmental and social considerations, particularly issues of involuntary and economic resettlement, before being finalized. According to the most current design, the total length of the Motorway, which will be a dual carriageway of mostly 3 and partially 2 lanes (3x2 and 2x2) in each direction, is 117.8 kilometers including the main carriageway and the access roads[2].

This Resource Effieceny Management Plan ("REMP" or "Plan") has been prepared by Antalya-Alanya Highway Construction Investment and Operation Inc. ("AAOİAŞ" or "SPV") for the Antalya-Alanya Highway Project ("Project") in accordance with national legislation, the Equator Principles ("EP"), the International Finance Corporation ("IFC") Performance Standards ("PSs"), and the international standards that reference the relevant legislative sections. The Plan covers the construction phase of the Project.

I.1 Project Description

The Project starts at Serik Interchange (Km: 52+000) and then proceeds eastward, following the corridor at the foothills of the Taurus Mountains within the boundaries of Serik and Manavgat districts, ending at north of Konaklı neighborhood of Alanya District (Km: 136+000). From this point onwards, the route turns southward with a 2x2 lane connection road and connects to the D400 state road at the Alanya West Interchange. As of April 2025, the current Project design includes a total of 117.8 kilometers of road, comprising 84 kilometers of main road (motorway) and 33.8 kilometers of access roads.

The map showing the construction components and road route within the scope of the Project's construction activities is provided in *Figure I-1.*

[1] The BOT Contract uses the term "Appointed Company" to refer Project Sponsor
[2] It should be noted that the environmental and social baseline characterization, maps and scoping assessments provided in this report are based on the most current design

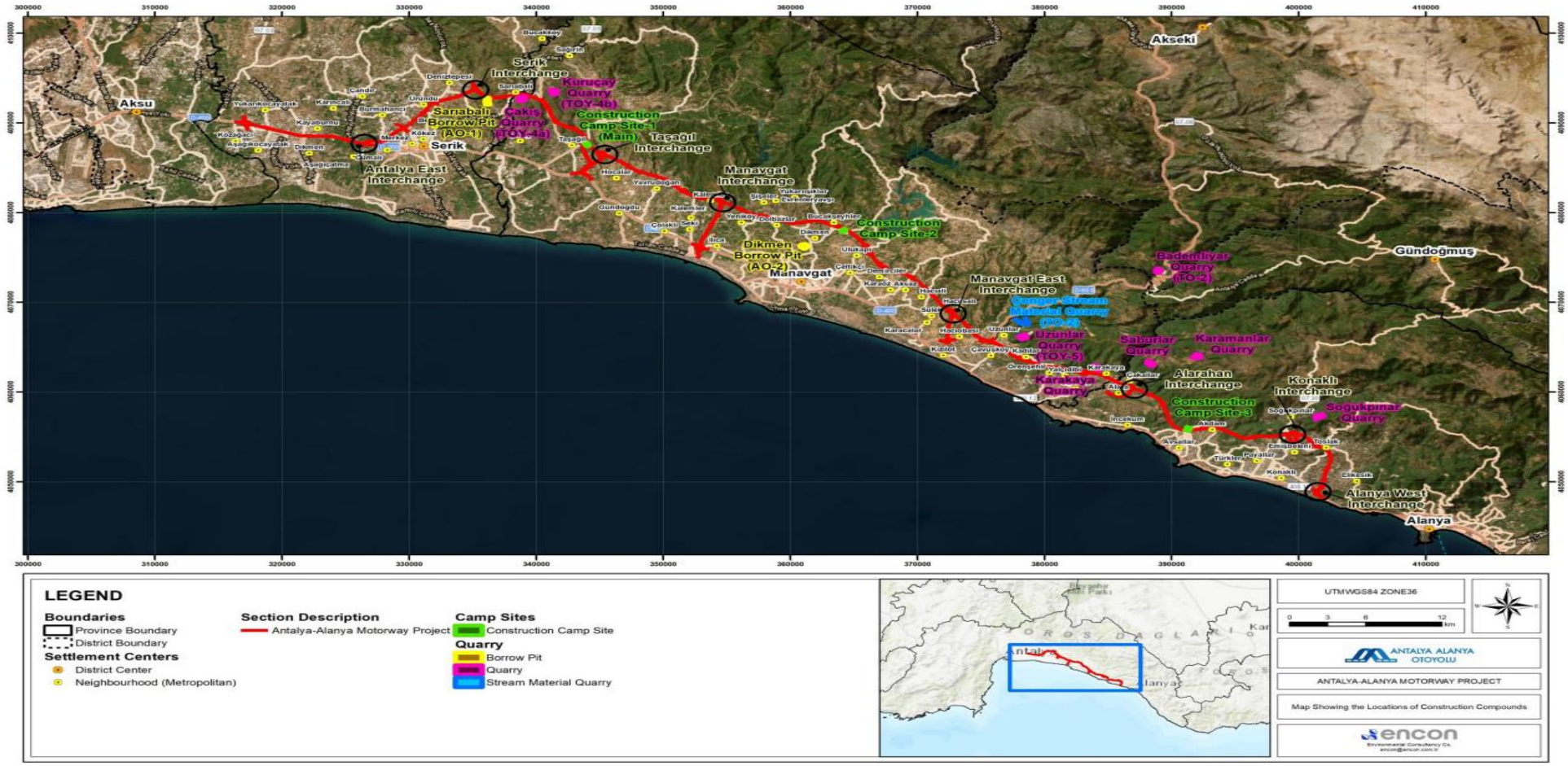

Figure I-1.Map Showing the Locations of Construction Compounds

Other structures to be built as part of the project are as follows:

- 16 viaducts,
- 22 bridges,
- 305 culverts,
- 25 interchanges,
- 56 overpasses,
- 43 underpasses, and
- 5 tunnels.

I.2 Purpose and Scope

The purpose of this Plan;

- Defining country legislation and project standards,
- Defining the duties and responsibilities of the personnel, and
- Identify measures and corporate targets to reduce resource consumption, to avoid or, when avoidance is not possible, minimize and control impacts on the environment resulting from environment and greenhouse gases during the construction phase.

This management plan is a living document developed with the best available information and will be reviewed and revised as necessary due to the nature of the construction and progress.

The Plan has been developed to provide further details on the measures to be implemented during the construction phase of the Project to ensure that the actual environmental impacts are consistent with those evaluated in Environmental and Social Impact Assessment (ESIA) and that mitigation measures are applied as intended and effective. The requirements set out in this Plan are applied to all activities during the construction phase of the Project, including those carried out by subcontractors.

This Plan has been developed according to the Turkish regulatory framework, International Finance Corporation (IFC) Performance Standards (PSs) and IFC General and Sector Specific Environmental, Health and Safety (EHS) Guidelines, IFC Environmental, Health, and Safety Guidelines for Railways, IFC Environmental, Health, and Safety Guidelines for Construction Materials Extraction and related EU Directives.

The Plan has been developed in alignment with applicable national legislation and relevant international standards, including the requirements of international financial institutions. This plan will provide mitigation alternatives and an impact monitoring schedule in accordance with Turkish and international regulations and standards.

This Plan should be applied by all parties involved in the construction phase, including the Project Sponsor, Antalya-Alanya Otoyolu İnşaat Yatırım ve İşletme A.Ş. (AAOİAŞ), the Main Contractor (EPC or Limak), and all subcontractors. Responsibilities for implementation, monitoring, and reporting of resource efficiency related issues should be clearly assigned. Necessary updates to the Plan should be considered in case of changes in project design, construction methodology, or regulatory requirements.

The purpose of this Plan is to identify measures and corporate targets to reduce resource consumption, to avoid or, when avoidance is not possible, minimize and control impacts on the environment resulting from environment and greenhouse gases.

This Plan applies to all Project activities under the Contractor's supervision, its subcontractors and to all employees. The Contractor is the main responsible for the implementation of this Plan. Subcontractors will be responsible to work in line with all environmental and social management systems

(ESMS) of the Contractor. This Plan applies to normal conditions during the construction phase activities and it is a living document, and the responsibilities, procedures and compliance actions should be updated as appropriate.

II. LEGISLATIVE FRAMEWORK AND REFERENCE STANDARDS

This section includes policies, standards and requirements of reference for this Plan that are applicable for, but not limited to, construction phase of the Project. Project standards are described in the Project ESIA and are listed below:

- National legislative requirements and all permits, licenses and approvals
- IFC PSs
- Equator Principles (EPs) IV
- Other good international industry practices (GIIP) including ISO 9001:2015 - Quality Management Systems, ISO 14001:2015 – Environmental Management Systems and ISO 45001:2018 - Occupational Health and Safety Management Systems
- International Conventions and Protocols Türkiye is a party to
- The Contractor's Quality Policy, Health, Safety and Environmental Policy and related practices and procedures.

II.1 National Requirements

The following Turkish laws and regulations will be used as the legal basis:

- Environmental Law No. 2872
- Regulation on Decreasing the Ozone Depleting Materials
- Regulation on Reduction of Sulphur Content of Some Fuel Types
- Regulation on Control of Exhaust Gas Emission and Quality of Fuel and Diesel
- Regulation on Monitoring of Greenhouse Gases Emissions
- Groundwater Law, Law No: 167,
- Regulation on Management of Surface Water Quality
- Regulation on the Water for Human Consumption of the Ministry of Health of Turkey, limit values for drinking and utilization waters
- Energy Efficiency Law No. 5627 dated 18/4/2007
- Regulation on the Improvement of the Energy Sources and the Efficiency in the Energy Usage
- Regulation on Assessment and Management of Environmental Noise
- Regulation on Environmental Noise Generation due to Equipment Used in Open Space
- Law on Protection of Soil and Land Use
- Regulation on Safety Data Sheets for Hazardous Substances and Mixtures
- Regulation on Registration, Evaluation, Permitting and Restrictions of Chemicals
- Regulation on the Classification, Labelling and Packaging of Hazardous Substances and Mixtures

II.2 International Standards and Conventions

In addition to national requirements, the following international guidelines frameworks, standards and agreements should be considered to ensure alignment with best practices and financial institution requirements:

To ensure responsible operations, AIIB adheres to policies addressing environmental and social impacts as outlined in its Environmental and Social Framework ("ESF") document. Updated in June 2024, the ESF reflects AIIB's commitment to international standards and sustainable development

practices. The ESF includes the Environmental and Social Policy (ESP), which sets mandatory requirements for all projects, supported by Environmental and Social Standards ("ESSs").

Moreover, the following standards, guidelines and directives should be used to align Project practices with international lender requirements and good practice environmental and social management:

- IFC Performance Standards (2012), specifically:
  - Performance Standard 3: Resource Efficiency and Pollution Prevention
  - Performance Standard 4: Community Health, Safety, and Security
- IFC Environmental, Health and Safety (EHS) General Guidelines (2007)
- IFC EHS Guidelines for Toll Roads (2007)
- IFC Guidance Notes (2012)
- Equator Principles IV (2020)
- EU Ambient Air Quality Directive (2008/50/EC)
- European Landscape Convention (entered into force in 2000, ratified by Türkiye in 2003)
- European Union Road Safety Policy Guidelines and Directives
- World Health Organization (WHO) Ambient Air Quality Guidelines (2005 and 2021)

These references should be used to guide the implementation, monitoring, and performance evaluation of air pollution and emissions control measures on-site throughout the construction phase.

III. LINKAGE WITH OTHER PROJECT PLANS AND PROCEDURES

This Plan is supported by other management plans and procedures developed under the Environmental and Social Management System (ESMS) of the Project. The following plans and procedures are particularly relevant and should be implemented in coordination with the Resource Efficiency Management Plan:

- Solid Waste Management Plan
- Water Quality, Wastewater and Storm Water Management Plan
- Environmental Accident Spill Response Management Plan
- Community Health and Safety Management Plan
- Traffic Management Plan
- Hazardous Material Management Plan
- Blasting Management Plan
- Demolition Management Plan
- Environmental and Social Management and Monitoring Plan (ESMMP)
- Training Management Plan

The effective integration of these plans should be ensured to maintain compliance with national regulations and international standards and to minimize the cumulative environmental and social impacts of construction activities.

IV. ROLES AND RESPONSIBILITIES

Antalya Alanya Otoyol İnşaat Yatırım ve İşletme A.Ş. (SPV) as the Project Sponsor and Limak (EPC) as the main contractor of the Project will be responsible for the following:

General Manager (SPV):

-Define and implement the overall business strategy and direction of the SPV in alignment with shareholder and stakeholder expectations.

-Ensure the provision of necessary resources and organizational support for the implementation of APEMP.
-Supervise and coordinate EPC contractors and subcontractors to ensure proper execution of construction, commissioning, and operational phases.
-Ensure that managerial decisions are made regarding the implementation of all SPV policies and plans by EPCs and subcontractors.
-Support the E&S Manager in preparing, disseminating, and implementing this plan.
-Make executive decisions on project budgeting, resource allocation, and capital management to support project execution and sustainability, H&S and E&S compliance.
-Ensure sufficient funding and personnel are dedicated to environmental, social, and H&S obligations under the project's contractual and regulatory frameworks.
-Ensure the monitoring environmental, social and financial performance, reporting, and risk exposure of the SPV, ensuring transparency and accountability to stakeholders and investors.
-Ensure that all project activities comply with local laws, environmental regulations, corporate governance policies, and international best practices and lender requirements.

E&S Manager (SPV):

-Review and ensure the preparation, revision, and implementation of REMP in accordance with national laws, regulations, company policies, international standards and lender requirements.
-Ensure the development, revision, and execution of project-specific management plans, including the Environmental and Social Management Plan (ESMP) in accordance with company policies and international standards.
-Review and update the REMP in coordination with the EPC's E&S Manager and construction teams.
-Ensure that all construction site activities are carried out safely by EPC and subcontractors.
-Monitor the environmental and social performance of EPC and subcontractors to ensure compliance.
-Monitor EPC and subcontractor adherence to the requirements of the E&S Management Plan.
-Ensure EPC and subcontractors maintain accurate records, including those of corrective and preventive actions.
- Oversee the Grievance Mechanism (GM) and ensure timely resolution of community and worker complaints.
-Engage with regulatory authorities, auditors, and NGOs on E&S compliance and performance matters
-Coordinate obtaining environmental related permits.

H&S Manager (SPV):

-Ensure the conditions and obligations specified in the health, safety, community related plans and documents are implemented and adhered to by EPC and subcontractors in accordance with company policies, regulatory obligations, international standards and lender requirements.
-Contribute to project risk assessments and job hazard analyses (JHAs) and ensure these are updated regularly.
-Ensure that all construction site activities are carried out safely by EPC and subcontractors.
-Ensure that physical site boundaries are clearly defined and maintained by EPC and subcontractors to control site access and protect public safety.
-Conduct regular inspections, audits, and hazard identification walkthroughs on construction sites.
-Ensure timely and appropriate resolution of complaints related to public health and safety.
-Engage with regulatory authorities on inspections, audits, and compliance verification.

Deputy E&S Manager (SPV):

-Lead the development, implementation, and continuous improvement of the Environmental and Social Management.
-Review the ESHS documents of subcontractors and suppliers and ensure that they comply with the Project ESHS requirements.

-Monitor performance through Key Performance Indicators (KPIs), reports, audits, and meetings.
-Oversee incident and non-compliance regarding to noise and vibration, including investigations, corrective/preventive measures, and stakeholder communication.
-Support E&S Manager (SPV) executive decision-making by providing timely reports and insights on E&S performance, risks, and emerging trends.
-Lead community engagement strategies in collaboration with the Environmental Engineer and, and Social Chief to ensure effective grievance management and positive relations with project-affected communities.
-Ensure that EPC and subcontractor provide the necessary training through the review of training records and relevant training documents.
-Coordinate environmental and social monitoring programs.

Social Chief (SPV):

-Supervise and mentor CLOs, ensuring their work aligns with project priorities and stakeholder engagement strategy.
-Develop and implement work plans and schedules for the CLO team.
-Ensure that complaints regarding air quality are recorded, processed, and resolved in a timely and transparent manner.
-Ensure accurate, timely, and complete reporting of CLO activities, stakeholder interactions, and grievance outcomes and inform the E&S Deputy Manager about the complaints and coordinate the assessment and solution of grievances with EPC team.
-Coordinate with the E&S Deputy Manager, CLOs and Environmental Engineer, E&S Specialists, and construction teams to address community-related impacts.
-Train subcontractors and relevant staff on community interaction protocols and grievance management.
-Support alignment between community concerns and project execution through proactive communication with technical departments.

HSE Specialist (SPV):

-Support the execution of the safety, health and community safety related plans, and ensure site activities are carried out safely by EPC contractors and subcontractors in-line with applicable laws, international standards and lender requirements.
-Conduct regular site inspections, hazard identification, and risk assessments; follow up on corrective and preventive actions.
-Monitor compliance with safety protocols and ensure H&S measures are integrated into method statements and work procedures.
-Maintain H&S documentation, including safety permits, incident records, and training logs, etc.
-Support H&S training delivery for all relevant site personnel and review contractor training records for adequacy.
-Contribute to the review and update of safety plans and procedures based on field experience and audit findings.
-Conduct regular inspections, audits, and hazard identification walkthroughs on construction sites.
-Engage with regulatory authorities on inspections, audits, and compliance verification.

Project Director (EPC):

-Define and oversee the implementation of the overall EPC execution strategy in alignment with contract objectives and company standards.
-Lead interdisciplinary project teams, coordinating EPC functions to achieve key milestones.
-In case of non-compliance regarding to air quality, ensure appropriate corrective and preventive actions are taken in coordination with the E&S Manager and H&S Manager.
-Communicate all relevant plans clearly to subcontractors and monitor their performance.
-Approve and monitor regular site inspections and safety reviews.

-Track project KPIs, timelines, and budgets to ensure performance objectives are met.
-Ensure that all employees comply with the obligations specified in the project's management plans during activities.
-Approve training plans and assess their implementation across EPC and subcontractor teams.
-Coordinate with regulatory authorities, community representatives, and auditors as required.
-Address stakeholder concerns proactively and transparently, particularly those related to safety, environmental, and social matters

E&S Manager (EPC):

-Facilitate coordination with the SPV's E&S Manager for compliance audits and reporting.
-Implement environmental and social measures through site practices and method statements.
-Ensure that all conditions and obligations outlined in the The Plan are implemented and adhered to during project activities.
-Ensure all project personnel are fully informed of and compliant with project plans and standards.
-Ensure employees and contractors in fulfilling the requirements and relevant trainings of The Plan.
-Ensure all site personnel receive appropriate related training.

H&S Manager (EPC):

-Ensure the safe execution of construction activities in compliance with NVMP, H&S Plan, legal requirements, international standards, SPV and lender obligations.
-Prepare, review, and improve H&S Plans by integrating noise and vibration control measures into site-specific risk registers, method statements, and monitoring programs.
-Supervise and support Contractors/Subcontractors to implement noise and vibration mitigation measures, and monitor their compliance with H&S and NVMP requirements.
-Coordinate with SPV H&S Manager and EPC HSE Manager to address noise/vibration-related incidents, risks, and community safety concerns.
-Ensure that all site personnel receive regular training and toolbox talks covering NVMP obligations, noise/vibration risks, and safe working practices.
-Oversee emergency preparedness and response procedures for noise and vibration incidents (e.g., blast vibration exceedances, community complaints).
-Conduct investigations of noise/vibration-related incidents or complaints, ensure corrective/preventive actions are taken, and report findings to Project Director and SPV.
-Promote a safety-first culture by ensuring noise and vibration risks are proactively managed and lessons learned are integrated into continuous improvement.

HSE Chief (EPC):

-Supervise daily implementation of HSE requirements on-site, with emphasis on noise and vibration control.
-Monitor contractor and subcontractor compliance with REMP and report deviations to the HSE Manager.
-Perform the implementation and compliance of the conditions and obligations specified in the REMP during project activities.
-Provide technical support to Contractor.
-Coordinate with the SPV HSE team during audits, inspections, and reporting.

HSE Engineer (EPC):

-Conduct site inspections and monitor compliance with REMP
-Collect, maintain, and report noise and vibration measurement data.

-Support investigations and corrective actions for REMP-related non-compliances.
-Provide technical input and guidance to workers on resource efficiency measures.

HSE Trainer and Document Controller (EPC):

-Organize safety induction programs for new employees and visitors.
-Support internal and external audits by providing required HSE documentation and evidence.

Environmental Engineer (SPV and EPC):

-Implement the monitoring and recording of this Plan's execution (including implementation by Subcontractors).
-Ensure project activities comply with national environmental legislation, permits, international standards and lender requirements.
-Implement and monitor the REMP and its site-specific sub-plans to ensure compliance with national legislation, international standards, and lender requirements.
-Implement environmental monitoring programs.
-Ensure that necessary training on environmental management is provided and that all personnel receive the required training.
-Report the implementation performance of this Plan.
-Support the review and update of this Plan.
-Coordinate with subcontractors to ensure implementation of project-specific environmental measures.
-Conduct internal audits and inspections; identify non-conformities and follow up on corrective and preventive actions.

Community Liaison Officer (CLO) (SPV and EPC):

-Log, track, and follow up on grievances and appeals in a timely and respectful manner.
-Facilitate resolution of community disputes or concerns related to project activities.

All Personnel (including Contractor/Subcontractor Personnel):

-Follow this Plan and all related Plans and Procedures, and carry out all activities in accordance with the requirements of this Plan.
-Participate in relevant trainings.
-Ensure self-sufficiency in the implementation of this Plan.
-Fulfil and ensure the implementation of the requirements of this Plan.

V. MANAGEMENT MEASURES

The primary goal of the resource efficiency is to create opportunities for economics and efficiencies in the use of resources.

Monitoring of Resource Usage

As a main scope of this Plan, the Contractor and the subcontractors will regularly monitor the below items:

- Energy/Electricity consumption trends and identify where action can be taken to reduce energy use (e.g., Reduce loads of the energy systems, reduce losses in energy distribution, improve energy conversion efficiency)

- Water consumption trends and identify where action can be taken to reduce water use (e.g., reduce losses in water distribution, wastewater recovery)
- Material consumption and identify where action can be taken to reduce material use (e.g., reduce chemicals use, if possible)
- Fuel consumption and assess what action can be taken to reduce fuel consumption

Work Instructions

Preparation of written standard work instructions will improve the resource efficiency such as:

- Checking conditions of vehicles, tools and equipment
- Periodic maintenance of vehicles and equipment
- Turning off backup power generators when possible
- Shutting down of electronic goods when not used

GHG Management

The Project will quantify and monitor its direct Scope 1 GHG emissions as well as indirect Scope 2 emissions associated with the consumption of energy. Quantification of GHG emissions will be conducted annually in accordance with internationally recognized methodologies and good practice.

In addition, the following measures will be applied to reduce GHG emissions as much as possible:

- The Best Available Techniques will be taken into consideration in Project design as much as possible. The applicability of the Best Available Techniques (BATs) developed within the European regulatory framework [i.e., Integrated Pollution Prevention and Control, “IPPC”, BAT Reference Documents (BREFs) according to the European Directive 2010/75/EU (IED)] should been evaluated and integrated into the Project design.
- All employees will be provided climate, resource and energy efficiency awareness training.
- Maintenance of all machinery and equipment will be periodically conducted to ensure efficient fuel use and effective operation.
- All the fuels and other energy sources will be chosen among those that have the highest calorific values and minimum emissions per unit consumed.
- The use of recycled and locally sourced materials will be encouraged to reduce indirect emissions from material transportation.
- Efficient resource and material use will be promoted to reduce direct and indirect GHG emissions due to the Project.
- Energy consumption will be met, where possible, through the use of renewable energy sources.No idling and out-of-scope operation of the machinery and equipment will be allowed.
- During the closure phase, rehabilitation of land will help to recover lost carbon sink, which will act as a long-term mitigation measure.

An effective solid waste management plan will be implemented to control organic waste that may cause methane emissions.The increase of renewable energy production in national grid electricity may induce a decrease in Scope 2 related GHG emissions which is linked to the construction phase of the Project. However, it should be noted that this situation is out of Project control.

Energy Efficiency Design and Control Measures

Project will use energy efficient equipment (e.g., electric goods, backup power generators, lights etc.) as much as possible. The equipment purchasing process will consider the energy consumption features of the equipment.

When air conditioning systems are used, energy efficiency techniques will be considered as much as possible according to the following criteria:

- Placing air intakes and air-conditioning units in cool, shaded locations;
- Improving building insulation including seals, vents windows, and doors;
- Installing timers and/or thermostats and/or enthalpy-based control systems

Water Use Efficiency Design and Control Measures

- Project will reduce, as much as possible, water use. The water distribution system at the Site (e.g. taps, toilet flushing) will be periodically checked to ensure that they are working properly and that taps are not left open.
- In order to reuse the water used during vehicle washing operations, vehicle washing stations will be established and the necessary settlement pools and installations will be constructed for the reuse of water at these stations. It is planned to reuse treated water to prevent dusting.

VI. TRAINING

The employees of the Contractor and subcontractors will require to attend the new-hire induction training that includes environmental and social awareness and compliance training to be aligned with Project ESIA and ESMS.

Regular internal and external (when necessary) trainings will be given to ensure that the mitigation measures indicated in this Plan are applied during the construction phase of the Project for all involved parties. Regular internal inspections will be conducted to ensure that the mitigation measures indicated in this Plan are applied during the construction phase of the Project.

All workers will be informed about practices aimed to enhance resource efficiency. The records of resource usages (as defined above) will be announced at the information boards placed regularly and communicated to the workers.

VII. MONITORING

A structured internal monitoring program will be implemented to assess the effectiveness of resource efficiency mitigation measures outlined in this Plan during the construction phase of the Project. The scope and frequency of monitoring activities will be periodically reviewed and revised where necessary, based on site-specific conditions, air quality trends, stakeholder concerns, or changes in applicable environmental regulations.

Monitoring activities will be coordinated by E&S Manager and his/her team, in close collaboration with the H&S Manager and his/her team. Key responsibilities will include verifying the implementation of dust suppression practices, monitoring equipment and vehicle emissions, evaluating the maintenance status of construction machinery, and ensuring the consistent application of mitigation measures near sensitive receptors such as residential areas, schools, and healthcare facilities.

The performance of contractors and subcontractors in implementing resource efficiency management requirements will be reviewed through environmental audits, site supervision reports, and field observations. Any identified non-conformities will trigger timely corrective and preventive action plans. Monitoring will also include follow-up assessments to confirm the effectiveness of implemented measures and to ensure recurrence is prevented.

In addition to internal monitoring, inspections may be carried out by relevant public institutions, including the Ministry of Environment, Urbanization and Climate Change, in accordance with Turkish

legislation. The frequency and scope of these inspections will be determined by the authorities and may include review of monitoring data, on-site emission control practices, and documentation of compliance.

Monitoring efforts will be guided by the framework provided in Table VII.1, which outlines the parameters to be monitored, the corresponding monitoring locations, frequency of measurements, and responsible parties. These monitoring activities will be essential for evaluating the effectiveness of air quality and emissions mitigation measures and ensuring full compliance with national regulations and Project standards.

Table VII.1 Key Monitoring Activities

Parameter	Monitoring Station / Location	Monitoring Method	Monitoring Frequency	Responsible Parties
Consumption of resources	All site activities*	Quantify the resource consumption by installing appropriate devices; record and aggregate data on the consumption of the following resources: a) Water consumption (for industrial and civil purposes) b) Fuels (for heating, vehicle refuelling, equipment usages) c) Electricity (only if supplied by external sources/network using counters) d) Explosives	Monthly	AAOİAŞ and Limak
GHG Emissions	All site activities*	GHG emission levels (combined Scope 1 and Scope 2 Emissions, and, if appropriate, the GHG efficiency ratio) from the facilities owned or controlled within the physical project boundary, as well as indirect emissions associated with the off-site production of energy used by the Project during the construction phase, will be quantified and reported publicly on annual basis.	Annually	AAOİAŞ, Limak
Grievances	The field subject to the complaint	Grievances are recorded regarding resource efficiency	Upon grievance	AAOİAŞ, Limak
Training	All site activities*	Employee training	Monthly	AAOİAŞ, Limak

In cases of non-compliance identified through internal oversight or external audits, AAOİAŞ will ensure that corrective and preventive measures are promptly implemented in coordination with the Main Contractor (Limak) and relevant subcontractors.

VIII. KEY PERFORMANCE INDICATORS

The following Key Performance Indicators (KPIs) will be monitored, verified, and evaluated.

Table VIII.1 Key Performance Indicators – Construction Phase KPIs

Monitoring Parameter / Performance Indicator	Target	Frequency	Responsible Party
Water consumption	Minimize and continued improvement in consumption (No increase in the average consumption rate on a per capita basis)	Monthly	AAOİAŞ, Limak
Energy consumption	Minimize and continued improvement in consumption (No increase in the average consumption rate on a per capita basis)	Monthly	AAOİAŞ, Limak
Fuel consumption	Minimize and continued improvement in consumption (No increase in the average consumption rate on a per capita basis)	Monthly	AAOİAŞ, Limak
Number of non-compliances regarding resource efficiency measures identified in this Plan	Minimise the number of non-compliances and continuous improvement	Monthly	AAOİAŞ, Limak
Number of trainings planned vs completed	100%	Monthly	AAOİAŞ, Limak
Number of grievances received regarding resource efficiency	Minimise the number of grievances and continuous improvement	Monthly	AAOİAŞ, Limak

IX. AUDIT AND REVIEW

The implementation of this Plan should be regularly monitored and reviewed in accordance with the ESMMP. All labour-related incidents and non-conformities should be documented and reported as outlined in the Plan. Contractors and subcontractors should be subject to audits conducted by the Project Sponsor within the scope and schedule defined in the Supply Chain Subcontractor Management Plan.

Results of the monitoring will be reported to responsible parties to ensure that the Project activities comply with the national legislation and international standards. . Depending on the monitoring results, the Plan will be reviewed and updated by Project E&S and H&S Managers.

internal audit will address:

- The correct implementation of this Plan;
- The correct and timely implementation of an auditing and review system;
- Each of the point indicated in the table in Section 7 (Monitoring Activities) and Section 8 (KPIs) of this Plan.

Evidence and results of the inspection and audit activities are included in the audit reports and in the “Non-Conformity and Preventive/Corrective actions” records. Project Management reviews result of audits and inspections and the progress of the Preventive/Corrective actions and takes additional appropriate actions if necessary.

These audits and the associated records should be managed in compliance with the Project’s established human resources and labour-related procedures.

Observations and deficiencies identified during audits should be recorded in formal audit reports, and all findings requiring improvement should be registered under Corrective Actions. Project management should review audit outcomes and corrective action records, follow up on progress, and ensure that additional measures are implemented where necessary to ensure full compliance with labour legislation and international standards.

X. REPORTING

Regular reporting should be conducted to ensure the effective implementation and continuous improvement of resource efficiency management activities throughout the construction phase of the Project. Reporting should be structured to address both internal monitoring and auditing outcomes, as well as external compliance obligations and stakeholder engagement requirements.

Based on monitoring results, necessary corrective and preventive actions should be identified and the required updates should be incorporated into this Plan. The training program will also be revised accordingly to address any observed gaps. Regular audits and visual inspections should be conducted to verify that all activities are being undertaken in accordance with the provisions of this Plan.

Evidence of the implementation of the actions/measures and related results are collected through inspection and auditing activities as detailed in Section IIX “Audit and Review” of this Plan; these evidences are described in the audit reports.

Contractors are responsible to collect the statistics (including all types of training delivered to employees, incident records, grievance records, their own subcontractor selection processes, etc.) on a monthly basis and report to the Contractor. If any subcontractor is involved, it is responsible for duly implementing requirements included in this Plan under the Contractor supervision.

The results and supporting evidence of these monitoring activities (e.g., measurements, logs, and photos) should be documented in detail within appropriate reporting formats. This section of the Plan outlines the instructions and requirements for implementing these reporting activities.

All personnel are encouraged to raise concerns, suggestions, or complaints related to air quality management through the established grievance mechanism by completing the grievance form. The communication channels available for submitting grievances are outlined in the Stakeholder Engagement Plan.

Throughout the construction phase of the Project, this Plan will be reviewed by the E&S manager, based on the results of audits.

EXCAVATED MATERIAL MANAGEMENT PLAN

REVISION STATUS		
Revision Date	**Rev. No**	**Explanation**
16.06.2025	00	This plan is prepared according to TS EN ISO/IEC 9001:2015, TS EN ISO/IEC ISO 14001:2015, TS EN ISO/IEC 45001:2018 and IFC Performance Standards
08.09.2025	01	Revision as per Environmental and Social Due Diligence comments

EXCAVATED MATERIAL MANAGEMENT PLAN

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LIST OF ABBREVIATIONS

AAOİAŞ	Antalya-Alanya Otoyolu İnşaat Yatırım ve İşletme A.Ş.
BAT	Best Available Techniques
CLO	Community Liaison Officer
E&S	Environmental and Social
EHS	Environmental, Health, and Safety
EPC	Engineering, Procurement and Construction (Limak İnşaat Şanayi ve Tic. A.Ş.)
ESIA	Environmental and Social Impact Assessment
ESMMP	Environmental and Social Management and Monitoring Plan
ESMS	Environmental and Social Management System
IFC	International Finance Corporation
KPIs	Key Performance Indicators
Limak	Limak İnşaat Şanayi ve Tic. A.Ş.
MoTAT	Mobile Hazardous Waste Tracking System
MSDS	Material Safety Data Sheets
SPV	Special Purpose Vehicle (Antalya-Alanya Otoyolu İnşaat Yatırım ve İşletme A.Ş.)
WEEE	Electrical and Electronic Equipment
WHO	World Health Organization

I. INTRODUCTION

Ministry of Transport, and Infrastructure (former Ministry of Transport, Maritime Affairs and Communications), General Directorate of Highways ("KGM" or "the Administration"), as the owner of the Antalya-Alanya Motorway Project ("The Project"), has tendered for a contract in accordance with the Law on Implementation of Some of the Investments and Services in the Framework of Build, Operate and Transfer Model (Law No: 3996). Following the tendering process, KGM has awarded Antalya-Alanya Otoyolu İnşaat Yatırım ve İşletme A.Ş. (AAOİAŞ or the Project Sponsor) with a Build, Operate and Transfer (BOT) contract for the implementation of the Project. Accordingly, AAOİAŞ will be referred as Project Sponsor[1] in the scope of this report. The main contractor for the Project has been designated as Limak and will henceforth be referred to as the Contractor (or EPC).

The project is designed to connect the districts of Serik and Alanya via the Manavgat district of Antalya province. The Project will enhance the existing transportation network services with its surrounding provinces: Burdur, Muğla, Konya, Isparta, Karaman and Mersin. Various environmental, social, and technical studies have been conducted along the initial route of the Project tendered by the KGM. Based on these studies, the route was optimized, incorporating engineering practices and addressing environmental and social considerations, particularly issues of involuntary and economic resettlement, before being finalized. According to the most current design, the total length of the Motorway, which will be a dual carriageway of mostly 3 and partially 2 lanes (3x2 and 2x2) in each direction, is 117.8 kilometers including the main carriageway and the access roads[2].

This Excavated Material Management Plan ("EMMP" or "Plan") has been prepared by Antalya-Alanya Highway Construction Investment and Operation Inc. ("AAOİAŞ" or "SPV") for the Antalya-Alanya Highway Project ("Project") in accordance with national legislation, the Equator Principles ("EP"), the International Finance Corporation ("IFC") Performance Standards ("PSs"), and the international standards that reference the relevant legislative sections. The Plan covers the construction phase of the Project.

I.1 Project Description

The Project starts at Serik Interchange (Km: 52+000) and then proceeds eastward, following the corridor at the foothills of the Taurus Mountains within the boundaries of Serik and Manavgat districts, ending at north of Konaklı neighborhood of Alanya District (Km: 136+000). From this point onwards, the route turns southward with a 2x2 lane connection road and connects to the D400 state road at the Alanya West Interchange. As of April 2025, the current Project design includes a total of 117.8 kilometers of road, comprising 84 kilometers of main road (motorway) and 33.8 kilometers of access roads.

The map showing the construction components and road route within the scope of the Project's construction activities is provided in *Figure I-1.*

[1] The BOT Contract uses the term "Appointed Company" to refer Project Sponsor

[2] It should be noted that the environmental and social baseline characterization, maps and scoping assessments provided in this report are based on the most current design

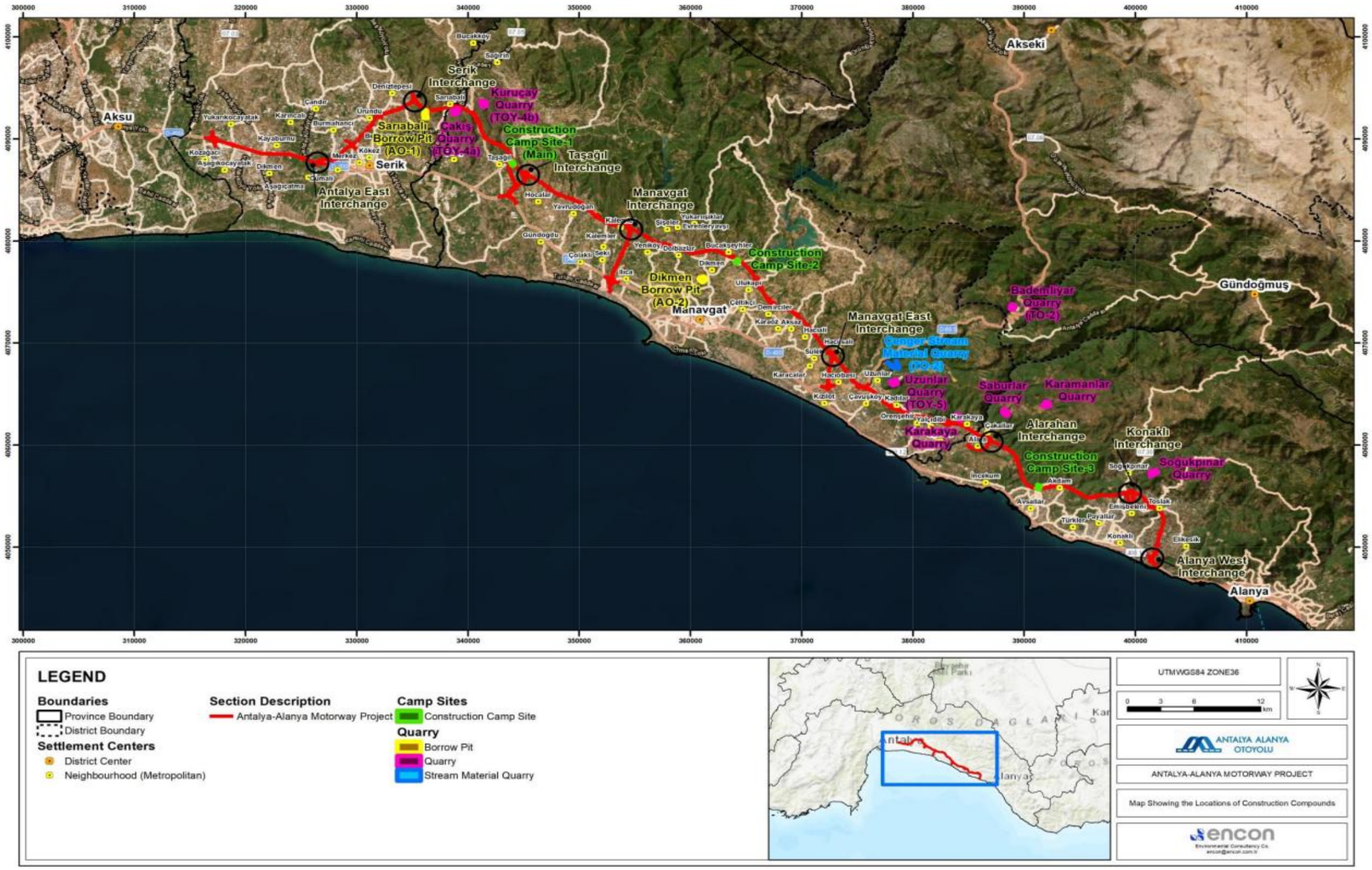

Figure I-1.Map Showing the Locations of Construction Compounds

Other structures to be built as part of the project are as follows:

- 16 viaducts,
- 22 bridges,
- 305 culverts,
- 25 interchanges,
- 56 overpasses,
- 43 underpasses, and
- 5 tunnels.

I.2 PURPOSE AND SCOPE

This Excavated Material Management Plan ("the Plan") has been prepared by Antalya-Alanya Otoyolu İnşaat Yatırım ve İşletme A.Ş. ("AAOİAŞ" or "SPV") for the Antalya-Alanya Motorway Project ("the Project").

The purpose of this Plan is to identify the main sources of excavated materials generated during the construction phase and to outline the measures that should be implemented to prevent, minimize, reuse, and recycle waste in accordance with applicable national legislation and international standards. This Plan aims to support sustainable waste management practices and promote circular economy principles throughout construction activities.

The Plan has been developed to provide further details on the measures to be implemented in dumpsites during the construction phase of the Project to ensure that the actual environmental impacts are consistent with those evaluated in Environmental and Social Impact Assessment (ESIA) and that mitigation measures are applied as intended and effective.

This management plan is a living document developed with the best available information and will be reviewed and revised as necessary due to the nature of the construction and progress.

This Plan has been developed according to the Turkish regulatory framework, International Finance Corporation (IFC) Performance Standards (PSs) and IFC General and Sector Specific Environmental, Health and Safety (EHS) Guidelines, IFC Environmental, Health, and Safety Guidelines for Construction Materials Extraction and related EU Directives.

This Plan will be implemented by the Project Sponsor, Antalya-Alanya Otoyolu İnşaat Yatırım ve İşletme A.Ş. (AAOİAŞ), the Main Contractor (Limak), and all subcontractors involved in the construction phase. Roles and responsibilities for waste management, monitoring, and reporting should be clearly defined, and this Plan should be reviewed and updated in line with changes in project activities or legal requirements.

II. LEGISLATIVE FRAMEWORK AND REFERENCE STANDARDS

The Plan has been developed in alignment with applicable national legislation and international standards and requirements of reference for this Plan that are applicable for, but not limited to, construction phase of the Project.

Project standards are listed below:

- National legislative requirements and all permits, licenses and approvals
- IFC PSs
- Equator Principles (EPs) IV
- Other good international industry practices (GIIP) including ISO 9001:2015 - Quality Management Systems, ISO 14001:2015 – Environmental Management Systems and ISO 45001:2018 - Occupational Health and Safety Management Systems

- International Conventions and Protocols Türkiye is a party to
- The Project Sponsor's Quality Policy, Health, Safety and Environmental Policy and related practices and procedures

II.1 National Requirements

The following Turkish laws and regulations should be used as the primary legal framework for solid waste management:

- Environmental Law (Law No. 2872)
- Regulation on Waste Management
- Regulation on the Control of Excavation, Construction, and Demolition Wastes
- Regulation on Landfilling of Waste
- Regulation on Zero Waste Management

These regulations should be used as the legal basis for waste segregation, temporary storage, transport, recycling, recovery, and disposal activities at all construction sites and associated facilities.

II.2 International Standards and Guidelines

In addition to national requirements, the following international guidelines frameworks, standards and agreements should be considered to ensure alignment with best practices and financial institution requirements:

To ensure responsible operations, AIIB adheres to policies addressing environmental and social impacts as outlined in its Environmental and Social Framework ("ESF") document. Updated in June 2024, the ESF reflects AIIB's commitment to international standards and sustainable development practices.

The EPs are a set of voluntary environmental and social guidelines that have been adopted by a significant number of financial institutions influential in the project finance market. The EPs comprise a set of ten broad principles that are underpinned by the environmental and social policies, standards and guidelines:

IFC PS 1 Assessment and Management of Environmental and Social Risks and Impacts, underscores the importance of managing environmental and social performance throughout the life of a project. An effective ESMS is a dynamic and continuous process initiated and supported by management, and involves engagement between the client, its workers, local communities directly affected by the project (the Affected Communities) and, where appropriate, other stakeholders.

IFC PS 3 Resource Efficiency and Pollution Prevention, outlines a project-level approach to resource efficiency and pollution prevention and control in line with internationally disseminated technologies and practices. In addition, this PS promotes the ability of private sector companies to adopt such technologies and practices as far as their use is feasible in the context of a project that relies on commercially available skills and resources.

IFC EHS Guidelines - The EHS Guidelines are technical reference documents with general and industry-specific examples of GIIP. The EHS Guidelines contain the performance levels and measures that are generally considered to be achievable in new facilities by existing technology at reasonable costs. General EHS Guidelines – Waste Management document is applicable for the Project.

IFC EHS Guidelines for Railways and EHS Guidelines for Construction Materials Extraction are also applicable to the Project.

In addition to these, related EU directives are given below:

- Directive 2006/12/EC of the European Parliament and of the Council of 5 April 2006 on waste
- Directive 2006/21/EC on the Management of Waste from Extractive Industries and Best Available Techniques (BAT) Reference Document
- Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives

These international references provide the broader sustainability framework and technical benchmarks to be integrated into solid waste management procedures, particularly in relation to source reduction, reuse and recycling targets, occupational health and safety, and environmental protection.

III. LINKAGE WITH OTHER PROJECT PLANS AND PROCEDURES

This Plan is supported by other management plans and procedures developed under the Environmental and Social Management System (ESMS) of the Project. The following plans and procedures are particularly relevant and should be implemented in coordination with the Excavated Materials Management Plan to ensure consistency in environmental and social performance and regulatory compliance throughout the construction phase:

- Environmental Accident and Spill Response Management Plan
- Solid Waste Management Plan
- Resource Efficiency Management Plan
- Traffic Management Plan
- Soil Management and Erosion Control Plan
- Water, Wastewater, and Storm Water Management Plan
- Hazardous Materials Management Plan
- Construction Camp Site Management Plan
- Occupational Health and Safety Management Plan
- Community Health and Safety Management Plan
- Environmental and Social Management and Monitoring Plan (ESMMP)

The effective integration of these plans should be ensured to maintain alignment with Turkish legislation, IFC Performance Standards, and other international best practices. Cross-plan coordination is essential for minimizing cumulative impacts, supporting resource efficiency, and enhancing overall environmental and social risk management during the construction phase.

IV. ROLES AND RESPONSIBILITIES

Antalya Alanya Otoyol İnşaat Yatırım ve İşletme A.Ş. (SPV) as the Project Sponsor and Limak (EPC) as the main contractor of the Project will be responsible for the following:

General Manager (SPV):

- Promote a culture of social responsibility across the SPV and its stakeholders.
- Ensure the provision of necessary resources and organizational support for the implementation of plan.
- Supervise and coordinate EPC contractors and subcontractors to ensure proper execution of construction, commissioning, and operational phases.
- Support the E&S and H&S Manager in preparing, disseminating, and implementing this plan. In the event of any incompatibility regarding the storage or transportation of excavation materials, ensure that the EPC and SPV collaborate with the E&S and H&S Manager and other responsible parties to take appropriate and preventive measures.
- Make executive decisions on project budgeting, resource allocation including employee, and capital management to support project execution and sustainability, environmental and social compliance.
- Ensure the monitoring environmental, social and financial performance, reporting, and risk exposure of the SPV, ensuring transparency and accountability to all stakeholders, including SPV, stakeholders and investors.

E&S Manager (SPV):

- Review and ensure the preparation, revision, and implementation of all plans in accordance with national laws, regulations, company policies, international standards and lender requirements.
- Ensure and monitor that EPC and subcontractors correctly implement site practices and management plans.
- Provide technical support to EPC and subcontractors for the implementation of the Plan.
- Collaborate with internal teams (e.g., H&S, Legal, Procurement) to integrate E&S criteria into project operations and contracts. Monitor the environmental and social performance of EPC and subcontractors to ensure compliance.
- Prepare and submit E&S compliance and performance reports to internal and external stakeholders, including lenders and regulators.
- Support stakeholder engagement activities and consultations with local communities.
- Engage with regulatory authorities, auditors, and NGOs on E&S compliance and performance matters.
- Lead the implementation of corrective actions and incident prevention measures.

Health and Safety Manager (SPV):

- Ensure the preparation, revision, and implementation of the health and safety-related plans and documents in accordance with the SPV's corporate policies, regulatory obligations, international standards and lender requirements and are implemented by EPC and subcontractors through appropriate method statements and site practices.

- Ensure that all construction site activities are carried out safely by EPC and subcontractors.
- Ensure root causes are identified, documented, and that corrective actions are implemented and verified.
- Monitor the compliance of EPC and subcontractors with the safety, health, and community safety related plans, and applicable laws, international standards and lender requirements.
- Conduct regular inspections, audits, and hazard identification walkthroughs on construction sites.
- Conduct a comprehensive accident and incident investigation process.
- Provide technical support to EPC and subcontractors for the proper implementation of the health and safety plans.
- Ensure the accurate records of inspections, incidents, safety meetings, and training records
- Engage with regulatory authorities on inspections, audits, and compliance verification

Project Director (EPC):

- Ensure that all project activities comply with local laws, environmental regulations, corporate governance policies, and international best practices and lender requirements.
- Promote a culture of environmental and social responsibility across the EPC and its stakeholders.
- Define and implement the overall business strategy and direction of the EPC in alignment with SPV and stakeholder expectations.
- Support the E&S and H&S Manager in preparing, disseminating, and implementing this plan. In case of non-compliance, ensure correct and preventive actions are taken in collaboration with the SPV and other responsible parties.
- Make executive decisions on project budgeting, resource allocation including employee, and capital management to support project execution and sustainability, H&S compliance.
- Ensure the monitoring environmental, social and financial performance, reporting, and risk exposure of the SPV, ensuring transparency and accountability to all stakeholders, including EPC, stakeholders and other related parties.
- Approval of project management plans (HSE, E&S, QA/QC, etc.) in line with company policies, legal frameworks, international standards, SPV and lender requirements.
- Coordinate with regulatory authorities, community representatives, and auditors as required.
- Address stakeholder concerns proactively and transparently, particularly those related to safety, environmental, and social matters.

E&S Manager (EPC):

- Coordinate the preparation, revision, and implementation of the Plan with H&S Manager in accordance with the Project SPV's corporate policies, regulatory obligations, international standards and lender requirements and are implemented by EPC and subcontractors through appropriate method statements and site practices.
- Ensure the excavated material is assessed and managed by waste recycling and reuses good practices.
- Facilitate coordination with the SPV's E&S Manager for compliance audits and reporting.

- Implement environmental and social measures through site practices and method statements.
- Ensure that all conditions and obligations outlined in the environmental and social management plans are implemented and adhered to during project activities.
- Ensure employees and contractors fulfil the requirements and relevant training of the environmental and social management plans.
- Ensure the environmental and social management plans are communicated and implemented by Contractors/Subcontractors.
- Conduct regular inspections, audits, and hazard identification walkthroughs on construction sites.
- Monitor compliance of Contractors/Subcontractors with environmental and social management plans requirements.
- Ensure the development and follow-up of corrective/improvement actions.
- Conduct comprehensive investigations of accidents and incidents and promote continuous improvement via lessons learned.

H&S Manager (EPC):

- Coordinate the preparation, revision, and implementation of the Plan with E&S Manager in accordance with the SPV's corporate policies, regulatory obligations, international standards and lender requirements and are implemented by EPC and subcontractors through appropriate method statements and site practices.
- Ensure that all construction site activities are carried out safely by EPC and subcontractors.
- Ensure root causes are identified, documented, and that corrective actions are implemented and verified.
- Monitor the compliance of EPC and subcontractors with the safety, health, and community safety related plans, and applicable legislation, international standards and lender requirements.
- Conduct regular inspections, audits, and hazard identification walkthroughs on construction sites.
- Provide technical support to EPC and subcontractors for the proper implementation of the Project's plans.
- Ensure the accurate records of inspections, incidents, safety meetings, and training records.
- Ensure the corrective actions process is followed up on by all parties strictly.
- Report on H&S performance, non-compliance, and corrective actions to the EPC Project Director.
- Engage with regulatory authorities on inspections, audits, and compliance verification.

V. WASTE MANAGEMENT AND RECYCLING APPROACH

IFC EHS Guidelines-Waste Management document provides a waste hierarchy which lays down priorities for the best overall environmental option. Based on that, management of wastes will be carried out as following, in the order of decreasing preference:

1. Prevent waste generation where possible
2. Reduction of wastes by setting measures where possible
3. Reuse waste/excess materials where feasible
4. Recover waste materials where feasible
5. Recycle waste materials where feasible

6. Dispose waste off-site by a licensed waste company

Solid waste generated during the construction phase of the Project will originate from various activities, including construction operations, excavation works, material usage, accommodation facilities, and routine consumption of goods and supplies such as paper, plastic, metal, and glass containers. All solid waste streams will be classified and managed in accordance with their physical and chemical characteristics to enable effective separation, reuse, recycling, and disposal. The detail of management of all types of solid wastes, hazardous and non-hazardous wastes are given in Solid Waste Management Plan.

The fundamental principle of solid waste management is to prevent waste generation at the source and, where prevention is not possible, to minimize, reuse, or recycle waste to the greatest extent practicable. All waste management activities will be carried out in compliance with relevant Turkish legislation and applicable international standards.

Waste types expected to be generated during the construction phase include excavation materials (soil, rock, inert debris), construction wastes (such as concrete remnants, packaging materials, and surplus materials), domestic and residential waste from worker accommodation and administrative areas, packaging waste (paper, plastic, metal, glass), reusable components (such as timber, metal, and topsoil), and recyclable materials including waste tires and electrical or electronic equipment.

A Solid Waste Management Plan, Hazardous Material Management Plan, Environmental Accident and Spill Response Management Plan, and Excavated Material Management Plan will be implemented in accordance with national regulations and international standards for the management of all types of waste.

The management of excavated material, storage areas, and management strategies within the scope of national regulations and international standards are specified in this management plan.

In order to minimize and appropriately manage the wastes generated on site, following good management practices will be used:

- During the construction, Contractor and subcontractors will identify all potential waste streams at their point of generation, their nature (classification) and quantity to be generated in order to identify opportunities to apply waste management hierarchy. Types and quantities of the wastes to be generated will be monitored throughout the construction phase. A waste minimization practices will be applied during the construction activities.
- Prevention of waste generation via management practices (such as instituting procurement measures that recognize opportunities to return usable materials, avoiding or decreasing amount of excavated material by backfilling activities, etc.) will be the primary aim of this Plan.
- Reduction of waste generation (via management practices, avoiding or decreasing materials use, etc.) will be the secondary aim of this Plan.
- Waste recycling will be promoted within all Project activities and related trainings will be provided accordingly.
- Excavated material will be separated from other wastes.
- Personnel responsible from the handling of wastes will be trained regarding to proper handling and management practices.
- Dumpsites will be inspected regularly to ensure proper waste management measures are taken.
- Excavated material will not be disposed on-site under any circumstances unless it will be using during backfilling stage of the construction activities.

Construction of the Project and related structures such as the cuttings, earthworks, etc. will generate significant volumes of material from earthmoving and site clearance. The cut and fill balances along the Project route indicates that total amount of surplus material to be disposed will be around 10,8 million m^3. 22 surplus material dumpsites are planned to be used for the Project which are listed below.

Table V.1 The List of Dumpsites and Capacities

Location		Description of the Site	Capacity Information (m^3)	Planned Capacity Usage (m^3)
Km 52+544	Antalya, Serik	D-2	736,660.28	470,850.34
Km 59+580	Antalya, Serik	D-3	2,111,705.36	56,553.44
Km 61+500	Antalya, Manavgat	D-6	4,378,853.62	156,734.25
Km 64+160	Antalya, Manavgat	D-7	3,327,945.41	615,670.09
Km 71+800	Antalya, Manavgat	D-10	7,516,026.00	184.77
Km 74+360	Antalya, Manavgat	D-11	1,037,880.08	149,039.49
Km 76+240	Antalya, Manavgat	D-14	371,940.90	160,175.41
Km 78+790	Antalya, Manavgat	D-15	1,261,077.59	223,457.91
Km 86+340	Antalya, Manavgat	D-16	4,869,058.60	1,050,435.77
Km 87+800	Antalya, Manavgat	D-17	2,504,385.12	262,361.54
Km 95+410	Antalya, Manavgat	D-18	1,124,258.46	73,868.29
Km 95+410	Antalya, Manavgat	D-19	1,522,633.16	162,563.18
Km 98+290	Antalya, Manavgat	D-20	711,115.13	41,87.43
Km 100+000	Antalya, Manavgat	D-21	1,648,102.37	2,174.86
Km 107+850	Antalya, Manavgat	D-22	1,222,720.44	301,963.83
Km 110+820	Antalya, Manavgat	D-23	20,093,692.94	584,686.39
Km 113+050	Antalya, Manavgat	D-24	2,552,495.14	205,287.40
Km 123+000	Antalya, Alanya	D-26	5,638,396.17	871,743.65
Km 124+250	Antalya, Alanya	D-27	1,926,864.50	1,297,126.46
Km 127+000	Antalya, Alanya	D-28	3,763,723.90	383,579.61
Km 130+400	Antalya, Alanya	D-29	1,991,642.98	1,625,062.08
Km 132+720	Antalya, Alanya	D-30	3,307,202.05	2,132,211.56

Although as a worstcase scenario, it was considered that all dumpsites will be used during the site preparation and excavation works of the construction phase, in practice, dumpsites will be used with the consideration of the construction schedule, project needs, backfilling capability of the excavation material etc.

As it can be seen from Table V.1, total capacity of the dump sites are two times more than project demands. Before use of new dumpsites started necessary permits and licenses will be acquired from relevant authority and AAOİAŞ will need to take opinion from relevant authorities (such as Ministry of Agriculture and Forest, municipality of the relevant district and/or province, and/or other authority which has responsibility on possible storage area in any manner) and the material will be stored accordingly. The statutory process is that the relevant authority will determine where the surplus materials are to be

deposited (e.g. in abandoned quarries or borrow pits), and these instructions must be followed by AAOİAŞ and the subcontractors. In addition to local regulations, Project's ESHS requirements will be followed by AAOİAŞ during management of surplus material and dumpsites.

Where technically and economically feasible, reusable materials such as wood, metal, topsoil, and excavation waste will be repurposed for use in other construction activities or site restoration works. This approach will contribute to minimizing the volume of waste requiring off-site disposal.

VI. MITIGATION MEASURES FOR SOLID WASTE-RELATED RISKS AND IMPACTS

Although the primary principle of solid waste management is to prevent waste generation at the source, mitigation measures should be implemented to minimize the adverse environmental and social impacts of the solid waste generated during the construction phase. These measures are designed in accordance with the waste management hierarchy—prevention, minimization, reuse, recycling, recovery, and safe disposal—and are essential to ensure full compliance with Turkish legislation and international standards.

Excavated material will be collected and stored separately from other wastes in designated temporary excavated material storage areas.

Transportation and Access

The following management practices given below will be used during the transportation, reuse and disposal of excavated material:

- Protocols will be signed with the related municipalities or provincial administrations for the transfer of excavation material for the disposal. As per the clauses to be included in the protocols, when required licensed facilities will be obligated to provide relevant reports, drawings, agreements, calculations or any other related document in order for Contractor to check the suitability and capacity of the services provided. Additionally, Project personnel will be allowed to conduct periodic site visits/audits to visually confirm that the Project wastes are being managed in an environmentally responsible manner.
- The materials unearthed after the excavation will be evaluated in order to determine their technical properties. In this context, materials that meet the technical specifications, among the formations in the nature of backfilling material specified in the geotechnical report, will be used in the backfilling. Use of suitable excavation material as backfilling material will be the primary priority in backfilling works in order to maximize the reuse of the materials and reduce the amount of disposed excavated material. Based on that, the following items will be evaluated while deciding filling materials:
    - Materials that do not include the following contents:
        - Topsoil,
        - Trees, shrubs, roots and similar organic materials,
        - Materials subject to internal combustion, including coal dust,
        - Swamp or water-saturated clayey and marly soils,
        - Waste materials such as garbage, debris, etc.,
        - Snowy, icy and frozen soils, materials that will easily crumble with water and cause settlements,
        - Soils containing soluble matter more than 20% by weight such as gypsum and rock salt,
        - Highly serpentinized rocks that show clay behavior when weathered.
    - Rocks prone to weathering (marl, claystone, shale, etc.) dispersed under water and pressure will not be used in filling.

During the excavation activities, topography of the Project Area will also be taken into consideration in order to minimize the excavation amount.

For excavations that are not suitable for backfilling, will be transferred to the Excess Excavated Material Storage Areas (i.e. Dump Sites). Locations of the excavation activities that will be carried out along the Project route, and list of corresponding Excess Excavated Material Storage Areas defined in the Project ESIA Report that are determined in accordance with the locations of the excavation activities and will be used for the disposal of excess excavated materials, are given in Table V.1.

In any case, during all excavation works, Regulation on Control of Excavation Soil, Construction and Demolition Wastes will be complied with.

Records for generated excavated material, from time of generation to final destination, will be maintained. Within this regard, a sample excavated material log form is provided in *Appendix A.*

Daily inspections regarding on-site management of wastes will be conducted during the construction phase of the Project. A sample checklist for subjects to be covered during inspections is provided in *Appendix B.*

Pollution Prevention

The primary goal of the pollution prevention is to incorporate all the measures necessary to avoid or minimize the creation of costly contamination.

Air Quality:

- Use of water suppression at dump sites and transportation routes, especially in hot-dry seasons and in windy conditions,
- Loads in all trucks transporting dust-generating materials will be sprayed with water to suppress dust,
- Use of water suppression for control of loose materials on paved or unpaved road surfaces,
- Use of dust suppression techniques, such as covers, water suppression, or increased moisture content for open materials storage piles,
- In case alternative roads are present, traffic to the dump site will avoid passing through the settlements. If unavoidable, necessary measures (i.e. speed limits) will be taken to prevent/minimise transportation related emissions and inform the communities about the activities and schedule.
- Speed reduction for the means travelling inside the dump site.
- Trucks carrying fine material (excavation soil or fine material, etc.) will be covered with tarpaulin to prevent dust emissions.
- During the days of extreme wind conditions construction and material extraction works will be suspended temporarily and/or production amounts will be reduced (e.g. amount of material extracted at the quarries/borrow sites) at locations close to sensitive receptors.
- Loading and unloading of material will be carried out without scattering to the extent possible.
- Lighting of fire and burning of materials in will be prohibited.

In order to reduce the exhaust emissions from trucks using during the transportation of excavated material, the following actions shall be implemented:

- Activities will be conducted trying to use the minimum required number of means at the same time,

- Transportation distances will be minimized where possible,
- Vehicle engines and other machinery shall be kept turned on only if necessary, avoiding any unnecessary emission,
- All equipment and machinery must be maintained for compliance with standards and technical regulations for the protection of the environment and have appropriate certification,
- Machinery and equipment shall be periodically checked and maintained to ensure their good working condition.
- Monthly monitoring campaign will be conducted during the construction phase at baseline locations close to the dump sites. In case of any air quality related grievance, air quality measurement campaign (except from this plan and to be specific to the locations of the grievance) will be carried out immediately at the area where air quality related grievance is received.

Noise and Vibration Management:

Mitigation measures to be taken for noise and vibration management are given below:

- Trucks with lower sound power levels will be selected where possible.
- The sound power levels of the trucks to be used will meet the standards given in the Regulation on Machinery Safety.
- Maintenance of all the equipment / vehicles will be periodically undertaken in order to minimize the possible high noise levels generated by the equipment / vehicles.
- Suitable mufflers will be installed on engine exhausts and compressor components.
- Workers will be trained in noise abatement best practices, including avoiding unnecessary revving of engines and switching off equipment when it is not required.
- Haul routes will be well maintained and where steep gradients are required, operatives will be trained to minimize engine noise through avoiding unnecessary revving etc.
- Acoustic enclosures will be installed for equipment casing radiating noise.
- Operation hours of the specific pieces of equipment or operations, especially mobile sources operating through community areas, will be limited to hours between 7 am and 10 pm.
- Noise sources will be relocated to less sensitive areas where possible, in order to take advantage of distance and shielding.
- Project traffic routing through community areas will be reduced where possible.
- Grievance mechanism will also be used to record and respond to complaints.
- Monitoring campaigns will be performed monthly at the baseline noise measurement locations close to the dump sites.
- In case of any noise related grievance, noise measurement campaign (except from this plan and to be specific to the locations of the grievance) will be carried out immediately at the area where noise related grievance is received.

Hazardous Materials Management

In order to prevent incidents causing pollution of soil, water, groundwater and air; application of proper methods for transportation, handling, storage, usage and disposal of hazardous materials is crucial. Therefore, comprehensive measures set for management of hazardous materials in the scope of the Project are explained in Hazardous Material Management Plan and Environmental Accident and Spill Response Plan in order to ensure proper management to prevent (and/or reduce) environmental pollution and maintain health and safety in dumpsites, as well.

Rehabilitation

Rehabilitation of the dump sites will be planned with a separate Rehabilitation Plan after the completion of construction phase by AAOİAŞ.

VII. TRAINING

The employees of the Limak and subcontractors will require to attend the new-hire induction training that includes environmental and social awareness and compliance training to be aligned with Project ESIA and ESMS.

Regular internal and external (when necessary) trainings will be given to ensure that the mitigation measures indicated in this Plan are applied during the construction phase of the Project for all involved parties. Regular internal inspections will be conducted to ensure that the mitigation measures indicated in this Plan are applied during the construction phase of the Project.

Moreover, personnel responsible from the transportation of excavated material will be trained specifically in order for application of proper handling and management practices. A training on the management of excavated material will be provided to the workers. The training subjects at least includes:

- Requirements of this Plan;
- Precautions and risks when transportation of excavated material;
- Proper usage of Personal Protective Equipment (PPE);
- Excavated material minimization, segregation and storage; and
- Excavated material appropriate disposal.

VIII. MONITORING

Excavated material will be recorded on a monthly basis. Records for excavated material from time of generation to final destination, will be maintained. Within this regard, a sample waste log form is provided in Appendix A.

Daily inspections regarding on-site management of excavated material will be conducted during the construction phase of the Project. A sample checklist for subjects to be covered during inspections is provided in Appendix B.

Monitoring activities will be coordinated by the Limak's E&S Manager, in close collaboration with the Management teams. Key responsibilities will include reviewing the type and quantity of waste generated and disposed, verifying the implementation of waste segregation at source, and ensuring the consistent application of management measures.

The performance of contractors and subcontractors in implementing excavated material management requirements will be reviewed through environmental audits, site supervision reports, and field observations. Any identified non-conformities will trigger timely corrective and preventive action plans. Monitoring will also include follow-up assessments to confirm the effectiveness of implemented measures and to ensure recurrence is prevented.

In addition to internal monitoring, inspections may be carried out by relevant public institutions, including the Ministry of Environment, Urbanization and Climate Change, in accordance with Turkish legislation. The frequency and scope of these inspections will be determined by the authorities and may include review of monitoring data, on-site waste handling practices, and documentation of compliance.

Monitoring efforts will be guided by the framework provided in Table VIII.1, which outlines the parameters to be monitored, the corresponding monitoring locations, frequency of inspections, and responsible parties. These monitoring activities will be essential for evaluating the effectiveness of excavated material mitigation measures and ensuring full compliance with national regulations and Project standards.

Table VIII.1 Key Monitoring Activities

Parameter	Monitoring Station / Location	Monitoring Method	Monitoring Frequency	Responsible Parties
-Excavation and fill volumes (m^3) -Volume of reused materials (m^3) -Conditions at the storage sites	Excavated material storage sites	Site audit	Daily	AAOİAŞ, Limak, Sub-Contractor
Excavated Material Management	Road construction sites, quarries, dump sites	Excavated material storage areas and site excavated material management practices (separation, storage) will be inspected	Daily	AAOİAŞ, Limak
Annual Excavated Material Generation	Road construction sites, quarries, dump sites	Annual waste declaration records will be checked including excavated material.	Annually	AAOİAŞ, Limak
Grievance	All active construction and camp areas, dump sites, settlements near the Project areas	Number of grievances received regarding to excavated material management, will be recorded.	Weekly	AAOİAŞ, Limak
Training	All Project Areas	Employees will be trained.	Monthly	AAOİAŞ, Limak

In cases of non-compliance identified through internal oversight, AAOİAŞ will ensure that corrective and preventive measures are promptly implemented in coordination with the Main Contractor (Limak) and relevant subcontractors.

All excavated material-related findings, including violations of handling protocols, non-compliance incidents, or complaints received from surrounding communities, will be documented in accordance with national environmental regulations and Project procedures. In the event of serious violations—such as illegal disposal or mismanagement of hazardous waste—AAOİAŞ will ensure that the issue is reported to the competent authorities and that appropriate technical, procedural, and contractual actions are taken.

IX. KEY PERFORMANCE INDICATORS

The following Key Performance Indicators (KPIs) will be monitored, verified, and evaluated.

Table IX.1 Key Performance Indicators – Construction Phase KPIs

Monitoring Parameter / Performance Indicator	Target	Frequency	Responsible Party
Excavated material amount collected of each dump site	Minimized and continued improvement in excavated material generation amounts	Quarterly	AAOİAŞ, Limak
Excavated material management practices planned vs completed	100%	Quarterly	AAOİAŞ, Limak
Number of non-compliances with excavated material management practices identified in this Plan	Minimized and continued improvement	Quarterly	AAOİAŞ, Limak

Monitoring Parameter / Performance Indicator	Target	Frequency	Responsible Party
% of the validity of the agreements and protocols regarding excavated material transfer and disposal	100%	Quarterly	AAOİAŞ, Limak
Annual amount of declared excavated material	Declared every year	Annually	AAOİAŞ, Limak
Number of spillages / leakages resulting soil contamination	Zero per year	Annually	AAOİAŞ, Limak
Number of grievances received regarding excavated material management	Minimized and continued improvement in number of grievances	Monthly	AAOİAŞ, Limak
Number of trainings planned vs completed	100%	Monthly	AAOİAŞ, Limak

X. AUDIT AND REVIEW

The implementation of this Plan should be regularly monitored and reviewed in accordance with the ESMMP. All incidents and non-conformities should be documented and reported as outlined in the Plan. Contractors and subcontractors should be subject to audits conducted by the Project Sponsor within the scope and schedule defined in the Contractor and Subcontractor Management Plan. These audits and the associated records should be managed in compliance with the Project's established plans and procedures. Relevant records that will be reviewed during audits may include the external grievance and suggestion tracking database related to waste management issues, the internal grievance and suggestion tracking database concerning excavated material handling and site practices, training records, waste inventory logs, contractor waste transfer documentation, and non-conformity records related to excavated material segregation, storage, or disposal. Observations and deficiencies identified during audits should be recorded in formal audit reports, and all findings requiring improvement should be registered under Corrective Actions. Project management should review audit outcomes and corrective action records, follow up on progress, and ensure that additional measures are implemented where necessary.

XI. REPORTING

Regular reporting will be conducted to ensure the effective implementation and continuous improvement of management activities throughout the construction phase of the Project. Reporting will be structured to address both internal monitoring and auditing outcomes, as well as external compliance obligations and stakeholder engagement requirements.

Evidence of the implementation of the actions/measures and related results are collected through inspection and auditing activities as detailed in Section X "Audit and Review" of this Plan; these evidences are described in the audit reports.

Limak and Subcontractors are responsible to collect the excavated material related statistics (including all types of training delivered to employees and incident records) on a monthly basis and report to the AAOİAŞ. If any subcontractor is involved, it is responsible for duly implementing requirements included in this Plan under the Contractor's supervision.

The results of the inspection and audit activities will be summarized in a Report on a biannual basis that will be made available to stakeholders, if requested, which is under the responsibility of the Contractor. This report will constitute the basis for the monitoring report to be available for the Lenders.

The following reporting requirements apply for AAOİAŞ:

- Incident reporting;
- Emergency response reporting;

- Records of annual emergency response training exercises;
- Semi-annual reports on KPIs and performance trends;
- Monthly reports of relevant training activities completed and attendance registers to be maintained;
- Daily/Weekly/Monthly reports of site inspection activities;
- Audit reports;
- Inspection logs and status of non-compliances.

In addition, the following external reporting will be done:

- Monthly and biannual ESHS reports on KPIs and performance trends will be submitted by EPC to SPV,
- All environmental and social incidents will be appropriately documented, notified and reported in accordance with established procedures the terms and conditions by EPC to SPV,
- The Lenders will be notified of incidents pursuant to the terms and conditions agreed upon in the Finance Agreements through SPV.

Reports will be prepared using data gathered through excavated material monitoring activities defined under this Plan. The results and supporting evidence of these monitoring activities (e.g., waste quantity logs, contractor compliance records, and photographs) will be documented in detail within appropriate reporting formats. This section of the Plan outlines the instructions and requirements for implementing these reporting activities.

APPENDIX A – EXCAVATION MATERIAL LOG FORM

No	Date	Amount (ton or m^3)	Transporter	Disposer	Name of the Dumpsite
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

APPENDIX B – EXCAVATION MATERIAL MANAGEMENT INSPECTION CHECKLIST

Inspection Date:		
Inspection Location:		
Control Measure	**Compliance (Yes/No)**	**Comment**
Are excavated material being stored at separate location from other wastes?		
Has a map been produced showing the temporary excavated material storage locations at the site which are visible to all workers?		
Are all temporary excavated material storage area separated and signed to prevent cross contamination of other waste materials?		
Are licenses of companies contracted for excavated material transport and disposal valid and up-to-date?		

SOIL MANAGEMENT and EROSION CONTROL PLAN

REVISION STATUS		
Revision Date	**Rev. No**	**Explanation**
16.06.2025	00	This plan is prepared according to TS EN ISO/IEC 9001:2015, TS EN ISO/IEC ISO 14001:2015, TS EN ISO/IEC 45001:2018 and IFC Performance Standards
08.09.2025	01	Revision as per Environmental and Social Due Diligence comments

SOIL MANAGEMENT and EROSION CONTROL PLAN

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LIST OF ABBREVIATIONS

AAOİAŞ	Antalya-Alanya Otoyolu İnşaat Yatırım ve İşletme A.Ş.
CH	Critical Habitat
CLO	Community Liaison Officer
E&S	Environmental and Social
EHS	Environmental, Health, and Safety
ER	Employee Relations
ERT	Emergency Response Team
ESHS	Environmental, Social, Health And Safety
ESIA	Environmental and Social Impact Assessment
ESMMP	Environmental and Social Management and Monitoring Plan
ESMS	Environmental and Social Management System
EU	European Union
IFC	International Finance Corporation
ISO	International Organization for Standardization
KPIs	Key Performance Indicators
Limak	Limak İnşaat Şanayi ve Tic. A.Ş.
MSDS	Material Safety Data Sheet
OHS	Occupational Health and Safety
PPE	Personal Protective Equipment
RCA	Root Cause Analysis
SEP	Stakeholder Engagement Plan
SPV	Special Purpose Vehicle (Antalya-Alanya Otoyolu İnşaat Yatırım ve İşletme A.Ş.)
SRP	Spill Response Personnel
WHO	World Health Organization

I. INTRODUCTION

Ministry of Transport, and Infrastructure (former Ministry of Transport, Maritime Affairs and Communications), General Directorate of Highways ("KGM" or "the Administration"), as the owner of the Antalya-Alanya Motorway Project ("The Project"), has tendered for a contract in accordance with the Law on Implementation of Some of the Investments and Services in the Framework of Build, Operate and Transfer Model (Law No: 3996). Following the tendering process, KGM has awarded Antalya-Alanya Otoyolu İnşaat Yatırım ve İşletme A.Ş. (AAOİAŞ or the Project Sponsor) with a Build, Operate and Transfer (BOT) contract for the implementation of the Project. Accordingly, AAOİAŞ will be referred as Project Sponsor[1] in the scope of this report. The main contractor for the Project has been designated as Limak and will henceforth be referred to as the Contractor (or EPC).

The project is designed to connect the districts of Serik and Alanya via the Manavgat district of Antalya province. The Project will enhance the existing transportation network services with its surrounding provinces: Burdur, Muğla, Konya, Isparta, Karaman and Mersin. Various environmental, social, and technical studies have been conducted along the initial route of the Project tendered by the KGM. Based on these studies, the route was optimized, incorporating engineering practices and addressing environmental and social considerations, particularly issues of involuntary and economic resettlement, before being finalized. According to the most current design, the total length of the Motorway, which will be a dual carriageway of mostly 3 and partially 2 lanes (3x2 and 2x2) in each direction, is 117.8 kilometers including the main carriageway and the access roads[2].

This Soil Management and Erosion Control Plan ("SMECP" or "Plan") has been prepared by Antalya-Alanya Highway Construction Investment and Operation Inc. ("AAOİAŞ" or "SPV") for the Antalya-Alanya Highway Project ("Project") in accordance with national legislation, the Equator Principles ("EP"), the International Finance Corporation ("IFC") Performance Standards ("PSs"), and the international standards that reference the relevant legislative sections. The Plan covers the construction phase of the Project.

I.1 Project Description

The Project starts at Serik Interchange (Km: 52+000) and then proceeds eastward, following the corridor at the foothills of the Taurus Mountains within the boundaries of Serik and Manavgat districts, ending at north of Konaklı neighborhood of Alanya District (Km: 136+000). From this point onwards, the route turns southward with a 2x2 lane connection road and connects to the D400 state road at the Alanya West Interchange. As of April 2025, the current Project design includes a total of 117.8 kilometers of road, comprising 84 kilometers of main road (motorway) and 33.8 kilometers of access roads.

The map showing the construction components and road route within the scope of the Project's construction activities is provided in *Figure I-1.*

[1] The BOT Contract uses the term "Appointed Company" to refer Project Sponsor

[2] It should be noted that the environmental and social baseline characterization, maps and scoping assessments provided in this report are based on the most current design

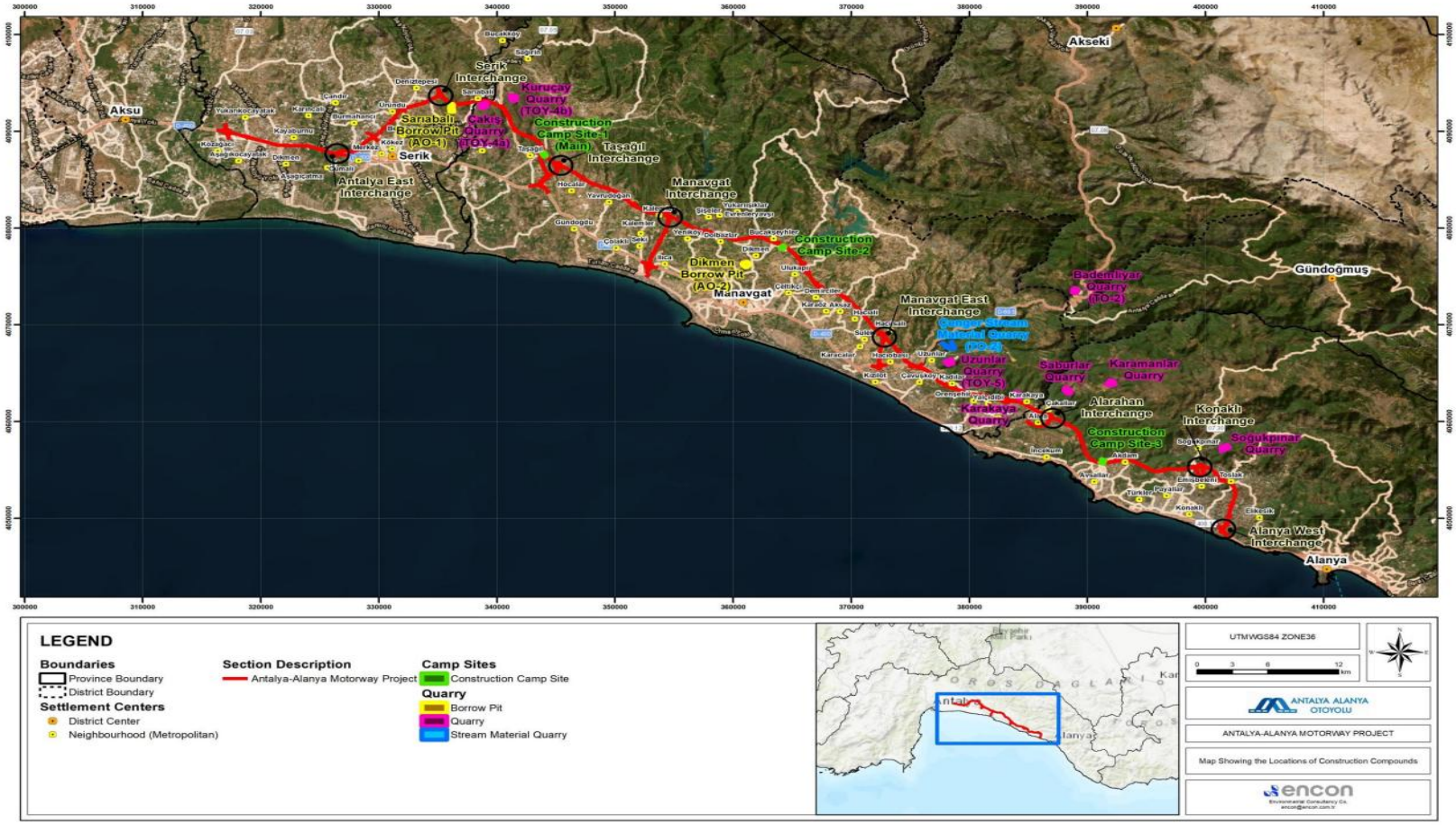

Figure I-1.Map Showing the Locations of Construction Compound

Other structures to be built as part of the project are as follows:

- 16 viaducts,
- 22 bridges,
- 305 culverts,
- 25 interchanges,
- 56 overpasses,
- 43 underpasses, and
- 5 tunnels.

I.2 Purpose and Scope

This Soil Management and Erosion Control Plan (SMECP) ("the Plan") has been prepared for the Antalya–Alanya Motorway Project ("the Project").

This Plan has been developed to provide further details on the measures to be implemented during the construction phase of the Project to ensure that the actual environmental impacts are consistent with those evaluated in Environmental and Social Impact Assessment (ESIA) and that mitigation measures are applied as intended and effective.

This SMECP has been developed according to the Turkish regulatory framework, International Finance Corporation (IFC) Performance Standards (PSs) and IFC General and Sector Specific Environmental, Health and Safety (EHS) Guidelines, IFC Environmental, Health, and Safety Guidelines for Railways, IFC Environmental, Health, and Safety Guidelines for Construction Materials Extraction and related EU Directives.

The purpose of this SMECP is to provide a clear set of actions and responsibilities to:

- Ensure proper topsoil stripping, stockpiling and application measures are taken, in order to achieve successful rehabilitation of the Project Area
- Prevent/minimize erosion at the Project Area
- Prevent/minimize soil pollution at the Project Area

This Plan applies to all Project activities under the Contractor's supervision, its subcontractors and to all employees. The Contractor is the main responsible for the implementation of this Plan. Subcontractors will be responsible to work in line with all environmental and social management systems (ESMS) of the Contractor.

This management plan is a living document developed with the best available information and will be reviewed and revised as necessary due to the nature of the construction and progress.

This Plan should be implemented by all construction-phase parties, including the Project Sponsor (Antalya-Alanya Otoyolu İnşaat Yatırım ve İşletme A.Ş. – AAOİAŞ), the Main Contractor (Limak), and all subcontractors. Responsibilities related to implementation, training, monitoring, and reporting should be clearly defined and communicated across all relevant levels. In case of changes in project design, materials used, or construction methodology, this Plan should be reviewed and updated accordingly.

II. LEGISLATIVE FRAMEWORK AND REFERENCE STANDARDS

This section includes policies, standards and requirements of reference for this Plan that are applicable for, but not limited to, construction phase of the Project. Project standards are described in the Project ESIA and are listed below:

- National legislative requirements and all permits, licenses and approvals
- IFC PSs

- Equator Principles (EPs) IV
- Other good international industry practices (GIIP) including ISO 9001:2015 - Quality Management Systems, ISO 14001:2015 – Environmental Management Systems and ISO 45001:2018 - Occupational Health and Safety Management Systems
- International Conventions and Protocols Türkiye is a party to
- The Contractor's Quality Policy, Health, Safety and Environmental Policy and related practices and procedures.

II.1 National Requirements

The following Turkish laws and regulations provide the legal foundation for managing environmental accidents, hazardous material spills, and associated risks during the construction phase of the Project:

- Environmental Law (Law No. 2872)
- Law on Protection of Soil and Land Use (No. 5403)
- Regulation on Reclamation of Land Deteriorated by Mining Activities
- Regulation on Control of Soil Pollution and Contaminated Lands by Point Sources
- Regulation on Waste Management
- Regulation on Mining Wastes
- Regulation on Control of Excavation Soil, Construction and Demolition Wastes
- Regulation on Contaminant Release and Transportation Record

II.2 International Standards and Conventions

In addition to Turkish national legislation, the following international standards and guidelines should be taken into account to ensure compliance with best practices and international lender requirements.

To ensure responsible operations, AIIB adheres to policies addressing environmental and social impacts as outlined in its Environmental and Social Framework ("ESF") document. Updated in June 2024, the ESF reflects AIIB's commitment to international standards and sustainable development practices. The ESF includes the Environmental and Social Policy (ESP), which sets mandatory requirements for all projects, supported by Environmental and Social Standards ("ESSs").

The EPs are a set of voluntary environmental and social guidelines that have been adopted by a significant number of financial institutions influential in the project finance market. The EPs comprise a set of ten broad principles that are underpinned by the environmental and social policies, standards and guidelines:

- Principle 2: Environmental and Social Assessment will require the client to conduct an appropriate Assessment process to address, to the EPFI's satisfaction, the relevant environmental and social risks and scale of impacts of the proposed Project.
- Principle 3: Applicable Environmental and Social Standards - The Assessment process should, in the first instance, address compliance with relevant host country laws, regulations and permits that pertain to environmental and social issues.
- Principle 4: Environmental and Social Management System - an Environmental and Social Management Plan (ESMP) will be prepared by the client to address issues raised in the Assessment process and incorporate actions required to comply with the applicable standards.

IFC PS 1 Assessment and Management of Environmental and Social Risks and Impacts, underscores the importance of managing environmental and social performance throughout the life of a project. An effective ESMS is a dynamic and continuous process initiated and supported by

management, and involves engagement between the clients, its workers, local communities directly affected by the project (the Affected Communities) and, where appropriate, other stakeholders.

IFC PS 3 Resource Efficiency and Pollution Prevention, outlines a project-level approach to resource efficiency and pollution prevention and control in line with internationally disseminated technologies and practices. In addition, this PS promotes the ability of private sector companies to adopt such technologies and practices as far as their use is feasible in the context of a project that relies on commercially available skills and resources.

IFC EHS Guidelines - The EHS Guidelines are technical reference documents with general and industry-specific examples of GIIP. The EHS Guidelines contain the performance levels and measures that are generally considered to be achievable in new facilities by existing technology at reasonable costs.

IFC EHS Guidelines for Railways and EHS Guidelines for Construction Materials Extraction are applicable to the Project.

In addition to these, related EU directives are given below:

- Directive 2004/35/CE of 21 April 2004 on environmental liability with regard to the prevention and remedying of environmental damage
- Directive 2008/1/EC of the European Parliament and of the Council of 15 January 2008 concerning integrated pollution prevention and control

III. LINKAGE WITH OTHER PROJECT PLANS AND PROCEDURES

This Plan is supported by other management plans and procedures developed under the Environmental and Social Management System (ESMS) of the Project. The following plans and procedures are particularly relevant and should be implemented in coordination with the Soil Management and Erosion Control Plan:

- Solid Waste Management Plan
- Resource Efficiency Management Plan
- Excavated Material Management Plan
- Water, Wastewater, and Storm Water Management Plan
- Hazardous Materials Management Plan
- Occupational Health and Safety Management Plan
- Community Health, Safety, and Security Management Plan
- Traffic Management Plan
- Environmental and Social Management and Monitoring Plan (ESMMP)

The effective integration of these plans should be ensured to maintain compliance with national regulations and international standards and to minimize the cumulative environmental and social impacts of construction activities.

IV. ROLES AND RESPONSIBILITIES

To support this structure, the roles and responsibilities specifically related to the implementation, monitoring, and reporting requirements of this Plan are summarized below .

General Manager (SPV):

- Promote a culture of social responsibility across the SPV and its stakeholders.
- Ensure the provision of necessary resources and organizational support for the implementation of plan.

- Supervise and coordinate EPC contractors and subcontractors to ensure proper execution of construction, commissioning, and operational phases.
- Support the E&S and H&S Manager in preparing, disseminating, and implementing this plan. In the event of any incompatibility regarding the storage or transportation of excavation materials, ensure that the EPC and SPV collaborate with the E&S and H&S Manager and other responsible parties to take appropriate and preventive measures.
- Make executive decisions on project budgeting, resource allocation including employee, and capital management to support project execution and sustainability, environmental and social compliance.
- Ensure the monitoring environmental, social and financial performance, reporting, and risk exposure of the SPV, ensuring transparency and accountability to all stakeholders, including SPV, stakeholders and investors.

E&S Manager (SPV):

- Review and ensure the preparation, revision, and implementation of all plans in accordance with national laws, regulations, company policies, international standards and lender requirements.
- Ensure and monitor that EPC and subcontractors correctly implement site practices and management plans.
- Provide technical support to EPC and subcontractors for the implementation of the Plan.
- Collaborate with internal teams (e.g., H&S, Legal, Procurement) to integrate E&S criteria into project operations and contracts. Monitor the environmental and social performance of EPC and subcontractors to ensure compliance.
- Prepare and submit E&S compliance and performance reports to internal and external stakeholders, including lenders and regulators.
- Support stakeholder engagement activities and consultations with local communities.
- Engage with regulatory authorities, auditors, and NGOs on E&S compliance and performance matters.
- Lead the implementation of corrective actions and incident prevention measures.

Health and Safety Manager (SPV):

- Ensure the preparation, revision, and implementation of the health and safety-related plans and documents in accordance with the SPV's corporate policies, regulatory obligations, international standards and lender requirements and are implemented by EPC and subcontractors through appropriate method statements and site practices.
- Ensure that all construction site activities are carried out safely by EPC and subcontractors.
- Ensure root causes are identified, documented, and that corrective actions are implemented and verified.
- Monitor the compliance of EPC and subcontractors with the safety, health, and community safety related plans, and applicable laws, international standards and lender requirements.
- Conduct regular inspections, audits, and hazard identification walkthroughs on construction sites.
- Conduct a comprehensive accident and incident investigation process.
- Provide technical support to EPC and subcontractors for the proper implementation of the health and safety plans.

- Ensure the accurate records of inspections, incidents, safety meetings, and training records
- Engage with regulatory authorities on inspections, audits, and compliance verification

Project Director (EPC):

- Ensure that all project activities comply with local laws, environmental regulations, corporate governance policies, and international best practices and lender requirements.
- Promote a culture of environmental and social responsibility across the EPC and its stakeholders.
- Define and implement the overall business strategy and direction of the EPC in alignment with SPV and stakeholder expectations.
- Support the E&S and H&S Manager in preparing, disseminating, and implementing this plan. In case of non-compliance, ensure correct and preventive actions are taken in collaboration with the SPV and other responsible parties.
- Make executive decisions on project budgeting, resource allocation including employee, and capital management to support project execution and sustainability, H&S compliance.
- Ensure the monitoring environmental, social and financial performance, reporting, and risk exposure of the SPV, ensuring transparency and accountability to all stakeholders, including EPC, stakeholders and other related parties.
- Approval of project management plans (HSE, E&S, QA/QC, etc.) in line with company policies, legal frameworks, international standards, SPV and lender requirements.
- Coordinate with regulatory authorities, community representatives, and auditors as required.
- Address stakeholder concerns proactively and transparently, particularly those related to safety, environmental, and social matters.

E&S Manager (EPC):

- Coordinate the preparation, revision, and implementation of the Plan with H&S Manager in accordance with the Project SPV's corporate policies, regulatory obligations, international standards and lender requirements and are implemented by EPC and subcontractors through appropriate method statements and site practices.
- Ensure the excavated material is assessed and managed by waste recycling and reuses good practices.
- Facilitate coordination with the SPV's E&S Manager for compliance audits and reporting.
- Implement environmental and social measures through site practices and method statements.
- Ensure that all conditions and obligations outlined in the environmental and social management plans are implemented and adhered to during project activities.
- Ensure employees and contractors fulfil the requirements and relevant training of the environmental and social management plans.
- Ensure the environmental and social management plans are communicated and implemented by Contractors/Subcontractors.
- Conduct regular inspections, audits, and hazard identification walkthroughs on construction sites.
- Monitor compliance of Contractors/Subcontractors with environmental and social management plans requirements.

- Ensure the development and follow-up of corrective/improvement actions.
- Conduct comprehensive investigations of accidents and incidents and promote continuous improvement via lessons learned.

H&S Manager (EPC):

- Coordinate the preparation, revision, and implementation of the Plan with E&S Manager in accordance with the SPV's corporate policies, regulatory obligations, international standards and lender requirements and are implemented by EPC and subcontractors through appropriate method statements and site practices.
- Ensure that all construction site activities are carried out safely by EPC and subcontractors.
- Ensure root causes are identified, documented, and that corrective actions are implemented and verified.
- Monitor the compliance of EPC and subcontractors with the safety, health, and community safety related plans, and applicable legislation, international standards and lender requirements.
- Conduct regular inspections, audits, and hazard identification walkthroughs on construction sites.
- Provide technical support to EPC and subcontractors for the proper implementation of the Project's plans.
- Ensure the accurate records of inspections, incidents, safety meetings, and training records.
- Ensure the corrective actions process is followed up on by all parties strictly.
- Report on H&S performance, non-compliance, and corrective actions to the EPC Project Director.
- Engage with regulatory authorities on inspections, audits, and compliance verification.

V. SOIL MANAGEMENT and EROSION CONTROL MANAGEMENT MEASURES

V.1 Topsoil Management

Topsoil Stripping

Maximization of the topsoil recovery during the land preparation and construction phase is essential to ensure that sufficient topsoil would be available for use in restoration works. Within this regard, following measures will be taken:

- The boundaries of clearing and construction areas will be clearly marked or fenced to prevent impacts beyond these areas.
- Vegetation covering the topsoil, can cause difficulty in the removal of specific topsoil depths and excessive quantities of vegetative matter in stockpiles may promote chemical and biological degradation of the seed reserves that will be the future source of natural regeneration during rehabilitation process. Therefore, prior to topsoil stripping process, vegetation will be removed or reduced by grazing and/or clearing. Before the beginning of site preparation (vegetation clearing and topsoil removal) an expert biologist will perform surveys of the flowering period of the species identified as triggering Critical Habitat (CH)in the areas to be cleared of vegetation and its immediate surroundings. Please refer to Biodiversity Management Plan for the actions to be taken before vegetation clearance.
- Weed control will be conducted before vegetation clearance to prevent the formation of invasive species during revegetation.
- All cleared vegetative material will be buried in-pit, or if suitable, will be placed as habitat within the conservation areas.

- Machinery used for topsoil stripping will be cleaned of weeds, plants, and diebacks before being brought to the Project Area and between operations to prevent the introduction and spread of these elements.
- Soil infected with dieback and weeds will be sent to landfill to minimize the risk of spreading these species across the Project Area.
- Topsoil will be stripped separately from subsoil, considering the soil's depth and characteristics. Topsoil will be stripped to a depth of 10 to 30 cm. In areas with little or no topsoil, the Contractor will determine the depth (if any) to be stripped.
- The stripping and handling of topsoil will be carried out when the soil moisture content is optimum for the soil texture class.
- Topsoil stripping will not be conducted during windy and rainy periods. Construction is to be delayed 24 hours following a 24-hour rainfall of 10 mm or more during the preceding day, after which soil condition will be reassessed.
- Appropriate equipment will be used for the topsoil stripping activities. Surface grading of stockpiles will be performed with lightweight tracked vehicles or wheeled vehicles to prevent soil compaction.
- Vehicular traffic on soils to be stripped will be minimized to prevent soil compaction.
- Topsoil will be stripped progressively in order to reduce erosion.

Topsoil Storage

Depending on the topsoil characteristics, stripped topsoil will be stockpiled as agricultural topsoil and forest topsoil separately. During the storage of topsoil, following measures will be taken:

- To prevent the loss of the biological fraction in stockpiled topsoil due to long storage times, additional soil amelioration measures such as seeding and fertilization will be implemented to maximize topsoil recovery for rehabilitation. If topsoil and stockpiles are stored for over a year, they will be seeded using appropriate methods to prevent erosion from wind and rain and to protect the organic matter content. Fast-growing, ground-covering flora species will be used for revegetation to minimize soil erosion. Suitable species and seed mixtures (fast-growing, local plants) will be selected in consultation with biodiversity specialists. Refer to the Biodiversity Management Plan for topsoil conservation actions.
- The average height of topsoil stacks will be 1.5 meters. The side slope of the stacks will not exceed 3:1 ratio (h:v)..
- The stockpile surface will be lightly compacted as needed to restrict rainfall penetration, maintain aerobic conditions, and will be protected from flooding by placing berms around the outside. Topsoil and subsoil piles will be free-draining, with gaps left in linear topsoil piles to allow access and prevent water from being held against the stack.
- The area where topsoil will be stored will have a maximum inclination of 5%.
- All stockpiles will be positioned away from drainage lines, if applicable.
- Topsoil will be stored separately from subsoil at designated storage areas along the route and other work sites under suitable conditions to preserve its vegetative properties.
- Each topsoil stockpile will have appropriate signage to ensure it is identifiable to all personnel.
- Stockpiles will be surrounded by silt fencing, temporary drainage lines, or similar erosion control devices to prevent soil erosion.

Rehabilitation

Areas cleared during construction for temporary use will be restored, as soon as possible, with the goal of producing a stable vegetative cover to minimize erosion, dust and spreading of invasive alien species, and the aim of re-establish the original habitat with a positive impact on biodiversity. Vegetation and topsoil rehabilitation activities will be performed in all temporary facilities (mobilization areas, storage areas) in order to restore their original habitat.

During the rehabilitation of the Project Area at the closure phase, it is expected that the rehabilitation will include the use of topsoil recovered from the stockpiles, ground preparation such as ripping and scarification of the top surface and the planting of local native seeds. Some degree of soil amelioration such as addition of fertilizer and/or soil pH adjustment may also be required. Within this regard, following measures will also be applied:

- Topsoil will not be used as a fill material.
- Topsoil will be respread in even layers at a thickness appropriate for the landform and capability of the area to be rehabilitated.
- Areas where topsoil is spread will be ripped while trying not to bring subsurface materials to the surface (e.g. large rocks).
- Following the respreading, topsoil will be seeded to establish revegetation cover as early as possible. Please refer to Biodiversity Management Plan for plant selection.
- Rehabilitated areas will be controlled regarding to diseased plants and weed outbreaks, and significant weed outbreaks will be taken under control by using chemical or mechanical control methods.

Rehabilitation of the land will commence immediately on removal of each individual facility. The rehabilitation condition will be to a condition at least as good as that prevailing before establishment of the facilities, depending on the post construction land use and Project's access agreement. Disturbed areas will be rehabilitated to the satisfaction of the Limak, the regulatory authority or landowner and will obtain written approval from the Limak, the appropriate regulatory authority or the landowner of the level of rehabilitation. Photographs of the condition of the area prior to construction may be used for reference.

For detailed information regarding to the rehabilitation of the Project Area at the closure phase of the Project, please refer to Biodiversity Management Plan.

V.2 Soil Management

Earthworks including excavation, backfilling and filling will be conducted through the Project. Suitable cut material will be used as backfill material for the Project. Optimization of cut and fill will be implemented during the construction process. Excess material will be hauled and stockpiled at designated areas to minimize impacts on the area of influence of the project prior to transportation to final disposal area. Storage areas to be constructed within the scope of the Project will be used for the storage of the excess excavated materials which could arise from the tunnel and route excavation works and not used as backfilling material.

Details regarding the excavation and backfilling operations within the scope of the project and the management, transportation, and final storage of the excavated material in storage areas are provided in the Excavated Material Management Plan. Following list is provided for soil management:

- Excavated material controlled and approved in terms of quality can be used as filling material.
- Designated material storage areas will be managed by dikes to prevent loss of soil.
- Observed contaminated areas at construction site will be rehabilitated in accordance with the Environmental Accident and Spill Response Management Plan.
- Disposal areas will be rehabilitated as per the regulatory requirements.
- .

Spill risks during the construction phase are particularly associated with the use of heavy construction equipment, mobile fuel tanks, chemical storage areas, and processing units such as asphalt and concrete batching plants. The improper handling of waste oils, chemical solvents, and other construction-related liquid wastes can lead to contamination incidents if preventive measures are not

adequately implemented. Substances such as petroleum hydrocarbons, detergents, and acids may have persistent impacts on environmental media if not promptly contained and remediated.

However there will be three construction camp sites (Main Camp Site (Manavgat), Camp Site-2 (Manavgat) and Camp Site-3 (Alanya), temporary construction camp site in Taşağıl is in use. In addition to these areas, there will be usage land for mechanic and asphalt plant and concrete plant areas which are listed below (see Table V.1). In these areas, activities such as refueling and oil changes will be intensive, so the spill risk is highest. Additionally, construction activities along the route, in quarries, and during transportation are also at risk of environmental accidents and spills. In these areas, in addition to spill kits located in risky areas, extra kits will be kept for delivery to nearby construction sites in case of an emergency.

Table V.1 Information on Camp Sites, Mechanic, Asphalt and Concrete Plant Areas

Location	Province	District	Nearest Neighbourhood	Description of the Site / Plant	Area (m²)
Km 55+450	Antalya	Serik	Sarıabalı	Concrete Plant-1	13,946
Km 59+400	Antalya	Manavgat	Taşağıl	Temporary Construction Camp Site	66,450
				Concrete Plant-2	
				Mechanical Plant-1	
				Asphalt Plant-1	
Km 64+400	Antalya	Manavgat	Taşağıl	Construction Camp Site-1 (Main)	-
Km 80+400	Antalya	Manavgat	Yeniköy	Concrete Plant-3	15,000
Km 87+500	Antalya	Manavgat	Bucakşeyhler	Construction Camp Site-2	42,371
Km 87+700	Antalya	Manavgat	Bucakşeyhler	Concrete Plant-4	
				Mechanical Plant-2	
				Asphalt Plant-2	
Km 89+700	Antalya	Manavgat	Ulukapı	Concrete Plant-4a	11,665
Km 99+200	Antalya	Manavgat	Sülek	Concrete Plant-5	11,977
Km 124+300	Antalya	Alanya	İncekum	Construction Camp Site-3	85,000
				Concrete Plant-6	
				Mechanical Plant-3	
				Asphalt Plant-3	

To prevent or minimize the environmental consequences of spills, proactive strategies should be implemented. These include proper handling, storage, and transportation of hazardous substances, the provision of appropriate containment infrastructure, and the development of robust emergency response and remediation procedures that are systematically applied throughout construction activities.

In case of a spill in any area, contaminated soil, water and used spill kits will be treated as hazardous waste. These wastes will be disposed of in hazardous waste containers in the area where the work is carried out and from there they will be transferred to the Temporary Hazardous Waste Storage Areas in Temporary Construction Camp Site, Main Camp Site, Camp Site-2 or Camp Site-3 which one is the closest.

Soil Sampling and Analyses

Most of the Motorway route passes through agricultural lands and forest areas where the historical soil contamination potential is considered to be low. However, there are quarries, and remote settlement areas close to the study area where illegal waste disposal activities could occur. Thus, such areas may include contaminated lands.

Soil contamination is evaluated as a potential risk during the land preparation and construction works, road repair and maintenance activities, and accidents/emergencies during operation phase. This potential risk may arise from accidental spills during transfer, mixing, and storage of hazardous materials or from unexpected incidents.

A soil sampling and laboratory analysis program was conducted as part of the baseline studies for the Project. Initial soil sampling and laboratory analyses were conducted as of September 2024. An additional round of soil sampling was carried out at 35 locations in May 2025 to support the baseline data set. The locations of these additional sampling points are illustrated in Figure V-1 and Figure V-2.

Figure V-1 Soil Sampling Points of the Project (September, 2024)

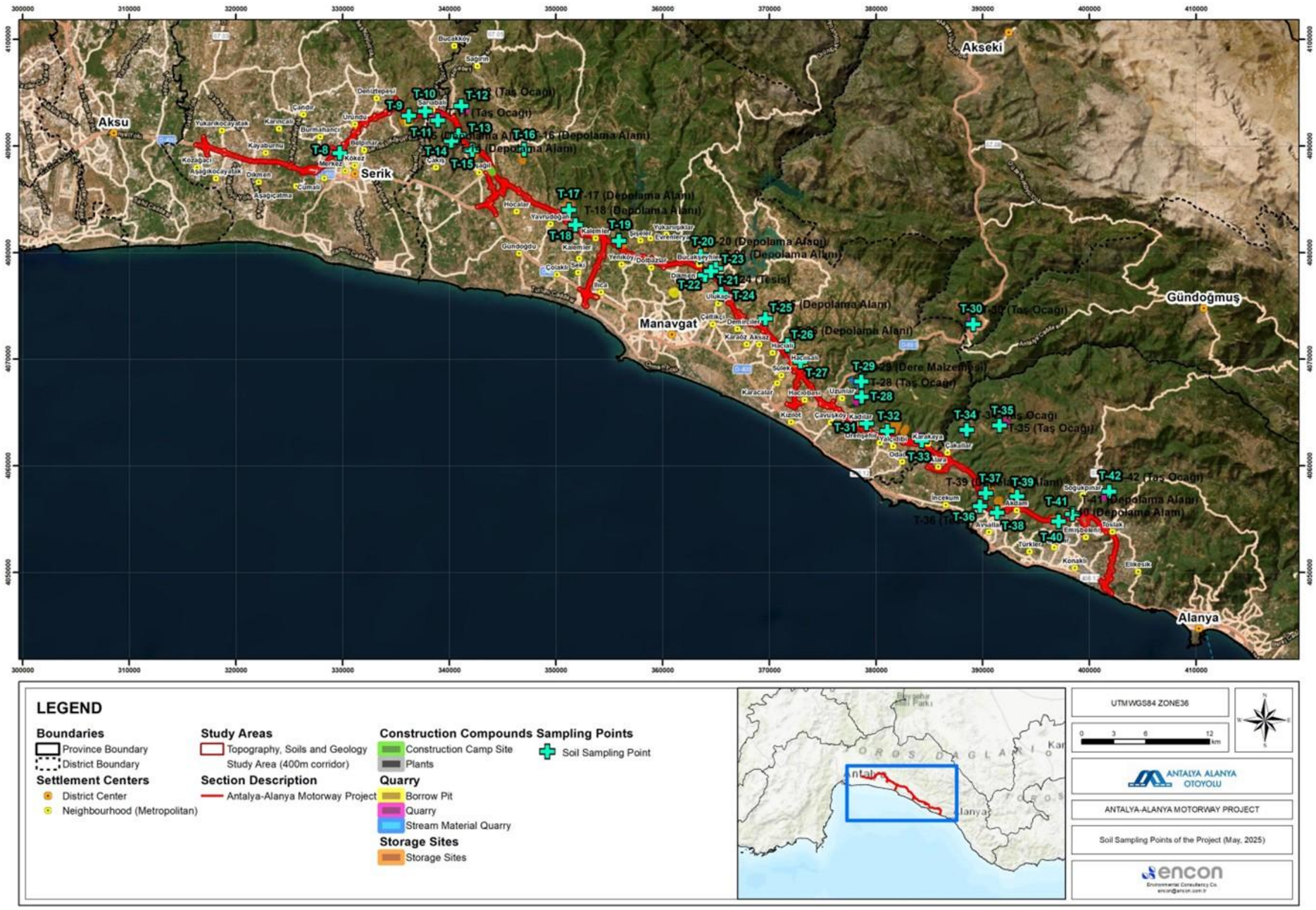

Figure V-2 Soil Sampling Points of the Project (May, 2025)

Soil Pollution Control Mitigation Measures

During construction activities soil contamination may be seen due to accidental leakages/spillages and, poor waste and wastewater management. If necessary mitigation measures will not be taken, these impacts may affect the soil quality in the Project Area. Within this regard following measures will be taken, in addition to the measures given in above sections:

- The amount of soil that could be subject to contamination/pollution and compaction will be minimized by ensuring the use of only the designated work sites and routes for the machinery, equipment and personnel.
- Related PPEs will be provided to the personnel handling the excavation soil/waste.
- The fuel required for the machinery and equipment to be used within the Project, will be supplied in accordance with the Hazardous Material Management Plan.
- Provisions of the Regulation on Control of Soil Pollution and Contaminated Lands by Point Sources, and Regulation on Contaminant Release and Transportation Record will be complied within the scope of the Project.
- In case of a spillage/leakage at the site, actions defined in the Environmental Accident and Spill Response Plan will be taken immediately.
- The soil contaminated due to spillages during handling fuel and other hazardous liquids will be removed from the site for suitable treatment and/or disposal according to the Waste Management Plan.
- No fuelling of vehicles or equipment will take place within excavated areas. If heavy equipment cannot be moved to appropriate fuelling points, an impervious surface (such as a drip-tray) has to be used for refueling this equipment to hinder accidental spillage to drain into the soil and therefore in potential groundwater aquifers.
- Wastes and wastewater to be generated within the scope of the Project, will be stored and disposed in a controlled manner in accordance with the Waste Management Plan, and Water Quality, Wastewater and Storm Water Management Plan, respectively. Thus, it will not be possible for the wastes and wastewater to be generated in the Project Area, interacting with the soil environment and cause any impacts.
- The areas, where the hazardous materials (chemicals, liquids etc.) storage tanks located (i.e., hazardous material storage areas), will be designed and constructed to avoid potential contamination into the soil (paved areas with sufficient secondary containment, proper drainage systems, storage as per Safety Data Sheet (SDS) requirements etc.). Also, the Project will comply with relevant legal and project safety requirements to avoid leakages from hazardous materials (chemicals, liquids etc.) storage facilities on-site
- Regular maintenance of vehicles and machinery/equipment will be undertaken to ensure that leakages of oil/fuel or any other hazardous material is prevented
- Safe Fueling and Gasoline Handling Guidelines will be developed in the construction areas. No fueling of vehicles or equipment will take place within excavated areas, if practically feasible. If heavy equipment cannot be moved to appropriate fueling points, an impervious surface (such as a drip-tray) has to be used for refueling this equipment to hinder accidental spillage to drain into the soil and therefore in potential groundwater aquifers
- Generators will be equipped with drip trays and to be checked regularly to prevent soil contamination
- Secondary containments, ponds and drip trays will be checked regularly, especially during extreme weather conditions
- Portable spill containment and clean-up materials (spill kits) will be made available and easily accessible at the construction site, instructions on how to use spill containment and clean-up materials will be included in the kits
- Pumps and trans mixers will be washed only at the concrete plants, concrete slurry will not be discharged into environment

V.3 Erosion Control Measures

Erosion is the process under the impact of water flow or wind consist of soil detachment, transportation and deposition of particles. Erosion control and sediment control are defined as any temporary or permanent steps used to reduce erosion and control sedimentation the process of settling or deposition of sediments due to motion through a fluid body. Proper erosion control along with sediment control reduce availability of particles for settling downstream.

Soil erosion is refers to the displacement of the upper layer of soil, leading to degradation of the land. This process can occur naturally due to factors such as weather conditions (winds, rains, ice or extreme heat), or as a result of anthropogenic activities like deforestation, agriculture, and construction. The rate of erosion is increased due to improper agricultural practices such as cultivation on relatively high slope lands, plowing through the fields in the direction of the slope, and excessive grazing on pasturelands or deforestation. The primary agents of soil erosion are water and wind, where the former is more prominent. Water erosion takes place on lands with weak or no vegetative cover where runoff can flow with sufficient energy, transporting loosened soil particles down the slope. Consequently the fertile top layer of the soil is lost from the agricultural lands resulting in reduced agricultural productivity, and water quality of the surface water resources deteriorates as a result of sedimentation and eutrophication (Former Ministry of Agricultural and Rural Services. July 2008).

Evaluation of the erosion level to which soils are exposed is done based on the erosion classification system developed by US Department of Agriculture and adopted by several state authorities including Türkiye. Erosion levels specified in this classification system are listed in Table V.2.

Table V.2. Erosion Levels according to Technical Procedure on Soil and Land Classification Standards

Erosion Level	Definition
Level 1	Low
Level 2	Moderate
Level 3	Severe
Level 4	Very severe

Source: Former Ministry of Agricultural and Rural Services. July 2008.

Following the erosion level classification, erosion potential of the soils corresponding to the study corridor (6,856 ha total area; settlement, river, river flood plain, and coastal dune areas that cover 1.1% of the study corridor and not categorized under any of the soil groups. and are not taken into consideration in the following figures) have been described based on the land use, and soil database of the former GDRS published for Antalya province in 1993. The results of the analyses done in this scope are provided in Table V.3.

As presented in the table, approximately 57% (3,933.2 ha) of the study corridor corresponds to soils with severe erosion levels (Level 3). This is followed by no or very low erosion level (Level 1), which accounts for about 25% (1,691.8 ha) of the study corridor. Soils with very severe erosion levels (Level 4) occur in about 2% of the study corridor. Soils with moderate erosion levels (Level 2) along the study corridor account for approximately 15% of the area. In addition, it should be noted that the Project area has experienced a rapid urbanization rate, especially in the last 30 years resulting in significant changes in the land use patterns and an increase in the overall area of artificial surfaces, including urban areas, industrial sites, transport networks, mine extraction sites, etc. Consequently it is likely that the erosion rate has accelerated, and the erosion exposure levels of the soils corresponding to the study corridor have increased.

Additionally, erosion levels of soils of the settlements within the study area are listed in Table V.3.

Table V.3. Erosion Potential of the Soils within the Study Corridor of the Project (GDRS. 1993)

Erosion Levels	Risks	Area (m^2)	Area (ha)	Percent (%)
None or very low	-	4,599,930.62	459.99	6.71
	Slope and erosion damage	2,107,249.47	210.72	3.07
	Soil insufficiency	553,026.62	55.30	0.80
	Drainage problems, oldness, flood damage	9,657,676.43	965.77	14.09
Sub-total (None or very low)		**16,917,883.15**	**1,691.79**	**24.67**
Moderate	Slope and erosion damage	7,656,224.52	765.62	11.17
	Slope and erosion damage Soil insufficiency	2,416,436.79	241.64	3.52
Sub-total (Moderate)		**10,072,661.30**	**1,007.27**	**14.69**
Severe	Slope and erosion damage. Soil insufficiency	39,331,463.24	3,933.15	57.37
Sub-total (Severe)		**39,331,463.24**	**3,933.15**	**57.37**
Very severe	Slope and erosion damage. Soil insufficiency	1,521,465.97	152.15	2.22
Sub-total (Very severe)		**1,521,465.97**	**152.15**	**2.22**
Settlements		184,874.57	18.49	0.27
River		44,053.60	4.41	0.06
River Flood Plain		428,820.08	42.88	0.63
Coastal Dunes		60,104.88	6.01	0.09
Total		**68,561,326.77**	**6,856.13**	**100.00**

Table V.4. Erosion Levels of Soils in the Settlements within the Study Corridor (GDRS. 1993)

Province	District	Neighborhood	Erosion Level
Antalya	Serik	Kozağacı	None or very low
		Yukarıkocayatak	None or very low
		Aşağıkocayatak	None or very low
		Kayaburnu	None or very low
		Dikmen	Moderate
		Çandır	None or very low
		Aşağıçatma	None or very low
		Cumalı	None or very low
		Burmahancı	Moderate

Province	District	Neighborhood	Erosion Level
		Merkez	None or very low
		Üründü	None or very low
		Kökez	None or very low
		Deniztepesi	Moderate
		Sarıabalı	Severe
	Manavgat	Çakış	Severe
		Sağırin	Severe
		Taşağıl	Severe
		Hocalar	Severe
		Gündoğdu	Moderate
		Yavrudoğan	Severe
		Kalemler	Severe
		Evren	None or very low
		Seki	None or very low
		Ilıca	None or very low
		Yeniköy	Severe
		Şişeler	None or very low
		Evrenleryavşı	Severe
		Dolbazlar	Severe
		Yukarıışıklar	Severe
		Dikmen	Severe
		Bucakşeyhler	Severe
		Ulukapı	Severe
		Aşağıışıklar	Severe
		Demirciler	Severe
		Karaöz	Severe
		Aksaz	Severe
		Hacıali	Severe
		Cevizler	Severe
		Sülek	Moderate
		Hacıisalı	Severe
		Hacıobası	Severe
		Karacalar	Moderate
		Kızılot	None or very low
		Uzunlar	Severe

Province	District	Neighborhood	Erosion Level
		Çavuşköy	Severe
		Kadılar	Moderate
		Örenşehir	Severe
		Yalçıdibi	Severe
		Odaönü	Severe
		Karakaya	Moderate
	Alanya	Çakallar	Severe
		Alara	Severe
		İncekum	Very severe
		Avsallar	Severe
		Akdam	Severe
		Türkler	Severe
		Soğukpınar	Severe
		Emişbeleni	Severe
		Toslak	Severe
		Konaklı	Severe
		Elikesik	Severe

Erosion control and sediment control during construction phase of the Project should mainly aim for preventing any type of erosion, ensuring interception and drainage for surface runoff, ensuring surface runoff does not cause erosion or collect sediments from disturbed areas and ensuring stabilization of disturbed slopes.

Topsoil stripping, earthworks and excavation activities will disturb and expose the soil surfaces at working areas which will be disposed to erosion due to rain and wind. Exposed working areas will be rehabilitated without delay to prevent soil erosion after completion of construction activities.

Measurements for erosion control and sediment management are provided below:

- Erosion control measures (e.g. geotextile filter barriers that would reduce the flow velocity and trap the sediments, drainage channels, settling structures, etc.) will be implemented along the route prior to the start of construction works in order to reduce or prevent off-site sediment transport during construction. Temporary erosion control measures will be moved forward as the construction progresses.
- Stripping and excavation works will be planned in a way that maximum 30.000 m2 of exposed land will be created at once. Mulching will be applied to stabilize exposed areas.
- Activities will be modified or suspended during extreme rainfall and high winds to the extent practical.
- Contouring will be applied and length and steepness of slopes will be minimized.
- All the earth works will be structured at the end of each work day in a way to control probable surface run-off due to precipitation and minimize associated erosion.

- All the water flow coming from the areas surrounding the work sites and from the side slopes will be diverted by means of temporary channels, earth banks and temporary engineering structures to avoid mixing of clean (non-contact) and contaminated (contact) runoff.
- Erosion control measures will be implemented at the outlet of culverts.
- At the outlet of the erosion control structures, relevant measures (i.e. use of riprap) will be taken to reduce the flow velocity and erosion impact.
- Following the completion of base excavations, permanent erosion control measures will be taken and slope improvement works will be conducted.
- Dikes will be formed around the excavated material storage sites in order to prevent loss of soil due to erosion.
- Channels and ditches will be designed in consideration of post-construction flows. • Following the completion of concrete lining of the drainage ditches, temporary erosion control structures will be dismantled and the sites will be rehabilitated.
- Temporary service road gradients will be limited to reduce runoff-induced erosion.
- All the work sites will be revegetated to the extent possible promptly following the completion of works at that site.
- Operation and Rehabilitation of Quarries and Material Borrow Sites
- Open pit mining method will be used at quarries and tunneling will not be applied. Open pit will be developed in benches.
- Borders of the quarry and material borrow sites will be identified by using proper methods (i.e. fencing, etc.) and material extraction activities will be conducted within these borders.

VI. TRAINING

The employees of the AAOİAŞ, Limak and subcontractors will require to attend the new-hire induction training that includes environmental and social awareness and compliance training to be aligned with Project ESIA and ESMS.

Regular internal and external (when necessary) trainings will be given to ensure that the mitigation measures indicated in this Plan are applied during the construction phase of the Project for all involved parties. Regular internal inspections will be conducted to ensure that the mitigation measures indicated in this Plan are applied during the construction phase of the Project.

All Project workers shall receive adequate training regarding soil and topsoil management. Specific trainings will be provided to operators and key personnel involved in activities which involve vegetation clearance, topsoil stripping, subsoil handling and rehabilitation. All personnel will receive structured training upon hiring as part of the Project's onboarding and orientation program. This training will cover the prevention and management of environmental accidents and hazardous material spills, including identification of potential spill sources, associated risks to human health and the environment, and appropriate response actions.

The training program will include the following core elements:

- General environmental awareness and potential impacts of spills;
- Applicable national legislation and international standards related to hazardous material handling and spill response;
- Where this Plan and other relevant procedures (e.g., Hazardous Materials Management Plan, Solid Waste Management Plan) can be accessed;
- Typical sources of spills on construction sites, such as equipment failure, leaks during fuel transfer, and improper storage of chemicals or lubricants;
- Precautionary measures for spill prevention;

- Use, location, and application of spill kits and absorbent materials in various work areas;
- Spill containment and control procedures;
- Proper use of personal protective equipment (PPE) during spill response;
- Procedures for clean-up, recovery, and appropriate disposal of contaminated materials;
- Replenishment of spill kits following use or routine inspection.

Subcontractors will be responsible for ensuring that their employees receive equivalent training, consistent with Project requirements and aligned with the overall ESMS.

All personnel will receive refresher training at regular intervals, and additional training will be provided to newly hired staff. The E&S Manager will prepare a detailed training schedule, which will be reviewed and approved by the Project Manager.

Attendance and completion of all training sessions will be documented through the Training Participation Form. These records will be managed and retained by the E&S team, and subject to periodic audits to verify compliance with training and preparedness requirements.

VII. MONITORING

A structured internal monitoring program will be implemented to assess the effectiveness of measures outlined in this Plan during the construction phase of the Project. The scope and frequency of monitoring activities will be periodically reviewed and revised where necessary, based on site-specific risks, incident trends, stakeholder concerns, or changes in applicable environmental regulations.

Monitoring activities will be coordinated by the E&S Manager, in close collaboration with the H&S Manager. Key responsibilities will include verifying the proper storage and handling of hazardous materials, monitoring implementation of spill prevention measures, checking the availability and condition of spill response kits, and ensuring that spill containment practices are consistently applied across critical work areas such as fuel storage sites, maintenance zones, and material handling areas.

Regular inspections will be conducted at designated locations across all worksites to evaluate compliance with national environmental regulations and Project-specific spill prevention requirements. This will include visual inspections for potential leaks or spill risks, control of secondary containment systems, checks on the use of drip trays and absorbent materials, and review of maintenance and inspection logs for storage tanks and hazardous material containers.

Monitoring efforts will be guided by the framework provided in Table VIII.1, which outlines the parameters to be monitored, the corresponding monitoring locations, frequency of inspections, and responsible parties.

Table VII.1 Key Monitoring Activities

Parameter	Monitoring Station / Location	Monitoring Method	Monitoring Frequency	Responsible Parties
Number of trainings conducted	Project site offices	Tracking the number of trained personnel	Quarterly	AAOİAŞ, Limak
Invasive Species	Site-wide	Weed control will be conducted to prevent the formation of invasive species during the revegetation.	Once prior to the topsoil stripping Monthly on closure phase	AAOİAŞ, Limak
Invasive Species	Site-wide	All machinery will be visually checked regarding to weeds, plants and diebacks sticked to them.	Once before machinery brought to the Project Area Between the operations	AAOİAŞ, Limak

Topsoil Management	Site-wide	Amount of stripped/stored and used topsoil will be recorded	Following the topsoil stripping and rehabilitation process	AAOİAŞ, Limak
Soil Management	Site-wide	Amount of subsoil stored/transferred for disposal will be recorded	Following the subsoil removal and disposal process	AAOİAŞ, Limak
Erosion Control	Site-wide	Erosion control measures at will be visually checked.	Monthly	AAOİAŞ, Limak
Soil Pollution	Site-wide	Soil quality analyses will be conducted at the areas where any possible contaminated site identified during the surveys conducted under the scope of Pre-Construction Site Assessment Procedure or any spillage/leakage occurs, for the suitable parameter sets corresponding the spilled/leaked material defined in the Regulation on Control of Soil Pollution and Contaminated Lands by Point Sources	In case of any contaminated site identified during Pre-Construction Site Surveys or In case of any spillage/leakage occurs	AAOİAŞ,
Rehabilitation	Site-wide	Areas progressively restored will be inspected	Monthly during the vegetative season (from April to October) of the first year after restoration Every 2 months during the vegetative season (from April to October) of year 2 and 3 after restoration	AAOİAŞ, Limak
Reported spill/leak incidents or non-compliance records	Site-wide	Review of non-compliance, accident, and spill records	Quarterly	AAOİAŞ,
Number of complaints related to environmental accidents	Project site offices	Logging and reviewing records as per the Stakeholder Engagement Procedure	Quarterly	AAOİAŞ,
Spill kits in work areas and on heavy machineries	All construction and maintenance areas and vehicles	Visual check and control list	Daily	AAOİAŞ, Limak and Subcontractors

In cases of non-compliance identified through internal oversight or external audits, AAOİAŞ will ensure that corrective and preventive measures are promptly implemented in coordination with the Main Contractor (Limak) and relevant subcontractors.

VIII. KEY PERFORMANCE INDICATORS

The following Key Performance Indicators (KPIs) will be monitored, verified, and evaluated.

Table VIII.1 Key Performance Indicators – Construction Phase KPIs

Key Performance Indicator	Target	Frequency	Responsible Party
Conduction of the weed controls	Weed controls are conducted according to the proposed schedule	Monthly	AAOİAŞ, Limak
Removal of weeds, plants and diebacks sticked to the Project machinery	All machinery is cleared from the weeds, plants and diebacks sticked to them	Monthly	AAOİAŞ, Limak
Performance of topsoil stripping and storage as planned	100%	Monthly	AAOİAŞ, Limak
Amount of stripped/stored and used topsoil	Topsoil amounts recorded	Monthly	AAOİAŞ, Limak
Amount of stored/transferred for disposed subsoil	Subsoil amounts recorded	Monthly	AAOİAŞ, Limak
Presence of the determined erosion control and storage measures	All erosion control and storage measures are present at the site	Annually	AAOİAŞ, Limak
Number of spillage/leakage resulted in soil contamination or number of contaminated land identified during Pre-Construction Site Surveys	Zero per year	Annually	AAOİAŞ, Limak
Vegetation cover and sign of erosion at the restored areas	Restored areas with vegetation cover and composition similar to undisturbed areas. No sign of erosion.	Semi-year	AAOİAŞ, Limak
Number of non-compliances regarding soil and topsoil measures identified in this Plan	Minimise the number of non-compliances and continuous improvement	Monthly	AAOİAŞ, Limak
Number of trainings planned vs completed	100%	Quarterly	AAOİAŞ, Limak
Number of grievances received regarding soil and topsoil management	Minimise the number of grievances and continuous improvement	Quarterly	AAOİAŞ, Limak

IX. AUDIT AND REVIEW

Results of the monitoring will be reported to responsible parties to ensure that the Project activities comply with the national legislation and international standards regularly... Depending on the monitoring results, the Plan will be reviewed and updated according to the Internal Audit Program that will be developed and updated by Project E&S Manager.

The regularly internal audit will address:

- The correct implementation of this Plan;
- The correct and timely implementation of an auditing and review system;
- Each of the point indicated in the table in Section 7 (Monitoring Activities) and Section 8 (KPIs) of this Plan.

Evidence and results of the inspection and audit activities are included in the audit reports and in the “Non-Conformity and Preventive/Corrective actions” records. Project Management reviews result of audits and inspections and the progress of the Preventive/Corrective actions and takes additional appropriate actions if necessary.

X. REPORTING

Quarterly reporting should be conducted to ensure the effective implementation and continuous improvement of this Plan throughout the construction phase of the Project. Reporting should be structured to address both internal monitoring and auditing outcomes, as well as external compliance obligations and stakeholder engagement requirements.

Based on monitoring results, necessary corrective and preventive actions which are defined in this Plan should be identified and the required updates should be incorporated into this Plan. The training program will also be revised accordingly to address any observed gaps. Monthly basis audits and visual inspections should be conducted to verify that all activities are being undertaken in accordance with the provisions of this Plan.

Evidence of the implementation of the actions/measures and related results are collected through inspection and auditing activities as detailed in Section IX “Audit and Review” of this Plan; these evidences are described in the audit reports.

Subcontractors are responsible to collect the soil, topsoil, rehabilitation and soil contamination statistics (including all types of training delivered to employees and incident records) on a monthly basis and report to the Limak and AAOİAŞ. If any subcontractor is involved, it is responsible for duly implementing requirements included in this Plan under the EPC and SPV supervision.

The results of the inspection and audit activities will be summarized in a Report on a biannual basis that will be made available to stakeholders, if requested, which is under the responsibility of the Contractor. This report will constitute the basis for the monitoring report to be available for the Lenders.

All personnel are encouraged to raise concerns, suggestions, or complaints related to environmental accident and spill response management through the established grievance mechanism by completing the grievance form. Public grievances regarding chemical spills, fuel leaks, or other contamination-related concerns should also be addressed and followed up accordingly. The communication channels available for submitting grievances are outlined in the Stakeholder Engagement Plan.

Throughout the construction phase of the Project, this Plan will be reviewed quarterly by the E&S Manager, based on the results of audits and any spill-related incidents or changes in site activities. Updates to the Plan will be agreed upon between the E&S Manager and the General Manager.

ANTALYA ALANYA MOTORWAY PROJECT

CULTURAL HERITAGE MANAGEMENT PLAN

REV 3

Revision LOG			
REV. Date	**Prepared by**	**Quality Checked by**	**Reviewed and Approved by**
02.09.2025	**Engin ÇOŞAR Senior Archaeologist**	**Ece ÇOŞAR Environmental Eng.**	**Engin ÇOŞAR Senior Archaeologist**
22.09.2025	**Engin ÇOŞAR Senior Archaeologist**	**Ece ÇOŞAR Environmental Eng.**	**Engin ÇOŞAR Senior Archaeologist**
23.10.2025	**Engin ÇOŞAR Senior Archaeologist**	**Ece ÇOŞAR Environmental Eng.**	**Engin ÇOŞAR Senior Archaeologist**

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APPENDICES

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APPENDIX 3 : GRAVE RELOCATION PROCEDURE

APPENDIX 4 : BOARD DECISIONS

ABBREVIATIONS

AD	Anno Domini
Archeo-Team	Archaeological Field Survey Team / Expert
Asst. Prof.	Assistant Professor
BC	Before Chris
CF	Chance Find
CHA	Cultural Heritage Area
CHMP	Cultural Heritage Management Plan
ICOMOS	International Council on Monuments and Sites
ICCROM	The International Centre for the Study of the Preservation and Restoration of Cultural Propert
GIS	Geographical Information System
KM	Kilometre
KML	Keyhole Markup Language
KMZ	Keyhole Markup Language Zipped
IFC	International Finance Corporation
EBRD	European Bank for Reconstruction and Development
M	Meter
No	Number
Shp (shape)	Netcad data name
Project Name	Antalya Alanya Motorway Project
UK	United Kingdom
UNESCO	The United Nations Educational, Scientific and Cultural Organization
WB	World Bank
WGS	World Geodetic System

1. PURPOSE AND SCOPE

The purpose of this Cultural Heritage Management Plan (CHMP) is to safeguard the archaeological and cultural heritage within the scope of the Antalya–Alanya Motorway Project and to minimize potential impacts arising from Project activities. The CHMP is designed not only to preserve **tangible archaeological remains** but also to address **intangible cultural heritage elements**, including traditions and practices associated with cultural sites and local communities.

The CHMP applies to all phases of the Project lifecycle, including **pre-construction, construction, and operation**. Its scope covers:

- Implementation of **archaeological baseline surveys** and ongoing investigations in newly accessible areas,
- Application of the **Chance Find Procedure**, ensuring immediate response in case of discoveries,
- **Stakeholder engagement and coordination**, particularly with the Antalya Regional Directorate for the Protection of Cultural Heritage, relevant Museum Directorates, and local communities through the **Project Archaeologist and Consultant Archaeologist**,
- Management of **grave relocation processes** in accordance with **Law No. 3998 on the Protection of Cemeteries (1994)**, **Law No. 2863 on the Protection of Cultural and Natural Assets**, and international standards,
- Delivery of **training programmes** to Project staff and contractors on cultural heritage awareness,
- Periodic **monitoring and updating** of the CHMP as a living document, incorporating new findings, stakeholder input, and decisions of the competent authorities.

All activities under this CHMP should be implemented in compliance with **national legislation** and the provisions of **international standards** (including IFC Performance Standard 8, EBRD PR8, and AIIB Environmental and Social Standards), thereby ensuring full alignment with lender requirements.

The Project will engage with the ARHB in accordance with the engagement methods and frequency indicated in the Project SEP as further detailed in Section 5.2..

2. LEGISLATION FRAMEWORK

In this section, the legislation framework that is related to the management of cultural heritage is summarized.

All HRM-coded areas identified during the baseline surveys along the project route have been inspected on site with the participation of the ARHB specialist archaeologist and the survey engineer. On-site inspections have been completed for all identified areas; however, for some areas, the definition of protection zone boundaries and the receipt of official opinions from the relevant authorities are still pending. Conservation Boards often determine the protection zone boundaries of areas identified during baseline studies at varying scales (either broader or narrower). The main reasons for this include the status of land parcelisation and the need to define a protection (buffer) zone in proportion to the nature and significance of the findings. When a major archaeological site is encountered, as described in the Principle Decision No. 658, the 1st-Degree Archaeological Site is generally delineated to include the entire extent of surface material distribution within and around the settlement. Subsequently, in order to further protect the 1st-degree site boundary, a 3rd-Degree buffer zone is established. There is no uniform national standard for the application of this practice.

All activities under this CHMP should be implemented in compliance with national legislation and the provisions of international standards, thereby ensuring full alignment with lender requirements.

In line with these requirements, all nationally designated or registered cultural heritage resources will require relevant permits and adherence to applicable conditions prior to the commencement of any construction activities.

2.1 Law on Protection of Cultural and Natural Assets (Law No: 2863 (published in the Official Gazette dated July 21, 1983))

The management plan for archaeological heritage mitigation strategies along the project site corridor is to be designed to meet the requirements stipulated in the Law on Protection of Cultural and Natural Assets, Law No. 2863, (July 21, 1983).

The objective of the Law is to set the definitions regarding the movable and fixed cultural and natural assets that shall be protected; to define the procedures and activities to be performed and to establish the formation and responsibilities of the organization that will enforce the required principles and implementation of action decisions on this subject." (Official Gazette, 23/7/1983 number 18113).

In the law archaeological sites are classified under three categories. These are:

- 1st Degree Archaeological Sites,
- 2nd Degree Archaeological Sites,

- 3rd Degree Archaeological sites

Principle Decision No: 658 defines these sites as follows:

- **1st Degree Archaeological Sites:** Areas requiring highest level of protection. They should be preserved with the exception of scientific excavations. The area should be free of any type of buildings and construction. All kinds of construction, excavation, and modification activities are prohibited. However, for exceptional cases such as the necessity for infrastructure construction, Regional Preservation Boards may permit such activities based on the approval of the relevant museum and the head of the scientific excavation team.
- **2nd Degree Archaeological Sites:** Areas requiring ***high*** level of protection. They should be preserved based on the conditions of protection and utilization set by the Regional Preservation Boards. Additional construction is prohibited. As for the 1st Degree Site Degree archaeological sites, for exceptional cases such as the necessity for infrastructure construction, Regional Preservation Boards may permit such activities based on the approval of the relevant museum and the head of the scientific excavation team.
- **3rd Degree Archaeological Sites:** Lowest level of protection area. Construction is permitted based on the decisions of Regional Preservation Boards. Before applying for a construction permit, test pit excavations should be conducted and the outcomes of these excavations should be reviewed by the relevant museum and, if present, the head of the scientific excavation team. ***All excavations are under the supervision of museum expert.*** Reviews should be submitted to Regional Preservation Boards. The Boards may ask for extension of the areal test pit coverage before taking any decision.

2.1.1 Definitions *(Article 3 of the Law numbered 2863)*

Article 3 of the Protection of Cultural and Natural Entities Law provides the following definitions:

- *Cultural Assets are all over-ground, underground or submarine movable and fixed assets related with science, culture, religion and fine arts, belonging to prehistoric and historic eras.*
- *Natural Assets are the over-ground, underground or submarine assets that belong to geological eras, prehistoric and historic eras and that shall be protected because of their rarity or specifications and preciousness.*

2.1.2 Obligation to Inform (Article 4 of the Law numbered 2863)

In case of chance find of movable or immovable cultural assets, the nearest museum directorate or mukhtar in the villages, local authorities in other places should be informed. If these cultural assets are encountered within military posts and forbidden areas, major

commands should be duly informed. Mukhtar should inform the nearest ***local*** authority within a day (24 hours), the ***local*** authority and other authorities should report the incident to the Ministry of Culture and Tourism and the related museum directorate via formal letter. The Ministry of Culture and Tourism, General Directorate of Cultural ***Heritage and Museums*** and related ***Regional Board Directorate of Protection of Cultural Heritage*** are responsible for the registration of the cultural heritage

2.1.3 Legal Necessities before the Impact Mitigation Measures (Article 7 of the Law numbered 2863)

In Article 7, it is stated that the related ***Regional Board Directorate of Protection of Cultural Heritage*** are responsible for the registration of the cultural and natural heritage. Therefore, for the registration of the immovable cultural assets, it is required to apply officially and directly to the related ***Regional Board Directorate of Protection of Cultural Heritage***.

2.2 Regulation on Determination and Registration of Immovable Cultural and Natural Heritage (Official Gazette dated 10.12.1987 and numbered 19660)

The aim of this regulation is to introduce principles on permits about researches and excavations to be conducted under the law of protection of cultural and natural entities, the preservation necessities of the findings, studies on these findings, the assignments, duties and authorizations, rights and expenses of the related persons.

2.3 Legal Framework on Cemeteries

According to the **Law No. 3998 on the Protection of Cemeteries**, adopted on 9 June 1994:

- **Ownership (Article 1):** Except for the State Cemetery, historical cemeteries managed by the Directorate General of Foundations, martyrdom cemeteries, and cemeteries belonging to religious communities with special status, the ownership of public cemeteries rests with municipalities in municipal areas and with village legal entities in villages. These lands cannot be sold, acquired through acquisitive prescription, or transferred by possession.
- **Protection (Article 2):** Cemeteries, martyrdom cemeteries, and graves cannot be altered, damaged, or polluted. They cannot be converted, through planning regulations or by any other means, into parks, gardens, squares, parking areas, playgrounds, green zones, or any other use outside their primary function. An exception is only provided where road construction is deemed necessary and approved by the Ministry of Environment, Urbanization and Climate Change.

In Türkiye, modern cemeteries are primarily used for burials; however, many of these cemeteries also possess **cultural heritage significance**. As a result, and due to the presence of registered cultural heritage within many cemeteries, any works affecting

cemeteries must be conducted in line with both **Law No. 3998 (1994)** and **Law No. 2863 on the Protection of Cultural and Natural Assets**.

2.4 European Convention on The Protection of The Archaeological Heritage (Revised) (Valetta, 16/01-1992)

This convention is known as the Valetta Convention. It sets guidelines for the funding of excavation and research work and publication of research findings. It also deals with public access, in particular to archaeological sites, and educational actions to be undertaken to develop public awareness of the value of the archaeological heritage

2.5 Convention Concerning the Protection of the World Cultural and Natural Heritage, 1972

Turkey is a signatory to this Convention (The World Heritage Convention), which was approved by The General Conference of the United Nations Educational, Scientific and Cultural Organization (UNESCO), meeting in Paris from 17 October to 21 November 1972.

The signatories to this Convention have agreed "to ensure that effective and active measures are taken for the protection, conservation and presentation of the cultural and natural heritage" on their territories.

3. ROLES AND RESPONSIBILITIES

Project Owner will be responsible for the preparation and implementation of the environmental and social impact assessment-based management plans, which will be project specific. These plans shall be practical, detailed procedures for use in the field.

Project Owner will ensure the implementation of the commitments stated in the ESIA.

Project Owner will also be responsible for the performance of all sub-contractors with respect to the project-specific plans and shall comply with all relevant project standards, statutory requirements, permit and license conditions and secure all applicable permits and licenses.

Table 1 Table of Roles and Responsibilities

Role	Responsibilities
Ministry of Culture and Tourism	• Acts as the national competent authority for cultural heritage. • Provides oversight and ensures compliance with national legislation and regulations.
Regional Conservation Board (Regional Board Directorate of Protection of Cultural Heritage)	• Serves as the sole decision-making body for interventions on cultural heritage assets. • Issues binding instructions regarding protection, salvage excavations, or further conservation actions.
Museum Directorate	• Provides archaeologists and technical experts to the site within 24 hours of notification. • Officially defines and classifies chance finds in line with national heritage law. • Responsible for conducting or supervising excavations in chance find areas. • Implements the decisions and instructions issued by the Regional Conservation Board.
Project Owner	• Holds overall responsibility for preparation and implementation of ESIA-based management plans, including the CHMP and Chance Find Procedure. • Ensures implementation of commitments stated in the ESIA. • Accountable for the performance of all sub-contractors in line with project-specific management plans, standards, statutory requirements, and permits. • Employs qualified archaeologists at the Project site to monitor ground disturbance activities and oversee CHMP and Chance Find Procedure implementation. • Ensures the adequate enforcement of the Chance Find Procedure during construction activities.
Construction Contractor	• Implements CHMP measures and Chance Find Procedure on site. • Ensures workers follow training and awareness requirements. • Immediately suspends works in the event of a chance find and secures the area until official instructions are received.

Archaeologists (Project-appointed)	• Conduct baseline surveys, monitoring of excavation and ground disturbance activities. • Document and report findings in coordination with the Museum Directorate. • Provide expert advice to ensure compliance with CHMP and national regulations. • Directly reports any chance find to the Museum archaeologist and the relevant Regional Conservation Board. • Responsible for organizing and delivering necessary trainings to field staff on the implementation of the Chance Find Procedure. • Records all chance finds in the Chance Find Report Form and maintains the Chance Find Register. • If required, ensures the execution of salvage excavations and provides necessary resources. • Within the scope of the project, the continuous updating of the status of permits and consultations for the areas listed in the CHMP is the responsibility of the Project Archaeologist and the archaeology consultant. • The reports to be prepared by the field archaeologist following the completion of the pre-construction activities shall be regularly shared with the construction teams. The archaeological reports in question shall be submitted to the lender on a monthly or quarterly basis. • The findings shall be regularly communicated to the site personnel through archaeological awareness trainings and toolbox talks. In addition, one hard copy of the pre-construction reports shall be kept on site for reference. • Intangible Cultural Heritage issues will be managed under the oversight and coordination of the Project Archaeologist and the Project CLOs.
Third-Party Archaeological Consultancy Services	In addition to the statutory responsibilities of the Ministry of Culture and Tourism, the Regional Conservation Boards, and the Museum Directorates, a third-party archaeological consultancy service has been engaged by the Project Owner. The consultancy is responsible for ensuring compliance with national legislation and international standards (e.g., IFC PS8, EBRD PR8), and for providing independent expertise in the management of cultural heritage.

Scope of Services	• Baseline Archaeological Surveys: Conducting field surveys and preparing an inventory of movable and immovable cultural heritage assets within the Project footprint and buffer zones. • Preparation of Management Documents: Drafting and updating the Cultural Heritage Management Plan (CHMP) and the Chance Find Procedure in alignment with international lender requirements. • Training & Awareness: Delivering induction and toolbox trainings for contractors and workers regarding chance finds and cultural heritage protection. • Regulatory Liaison: Coordinating with Museum Directorates and Regional Conservation Boards, assisting with official reporting and obtaining necessary permits. • Advisory Role: Providing recommendations for mitigation measures, conservation approaches, and alignment with lender standards. • Documentation & Reporting: Preparing chance find reports, registers, and cultural heritage monitoring reports for submission to the Project Owner, authorities, and lenders. • Through these services, the archaeological consultancy acts as an independent expert body, complementing the statutory authorities and supporting the Project Owner in managing cultural heritage issues effectively. • Within the scope of the project, the continuous updating of the status of permits and consultations for the areas listed in the CHMP is the responsibility of the Project Archaeologist and the archaeology consultant.

Together with this, a summary table of roles and responsibilities is provided below for better clarity.

Table 2 Summary Table for Mitigation Measures – Responsibilities & Stages

Activity	Responsible Party(ies)	Stage of Implementation
Pre-clearance surveys (walkovers)	Project Archaeologist (lead), relevant Museums / Antalya Regional Board for the Protection of Cultural Heritage (ARHB) oversight	Pre-construction planning and mobilization period
Pre-construction testing (evaluation) and/or excavations	Project Archaeologist and Ministry/Museum archaeologists, with ARHB approval	Pre-construction (after excavation permit is obtained)
Pre-construction site relocations	Project Archaeologist, Community Liaison Officers (CLOs), relevant Municipality and Directorate of Cemeteries, with ARHB approval	Pre-construction, after official permits and community consents are secured
Construction Monitoring (watching brief)	Project Archaeologist (field archaeologists), Construction Contractor coordination, ARHB notification	Construction phase (during earthworks, blasting and excavation activities)
Chance Find Procedure	All site-based contractors (initial notification), Project Archaeologist (documentation and museum reporting), ARHB/Museum	Throughout the construction phase (immediately upon discovery)
On-going engagement & permitting	Community Liaison Officers (CLOs), Project Archaeologist, Project	Throughout the project: from planning through completion of construction

	Management, ARHB and relevant Ministry departments	

3.1 Management of Cultural Heritage

The basic definitions regarding the management of cultural heritage are given in the following bullets:

- Ministry of Culture and Tourism is the responsible authority.
- Museum Directorate is responsible to provide experts for the sites within 24 hours after being informed and to officially define the Chance Find (see Appendix-1). ***Museum directorate is responsible excavation of chance find areas. Museum Directorate will follow the directions and decisions from Regional Board Directorate of Protection of Cultural Heritage***.
- The Chance Find Procedure is designed as an emergency response mechanism in areas of predicted low archaeological sensitivity. It is not a substitute for systematic baseline reconnaissance or pre-construction archaeological surveys, which remain mandatory in areas identified as medium or high sensitivity.
- ***Regional Board Directorate of Protection of Cultural Heritage*** is the only decision maker on any intervention, which would be made on the site after the chance find.
- Project Owner is responsible for the management of archaeological issues during the progress of construction of the Project site area and implementation of related management plan and chance find procedure.
- *Project Owner will employ archaeologists at the Project site responsible for the monitoring of ground disturbance activities. They are also responsible with the monitoring of the implementation of the Cultural Heritage Management Plan (CHMP) and chance find procedure.*
- *Project Owner will ensure that Chance Finds procedure is adequately enforced during ground disturbance activities. During the implementation of the Chance Finds procedure on site, Project Owner will directly report the issue to Museum archaeologist and relevant Regional Preservation Board.*
- *Salvage excavation (and other Chance find issues) (If necessary) are under the responsibility of Project Owner.*
- Project Owner is also responsible for giving necessary trainings to the field staff about the implementation of the chance find procedure.

- *Project Owner will record all chance finds on the Chance Finds Report Form and in the Chance Finds Register as per the Chance Find Procedure in Appendix-1.*

3.2 Management Structure and Responsibilities

Project Owner will be responsible for the management of the plan and procedure about archaeological issues of Project site. The Archaeologist of Project Owner will train the employees about cultural heritage and chance find procedure (see Section 4.1). Also, the monitoring of the construction works will be the responsibility of Project Owner Archaeologist (see Section 4.3).

The Project Manager will be in charge of the all-construction work team.

The Archaeologists will work with the equipment operators and have authority to the stop work. Each will accompany a topsoil stripping crew during ROW clearing. They will direct the operator to stop work or redirect stripping activities in case of a chance find. They will submit scheduled progress reports and special reports of chance finds to Environmental and Social Coordinators.

In addition to the Chance Find Procedure, the Antalya Regional Board Directorates will decide for the requirement of a salvage excavation if needed. The contact information of these board directorate is given in Appendix-2. The excavation permissions will be obtained by the relevant museum directorate from the General Directorate of Cultural Heritage and Museums. Following the permission, Project Owner will provide a team of qualified archaeologist to conduct the salvage excavation within the framework of their contract under the guidance of Project Archaeologist / Consultant archaeologist, who will follow the instructions of the related museum directorate). These works may cover non- destructive research methods such as remote sensing and geophysics and test pit excavations. The negotiations and meetings with the related Regional Board Directorate of Protection of Cultural Heritage on technical topics during and after the salvage excavation will be held by Project Archaeologist / Consultant archaeologist.

3.3 Site-Specific Mitigation and Management

All site-specific mitigation and management measures must be developed in close consultation with the Antalya Regional Directorate for the Protection of Cultural Heritage (ARHB) to ensure full compliance with Law No. 2863 on the Protection of Cultural and Natural Assets (1983) and other applicable Turkish legislation.

Mitigation shall follow the principles of the IFC Mitigation Hierarchy:

1. Avoidance – In all instances, avoidance of impacts must be the preferred measure. Where cultural heritage sites are classified as critical or non-replicable, avoidance through route realignment or design modification must be prioritised and applied.

2. Minimisation – Where avoidance is not feasible, impacts should be minimised through protective measures, restricted access, or adapted construction methodologies.
3. Restoration / Conservation – If impacts occur, restoration and conservation works must be conducted under the authority of the Museum Directorate and in line with Conservation Board decisions.
4. Offset / Compensation – Only as a last resort, offset measures (such as enhanced conservation or public access to alternative sites) may be considered.

All measures must be formally documented, integrated into the CHMP, and monitored throughout the Project lifecycle. Consultation outcomes with ARHB should be recorded, ensuring transparency and compliance with both Turkish law and international lender standards.

3.4 Grave Relocation Procedure

In Türkiye, cemeteries are not only places of burial but also sacred spaces where collective memory, beliefs, and identity are preserved. Cemeteries are regarded as places where families and communities maintain their ties with the past and ensure intergenerational transmission of traditions. They are therefore both tangible cultural assets and integral components of the nation's intangible cultural heritage. Practices such as remembrance, mourning, religious rituals, and community gatherings make cemeteries indispensable elements of cultural continuity.

Grave relocation activities in Türkiye are carried out under the authority of local municipalities (Cemeteries Directorate) and the Provincial Directorate of Environment, Urbanization and Climate Change, Department of Local Administrations. All activities must be conducted in accordance with Law No. 3998 on the Protection of Cemeteries (1994) and Law No. 2863 on the Protection of Cultural and Natural Assets, as well as other applicable national legislation.

In metropolitan municipalities in Türkiye, the management and administration of cemeteries are primarily the responsibility of the Metropolitan Municipality Cemeteries Directorate, which oversees cemetery planning, maintenance, and grave relocation. The District Municipality supports on-site operations and daily management, while the District Mufti's Office ensures that all religious rituals and ceremonial procedures are properly observed during grave relocation. The District Governorship coordinates the administrative approvals and ensures that all activities comply with national legislation. Together, these institutions provide a structured framework to manage grave relocation in a manner that respects both tangible and intangible cultural heritage and addresses social sensitivities.

Given the cultural and social sensitivities, grave relocation must be managed with particular care. It is essential that the process is carried out under the close supervision of the Project archaeologist and the Community Liaison Officer (CLO), ensuring continuous

communication with affected families and respect for intangible cultural values. Details of these steps are included in the Stakeholder Engagement Plan prepared for the Project (see EIA Annex 9 SEP).

3.4.1 Procedure Steps

The relocation of graves is a highly sensitive process and will be implemented in line with national legal requirements and local practices.

If graves identified during the archaeological baseline study are determined to be of historical significance, the Regional Conservation Board will first be notified.

Through the Board's process, if the graves are confirmed to have historical value, the registration procedure must be completed.

In all cemetery areas where the alignment cannot be modified or where cemeteries are encountered incidentally, and in cases where modern-era cemeteries are affected by construction, the following procedures will be followed.

Whenever work is required in any such area, the identified graves will be first reported by the SPV to General Directorate of Highways (KGM), and KGM will them notify the relevant public authorities, as detailed below.

1- Identification of Need – Determining that a grave must be relocated due to project alignment or other compelling reasons.
2- Submission of Application – Submission of a formal request by the responsible parties (e.g., SPV, General Directorate of Highways, Municipality) to the relevant Metropolitan Municipality Cemetery Directorate.
3- Stakeholder Coordination – Engagement with relevant authorities including health institutions, religious representatives (e.g., imam), and families of the deceased.
4- Notification Stage – Written notifications will be delivered to the families of the deceased whose graves will be relocated.
5- Public Announcement (Mukhtars) – Public notices will be posted for 15 days in the offices of relevant mukhtars, ensuring coverage for all affected communities.
6- Local Newspaper Announcement – A notice will also be published in a local newspaper to ensure wider public awareness.
7- Selection of New Grave Site – The Metropolitan Municipality Cemeteries Directorate, in consultation with relevant authorities and affected families, will identify and approve a suitable new grave location within an officially designated cemetery area.
8- Start of Relocation – Within one week after the posting period, relocation works will commence under municipal supervision, with participation of a medical doctor, imam, and administrative staff.
9- Completion of Relocation – Due to the sensitive nature of the matter, all relocations will be completed **as quickly as possible**. The Metropolitan Municipality will coordinate the process and provide the necessary resources.

10- Support Services – If required, heavy machinery or other technical support may be requested from the Project Owner, and such requests will be met promptly.
11- Documentation and Reporting – All steps will be officially documented, including photographic evidence, grave identification, and new burial location, and reported to the competent authorities.

All necessary requirements are fulfilled within the competent authority, and the SPV and EPC will provide support if required.

Community engagement and respect for local sensitivities are essential throughout the process. By integrating both tangible and intangible cultural heritage considerations, the Project will ensure compliance with national legislation and international lender requirements.

Further details regarding the implementation are outlined in the Grave Relocation Procedure attached as an Annex.

4. CONSOLIDATED COMMITMENTS, IMPLEMENTATION PROGRAMME AND BUDGET

4.1 Consolidation of Commitments

The Antalya–Alanya Motorway Project has committed to meeting performance standards in compliance with both the legislation of the Republic of Türkiye and international requirements. In this context, an independent archaeological firm conducted the initial baseline studies. These surveys identified the overall condition of high-risk areas along the route, as well as the status of potential archaeological sites that had not yet been discovered. Impact assessment forms were also prepared, and the necessary procedures were initiated prior to the commencement of construction, in accordance with the applicable legislation.

Building on the ESIA studies, site investigations, training, and consultations with relevant institutions are to be continued without interruption. The Antalya Regional Directorate for the Protection of Cultural Heritage is the highest competent authority on archaeological matters; therefore, consultations should be maintained with this institution.

For known archaeological locations, excavation permits must be obtained, and coordination with the Antalya Museum Directorate and the Side Museum Directorate should continue throughout the construction phase.

In summary, the Project reports are expected to ensure the fulfillment of the commitments set out in Table 3.

Table 3 Cultural Heritage Commitments Table

No	Commitment	Project Phase	Responsible Party	Implementation Method	Monitoring / Reporting
1	Conducting archaeological baseline field surveys and notifying the Regional Conservation Board and Museum Directorate of the findings	Pre-Construction	Project Owner	Preparation of relevant documents	Follow-up by consultant and/or Project archaeologist, permit register tracking
2	Preparation of CHMP and Chance Find Procedure before construction begins	Pre-Construction	Project Owner	Preparation of relevant documents	Submission to contractors, implementation monitoring
3	Training of construction units and teams on actions to be taken in case of chance finds	Pre-Construction	Project Owner	Preparation of training materials and delivery of programme	Training records
4	In case of archaeological finds during construction, all works to be stopped and the Museum archaeologist informed	Construction	Contractor & Project Archaeologist	Staff training, site demarcation and marking	Incident reports, photographic and coordinate records
5	Establishment of protection buffer zones around designated archaeological sites	Construction	Contractor	Restriction of machinery access, installation of signage	Pre-construction survey reports or Site Monitoring Reports

6	Annual repetition of cultural heritage awareness trainings for new and ongoing staff	Construction & Operation	Project Owner & Project Archaeologist	Implementation of training programme	Training attendance lists, periodic reporting
7	Updating of the CHMP and	Construction Phase	Project Owner, Project Archaeologist	Report update	Every 6 months (annually depending on construction progress)
8	Updating of the CF Procedure	Construction Phase	Project Owner, Project Archaeologist	Report update	Every 6 months (annually depending on construction progress)

4.2 Implementation Programme

All archaeological requirements are expected to be carried out in accordance with the commitments outlined in the table below

Table 4 Commitment / Action Table

No	Commitment / Action	Pre-Construction	Construction	Operation
1	Conducting archaeological baseline field surveys and reporting all identified findings to the Regional Conservation Board and the relevant Museum Directorate	●	-	-
2	Preparation of the Cultural Heritage Management Plan (CHMP) and the Chance Find Procedure prior to commencement of construction works	●	-	-
3	Delivery of induction and toolbox trainings to construction teams on the Chance Find Procedure, outlining the required actions in case of chance finds	●	(refresh as needed)	-
4	Immediate cessation of works and notification of the Museum archaeologist in case of archaeological finds during construction activities	-	● (ongoing)	-
5	Establishment and enforcement of protection buffer zones around designated archaeological sites to prevent disturbance	-	●	-
6	Annual repetition of cultural heritage awareness trainings for new hires and existing project staff	-	-	● (annual)

4.3 Budget & Contingency

As is widely recognized, management plans are considered living documents. The CHMP, while initially prepared to address the needs of the Project at the time, requires revision and updating to reflect current requirements. In addition to existing commitments, it is anticipated that archaeological excavations may be required. The budgetary provisions for such works have been based on the official 2025 Unit Price List published annually by the Ministry of Culture and Tourism.

For the purpose of this CHMP, estimated volumes (m³) of soil to be excavated within a typical archaeological investigation area have been calculated. Corresponding costs have been derived using the Ministry's unit prices, as provided in the latest annex. These unit prices are officially updated each year and serve as a reliable basis for preliminary cost estimation.

The consolidated budget table (Table 3) therefore reflects the indicative costs for archaeological works, complemented by a contingency allocation (10–15%) to accommodate unforeseen requirements such as extended excavations or additional conservation measures.

As an illustrative example, if an archaeological site were to require excavation of approximately 300 m³ and 500 m³ of soil, the corresponding calculations have been presented in the table below.

This table can be applied according to the number of areas to be excavated.

Table 5 Ministry of Culture and Tourism – Indicative Unit Price Calculation Table**

Code	**Description**	**Estimated Volume (m³)**	***Unit Price (TRY/m³)**	
V.0512/01	Careful excavation in soft soil, for scientific purposes, conducted under the supervision of the Museum Directorate and in line with the decision of the Regional Conservation Board	300	3.950 TL	1.185.00 TL
V.0512/02	Careful excavation in hard soil, for scientific purposes, conducted under the supervision of the Museum Directorate and in line with the decision of the Regional Conservation Board.	500	5.135 TL	2.567,5000 TL
Contingency		%15		562,875 TL
Total				4,315,375,00 TL

*Source:
https://kvmgm.ktb.gov.tr/Eklenti/130752,kulturveturizmbakanligi2025yilifiyatlistesi10022025sonpdf.pdf?0

**Note: The cost estimates presented in Table 5 have been calculated based on the 2025 Unit Price List published by the Ministry of Culture and Tourism. Estimated excavation volumes are expressed in cubic meters (m³), while unit prices correspond to the official schedule of rates provided by the Ministry. The table also includes a 15% contingency to account for unforeseen archaeological requirements.

Following the issuance of the necessary permits, tenders have been organized by the EPC for the areas where excavations have commenced. The companies participating in the tender have submitted their proposals for the works and activities listed in the table below. These proposals are being evaluated by the EPC tender committee.

The scope of works and activities is defined in line with the decisions of the Conservation Board regarding excavation planning and the expected tasks to be carried out. The bids are collected specifically for the works requested by the ARHB.

The tenders are conducted transparently by collecting proposals from interested companies. In this context, firms with prior experience in such works are contacted in advance, provided with the **Technical Specifications**, given a site orientation, and asked to submit their proposals. The incoming bids and the portfolios of the firms are then reviewed, and the company achieving the highest score is selected to carry out the work.

Since works have commenced at the HRM 32 structural remains, an estimated cost has been prepared in the table below. This example has been specifically selected because no similar structural remains are known to exist along the route.

Table 6 Approximate Cost Calculation Table for HRM 32

Work to be Performed	Description	Estimated Price	Estimated Time
Vegetation clearance in the archaeological area	The ARHB requires that vegetation be cleared before any work begins.		
Georadar and geodetic survey and documentation	In almost all areas, the ARHB requires georadar and geodetic surveys so that possible remains on the surface can be documented and potential subsurface remains can be identified.		
Opening of trial trenches	To better understand the size and extent of the archaeological site, the ARHB requires that trial trenches be opened under the supervision of the Museum Directorate.		
Execution of salvage excavation	After completion of the georadar documentation and trial trench works, the ARHB makes a general assessment and decides on the implementation of a salvage excavation.		
Dismantling, relocation and reconstruction of the structure	After completion of the salvage excavation, the following must be carried out and approved by the ARHB:	Totals with 15% added + 15% = 750.000 USD	8 Months
	• Creation of 3-D point-cloud data and preparation of drawings and measured surveys (röleve).		
	• Preparation of a report on the methods of relocation (e.g., cutting, block-by-block, cage lifting, etc.).		
	• Mortar analyses.		
	• Proposals for structural consolidation.		
	• Preparation of a geotechnical (soil investigation) report for the relocation site.		
	• Soil improvement and levelling at the relocation site.		
	• Description of the methods for reassembly and completion.		
	• Design of the surrounding landscaping.		

Work to be Performed	Description	Estimated Price	Estimated Time

Note: It has been calculated using an exchange rate of 1 USD = 41.35 TL

Note: These costs are provided as estimates/approximations.

Based on the work completed to date and the bids received, the current situation stands at around USD 750,000.

Simpler methods are applied for cemetery excavations, since under the relevant legislation all cemeteries fall under the authority of the Cemetery Directorate. This unit manages the entire process once they have been notified.

In this context, the only requirements expected from the contractor are to mark the grave locations, carry out vegetation clearance, and, if necessary, conduct trial trenching.

However, as no cemetery excavation has yet commenced, this part will be developed once the bids have been collected.

Moreover, since the CHMP is a living document and will be updated every six months, the expenditure items related to the tenders and their associated costs will be regularly reported to the lender through the document.

In addition, any potential chance find situations that may arise during this process will also be recorded in these excavation cost tables.

4.4 Consultancy Service Procurement

Under the third-party archaeology service described in Section 3, Table 1, an average monthly payment of approximately 5.000 USD is being made.

The service is expected to continue for roughly two years, with a decision on whether to extend the process to be taken based on the overall progress. Approximately one year of this service period has already been completed. The total cost over two years can therefore be estimated at roughly USD 5,000 × 24, i.e. about USD 120,000. These figures are approximate and may vary.

Within the scope of the archaeological fieldworks, archaeological monitoring will be carried out by the Project Archaeologist, while activities related to intangible heritage will be undertaken jointly by the Project Archaeologist and the Community Liaison Officer (CLO).

4.5 Site-Specific Monitoring Commitments

Site-specific monitoring must be undertaken to assess and manage potential impacts on cultural heritage sites, particularly in relation to vibration effects from construction activities (e.g., blasting, piling, heavy vehicle movement). The following commitments apply:

- **Baseline Monitoring** – Prior to construction, baseline measurements of vibration levels **must** be conducted in the vicinity of known archaeological sites to establish reference conditions.
- **During Construction** – Continuous or periodic monitoring of vibration levels shall be carried out when works are undertaken near sensitive archaeological areas.
- **Threshold Values** – Monitoring must be based on national regulations and international best practice thresholds for vibration impact on built heritage.
- **Blasting Activities** – Where blasting near archaeological sites is unavoidable, it is recommended that the charge size be reduced. By conducting blasts with lower explosive quantities, the transmission of vibration impacts to archaeological sites shall be minimised.
- **Reporting** – Monitoring results must be recorded, evaluated, and included in periodic cultural heritage monitoring reports submitted to the Project Owner and relevant authorities.
- **Corrective Actions** – If thresholds are exceeded, construction methods **must** be adapted (e.g., further reduction of blast charge, increased distance, or use of alternative equipment) to prevent damage to archaeological assets.

During land preparation and construction, blasting activities are expected to generate ground vibration, air shock, and flyrock. These effects may pose direct risks to cultural heritage assets, such as structural stress, displacement of masonry, or dislodgement of fragile materials.

The assessment of these potential impacts has been based on the vibration thresholds and modelling results presented in Chapter XI.2.3 (Noise and Vibration). Sensitive heritage receptors identified within the potential impact zone include HRM 5, HRM 6, HRM 8, HRM 9, HRM 16, HRM 20, HRM 38, HRM 41, HRM 45, HRM 50, HRM 51, HRM 52, HRM 53, HRM 57, and HRM 58. At these locations, the proximity of heritage features to blasting operations increases the likelihood of cumulative vibration and air pressure effects.

Without mitigation, such effects could result in short-term, reversible physical damage or partial loss of contextual integrity. The overall significance of these unmitigated impacts is assessed as moderate to high, depending on the receptor sensitivity and proximity.

To address these risks, site-specific mitigation and monitoring measures have been developed in coordination with the Noise and Vibration assessment and are detailed in Table 7 (Blasting-Induced Impact Mitigation and Monitoring Measures).

These monitoring commitments shall be developed in consultation with the Antalya Regional Directorate for the Protection of Cultural Heritage and the Museum Directorate, to ensure full compliance with Turkish law and lender requirements.

Table 7 Site-Specific Vibration Measures for Cultural Heritage

Site	Explanation	Mitigations	Residual Impact	Assurance Measures
HRM 5	For HRM 5, salvage excavation is underway, with construction paused until the salvage excavation is finished.	*Application of protective blasting mats or coverings to prevent flyrock and reduce air shock		
HRM 6	Construction activities will only proceed once the archaeological excavation has been fully completed and the necessary approvals have been obtained from the Board, the Municipality, and the Republic of Türkiye Ministry of Environment, Urbanization and Climate Change. Upon permit approval, minimal explosive charges will be used to prevent damage to the site.	Wait until the excavation is finished *Application of protective blasting mats or coverings to prevent flyrock and reduce air shock	Change of location of the site; minumum impact on archaeological site	Archaeological surveys coordinated with the Museum Directorate.
HRM 8	Remains of an architectural structure, possibly from the Roman Period, likely representing a frontier garrison settlement. A dense accumulation of rubble stone and visible wall rows, which may belong to the structure, are present on the surface. Additionally, numerous roof tile fragments and a small number of sherds from daily use vessels have been observed.	No blasting will be carried out before the decision of the conservation board. After the decision, a control survey/drilling operation will be done on the area. The measures determined by the Board will be implemented based on the results of the survey. *Application of protective blasting mats or coverings to prevent flyrock and reduce air shock	-No impact on archaeological site	-
HRM 9	This area is a natural protected zone. Therefore, throughout the entire process, we will reduce the maximum charge per delay (kg) and conduct survey and monitoring activities through an external contractor.	A minimum charge of 2 kg for 3 m hole (as common practice) will be used at distances of 56.96 meters or more, establishing a conservative baseline for safe blasting near sensitive archaeological features. Within 56.96 meters, no blasting will occur; instead, mechanical breaking with excavators will be employed as explained in the above paragraphs	With these measures, any impact on sensitive archaeological features is expected to be minimal or negligible.	Seismographs will be placed at 53 m, with weekly ecological surveys and compliance reporting to the Ministry of Environment.

Site	Explanation	Mitigations	Residual Impact	Assurance Measures
HRM 16	HRM 9 has not been registered by the Board (Permitting date and No.: 26.12.24/18914) and a construction permit has been granted for working on this area. But in case of Chance Find during the construction, Article 4 of Law No. 2863, the work is to be halted, and the Museum Directorate must be notified.	Visual inspections for chance find will be implemented. In accordance with Article 4 of Law No. 2863, if any archaeological remains are encountered during construction, all activities must be halted immediately and the Museum Directorate must be notified. * Application of protective blasting mats or coverings to prevent flyrock and reduce air shock	Negligible risk unless chance finds occur.	An on-site archaeological observer will monitor works, with immediate halting and notification to the Museum Directorate in case of chance finds (Law No. 2863).
HRM 20	Lowering the maximum Charge per Delay (kg).	For HRM 16, at 60 meters, the maximum charge per delay (kg) will be reduced.		
HRM 38	Use a charge of 2.2 kg with electronic detonators will be applied.	PPV: 4.968 mm/s. Low risk or negligible, but nearing threshold. Monitoring recommended during blasting. *Application of protective blasting mats or coverings to prevent flyrock and reduce air shock	Seismographs will be positioned at 60 m, and a pre-blast structural stability survey will be conducted.	

Site	Explanation	Mitigations	Residual Impact	Assurance Measures
HRM 41	HRM 20 is a 1st degree archaeological site. This area is not located on the project route, but is located within the Dikmen Quarry. The HRM-20 registered archaeological site is an aqueduct that supplied water to the ancient city of Side. Because the area has been designated a first-degree archaeological site, the opinion of the Antalya Board will be sought before any activity begins. Additionally, a 100-meter buffer zone will be established between the blasting area and the archaeological site to provide protection, and no activity will be carried out within this zone.	a 100-meter buffer zone will be established between the blasting location and the archaeological site to provide protection, and no activity will be carried out within this zone. The opinion of the Antalya Board will be sought before any activity begins. A charge of 6.15 kg using electronic detonators will be employed. A 100 m buffer zone from the ancient waterway must be maintained. The site is currently on standby. If the appointed specialist contractor determines that blasting is not a viable option, mechanical breaking may be used as an alternative. *Application of protective blasting mats or coverings to prevent flyrock and reduce air shock	PPV: 4.968 mm/s. Low risk or negligible, but nearing threshold. Monitoring recommended during blasting.	Seismographs will be positioned at 100 m, and a pre-blast structural stability survey will be conducted.

Site	Explanation	Mitigations	Residual Impact	Assurance Measures
HRM 45	The archaeological site lies at the summit of the hill, whereas the designated blasting area is located along the foothill. Given the topographical separation and distance, vibrations are expected to be attenuated. Furthermore, the recent design change led to the determination of the work area by the shoring (IKSA) wall, which established a clear boundary. Within this defined area, preventive measures can be implemented using a small amount of explosives or through mechanical breaking methods to minimize any potential impact as explained in the above paragraphs.	A minimum charge of 2 kg for 3 m hole (as common practice) will be used at distances of 56.96 meters or more, establishing a conservative baseline for safe blasting near sensitive archaeological features. Within 56.96 meters, no blasting will occur; instead, mechanical breaking with excavators will be employed as explained in the above paragraphs. A shoring (IKSA) wall will be installed to minimize vibration, and stemming applied to limit air overpressure near the site. Based on the external contractor the charge can be modified based on the attenuation. * Application of protective blasting mats or coverings to prevent flyrock and reduce air shock	With these measures, any impact on sensitive archaeological features is expected to be minimal or negligible.	Seismographs will be placed at 15 m and behind the IKSA wall, with structural surveys of the hill summit before and after blasting.
HRM 50	Lowering the maximum Charge per Delay (kg).	A minimum charge of 2 kg for 3 m hole (as common practice) will be used at distances of 56.96 meters or more, establishing a conservative baseline for safe blasting near sensitive archaeological features. Within 56.96 meters, no blasting will occur; instead, mechanical breaking with excavators will be employed as explained in the above paragraphs.	With these measures, any impact on sensitive archaeological features is expected to be minimal or negligible.	Seismographs will be installed at 20 m to monitor vibration attenuation over distance.

Site	Explanation	Mitigations	Residual Impact	Assurance Measures
HRM 51	Lowering the maximum Charge per Delay (kg.	A minimum charge of 2 kg for 3 m hole (as common practice) will be used at distances of 56.96 meters or more, establishing a conservative baseline for safe blasting near sensitive archaeological features. Within 56.96 meters, no blasting will occur; instead, mechanical breaking with excavators will be employed as explained in the above paragraphs.	With these measures, any impact on sensitive archaeological features is expected to be minimal or negligible.	Seismographs will be installed at 30 m to verify compliance with PPV limits.
HRM 52	Lowering the maximum Charge per Delay (kg).	Use a charge of 3 kg with electronic detonators.	PPV: 4.975 mm/s. Low or negligible risk, but nearing threshold. Monitoring recommended during blasting.	Seismographs at 70 m to monitor vibration attenuation over distance. Pre-blast survey.
HRM 53	Lowering the maximum Charge per Delay (kg).	Use a charge of 6.15 kg with electronic detonators.	PPV: 4.993 mm/s. Low or negligible risk, but nearing threshold. Monitoring recommended during blasting. *Application of protective blasting mats or coverings to prevent flyrock and reduce air shock	Seismographs at 100 m to monitor vibration attenuation over distance.
HRM 57	Lowering the maximum Charge per Delay (kg).	Use a charge of 6.92 kg with electronic detonators.	PPV: 4.999 mm/s. Low risk or negligible, but nearing threshold. Monitoring recommended during blasting. *Application of protective blasting mats or coverings to prevent flyrock and reduce air shock	Seismographs will be installed at 106 m to monitor vibration attenuation over distance.

Site	Explanation	Mitigations	Residual Impact	Assurance Measures
HRM 58	Lowering the maximum Charge per Delay (kg).	A minimum charge of 2 kg for 3 m hole (as common practice) will be used at distances of 56.96 meters or more, establishing a conservative baseline for safe blasting near sensitive archaeological features. Within 56.96 meters, no blasting will occur; instead, mechanical breaking with excavators will be employed as explained in the above paragraphs .	With these measures, any impact on sensitive archaeological features is expected to be minimal or negligible. *Application of protective blasting mats or coverings to prevent flyrock and reduce air shock	Seismographs at 29 m to monitor vibration attenuation over distance.

* The implementation of these measures will ensure that ground vibration, air shock, and flyrock remain within the safe threshold limits defined in Chapter XI.2.3, and no adverse effects are expected on cultural heritage receptors. Therefore, when properly applied, these mitigation actions are expected to prevent the occurrence of significant vibration-, air shock-, or flyrock-related impacts.

5. TRAINING, REPORTING AND MONITORING

5.1 Training

The Archaeological Monitoring Archaeologist/Consultant of the Project Owner will deliver cultural heritage awareness training to all project personnel, including contractors and subcontractors. This training will form part of the mandatory Project induction programme and will specifically include the implementation of the Chance Find Procedure.

The training is designed to raise awareness among the workforce about the significance of cultural heritage, relevant legal and institutional requirements, and the practical steps to be followed in case of chance finds. It will also include visual examples of potential archaeological materials and clear guidance on reporting and communication procedures.

In addition, the Project Owner's archaeologists will receive specialized training focused on monitoring methodologies, documentation of archaeological features, and reporting requirements under the CHMP.

The detailed outline of the training modules is presented in Table 4: Cultural Heritage Awareness Training – Project-Specific Outline.

Table 8 Cultural Heritage Awareness Training – Project-Specific Outline

Module	Content	Target Audience
Introduction to Cultural Heritage	Definition of culture and cultural heritage; significance of protecting archaeological and historical assets.	All project staff, contractors
UNESCO and Turkey's UNESCO Record	Overview of UNESCO World Heritage List, Turkey's current status and obligations.	All project staff, contractors
IFC Standards	Introduction to IFC Performance Standard 8 (Cultural Heritage) and its relevance to the Project.	All project staff, contractors, supervisors
Archaeology	Basics of archaeology, types of archaeological sites and artefacts, importance of preservation.	All project staff, contractors
Principle Decision No. 658	Explanation of the Regional Conservation Board Principle Decision No. 658 and its application in construction projects.	All project staff, supervisors
Law No. 2863	Key provisions of Law No. 2863 on the Protection of Cultural and Natural Assets, particularly those relevant to construction.	All project staff, supervisors, contractors
Construction Process in the Context of Cultural Heritage	How construction activities are monitored from a cultural heritage perspective; responsibilities of site staff and archaeologists.	All project staff, contractors
Chance Find Procedure	Step-by-step explanation of what to do in case	All project staff, contractors

	of chance finds; responsibilities and reporting lines.	
Do's and Don'ts on Site	Practical guidance: do not move artefacts, stop work immediately, inform supervisor, secure the area.	All project staff
Reporting and Communication	How to report chance finds; communication chain (site supervisor → project archaeologist → Museum Directorate).	All project staff, supervisors, contractors
Health, Safety and Security	Safe handling of finds, ensuring security of chance find areas, avoiding contamination or damage.	All project staff
Specialized Training for Archaeologists	Detailed methodology for monitoring ground disturbance activities and documenting chance finds.	Project Owner archaeologists

5.2 Ongoing Statutory Engagement with the Regional Conservation Board (ARHB)

The Project Owner will maintain continuous statutory engagement with the Regional Conservation Board (ARHB) throughout the lifecycle of the Project. This engagement will be aligned with the Project schedule and will ensure that all cultural heritage management activities are conducted in compliance with national legislation and regulatory requirements.

The meetings with the ARHB will be conducted according to engagement method and frequency indicated in SEP. As outline in the SEP, the engagement with the ARHB will be led by the EPC Archaeologis with support from SPV and EPC E&S Managers, as needed. The meetings will be conducted on an ongoing basis throughout the construction phase, with a frequency of at least monthly. The engagement method will include face-to-face meetings, regular monitoring and reporting by Project Archaeologist, joint review meetings for grave relocation planning and execution, vibration-related findings and/or other heritage risks, as appropriate. Cultural heritage engagement activities will be conducted at the relevant cultural heritage sites, at the Project site, or in the ARHB offices. Official correspondence with the ARHB will be carried out as necessary.

The engagement programme includes:

- Pre-Construction Phase: Submission of baseline archaeological survey results to the ARHB for review and approval. Formal request for guidance and decisions on identified archaeological sites within the Project footprint.
- Construction Phase: Regular updates to the ARHB on ongoing monitoring activities and chance find reports. Immediate notification of the ARHB in case of significant discoveries, followed by official correspondence and site inspections as required.
- Operation Phase: It is not expected that any cultural heritage assets will be affected during the operation phase, and no additional coordination with the

Ministry of Culture and Tourism regarding cultural heritage areas will be necessary

The Project Owner will ensure that minutes of meetings, official correspondence, and ARHB decisions are systematically recorded and integrated into the Project's Environmental and Social Management System (ESMS). This structured engagement programme will guarantee timely regulatory approvals and ensure that cultural heritage management is fully aligned with the overall Project schedule.

5.3 Other Excavation Area

Information on the areas where route modification was not possible and excavation has been planned is provided in the table below.

Table 9 Table of High-Risk Archaeological Areas

Type	Status – Contractor Procurement	Planned / Ongoing Activities
HRM 1- Cemeteries	ARHB permitting process is ongoing. The finalization of the design is awaited. Excavation of approximately 10 modern and historic graves is planned under the supervision of the Museum Directorate. The graves are planned to be relocated within the boundaries of the same cemetery. The specific relocation site will be determined by the Metropolitan Municipality Cemeteries Directorate.	Excavations are scheduled to commence as of Q4, 2025.
HRM 5- Cemeteries	ARHB permitting process is ongoing. The design has been finalized. The presence of the Museum Directorate specialist is awaited, and under the supervision of the specialist, the excavation of approximately 40 graves is planned. Since the area is not registered at this stage, it cannot be confirmed whether the graves are of historical character; the outcome of the excavation is awaited. However, the Board has indicated that in either case, the graves may be relocated. The graves are planned to be relocated within the boundaries of the same cemetery. The specific relocation site will be determined by the Metropolitan Municipality Cemeteries Directorate.	Excavations are scheduled to commence as of Q4, 2025.
HRM 15- Cemeteries	ARHB permitting process is ongoing. The design has been finalized. Under the supervision of a Museum specialist, the excavation of approximately 25 graves is planned. Modern graves are also present within the cemetery. The Board has indicated that in either case, the graves may be relocated. The graves are planned to be relocated within the boundaries of the same cemetery. The specific relocation site will be determined by the Metropolitan Municipality Cemeteries Directorate	Excavations are scheduled to commence as of Q4, 2025.
HRM 32- Church Remains	ARHB permitting process is ongoing. Archaeological excavation works are ongoing. The site, located within the expropriation corridor but outside the active construction footprint, will be relocated and exhibited in a designated safe area to ensure its protection and continued visibility. The official coordination process between the Antalya Regional Board for the Protection of Cultural Heritage (ARHB), the General Directorate of Highways (KGM), and the Project Sponsor is ongoing to determine the final relocation site.	The completion of the excavations and the relocation and reconstruction of the structure are scheduled for Q2/Q3 2026.
HRM 37- Settlement	ARHB permitting process is ongoing. An application has been submitted to the Antalya Regional Board for the Protection of Cultural Heritage (ARHB) regarding this area. Following the route revision, the alignment has been shifted outside the boundaries of the 1st-degree archaeological site. However, since no design revision could be implemented within the 3rd-degree registered area, a test trench excavation was requested in accordance with the applicable legislation and will be carried out under the supervision of the Antalya Museum Directorate.	Excavations are scheduled to commence as of Q4, 2025.
HRM 42- Settlement	ARHB permitting process is ongoing. An application has been submitted to the Antalya Regional Board for the Protection of Cultural Heritage (ARHB) regarding this area. Following the route revision, the alignment has been shifted outside the boundaries of the 1st-degree archaeological site. However, since no design revision could be implemented within the 3rd-degree registered area, a test trench excavation was requested in accordance with the applicable legislation and will be carried out under the supervision of the Antalya Museum Directorate.	Excavations are scheduled to commence as of Q4, 2025.

5.4 Reporting

The Project Owner will ensure systematic documentation and reporting of all chance finds in line with the Chance Find Procedure (Appendix-1).

- **Chance Finds Report Form:** Every chance find will be recorded by the Project Owner's archaeologist on the official form (Appendix-1). The form will include details such as date, GPS coordinates, description of the find, photographs, preliminary assessment, and actions taken on site.
- **Chance Finds Register:** All completed forms will be consolidated into the Chance Finds Register (Appendix-2), which will be maintained and regularly updated by the Project Owner's archaeologist.
- **Hard Copy and Digital Records:** A signed hard copy of each report will be archived by the Project archaeologist, while digital versions will be stored within the Project's Environmental and Social Management System (ESMS) for traceability.
- **Reporting to Authorities:** Copies of the completed Chance Finds Report Form will be shared with the Museum Directorate within 24 hours of the discovery. Significant finds will also be notified to the Regional Conservation Board, accompanied by supporting documentation.
- **Internal Communication:** Summaries of chance find reports will be circulated to the Construction Contractor and relevant site supervisors to ensure awareness and implementation of necessary protective measures.
- **Periodic Reporting:** All chance find records will be compiled into quarterly cultural heritage monitoring reports, submitted to lenders and authorities as required.

5.5 Monitoring

The archaeological monitoring process will ensure that all ground disturbance activities are carried out in full compliance with national legislation and international standards. Monitoring will be undertaken by the Project Owner's archaeologists and will include the following key functions:

- **Advisory Role:** Provide advice to define areas where construction activities may continue or must be suspended due to archaeological findings.
- **Observation and Documentation:** Record archaeological features observed on, and in the vicinity of, the Project site. Maintain detailed logs, photographs, GPS coordinates, and field sketches.
- **Construction Monitoring:** Record and assess archaeological features discovered during excavation and construction works, including trenches, borrow pits, access roads, and Above Ground Facilities (AGFs).

- **Preliminary Assessment:** Provide advice in the form of a preliminary assessment to the construction superintendent on the significance and potential implications of new discoveries for Project design and schedule.
- **Verification of Protection Measures:** Ensure that buffer zones, fencing, and signage established for cultural heritage areas are respected throughout the construction process.
- **Compliance with Chance Find Procedure:** Ensure that the Chance Find Procedure (Appendix-1) is implemented immediately when archaeological materials are encountered, including cessation of works, site protection, and reporting to the Museum Directorate.
- **Liaison with Authorities:** Facilitate communication with the Museum Directorate and the Regional Conservation Board, including arranging site inspections where required.
- **Reporting:** Maintain monitoring logs and prepare monthly/quarterly monitoring reports summarising activities, observations, chance finds, and recommendations. These reports will be submitted to the Project Owner, relevant authorities, and lenders.

ll ground disturbance activities within the Project site and associated Above Ground Facilities will be monitored by the Project Owner's archaeologists. Monitoring activities will be scheduled in line with the construction programme and will continue until all relevant works are completed.

5.6 Monitoring and Updating of the CHMP

The Cultural Heritage Management Plan (CHMP) should be regarded as a **living document** and should be continuously monitored and updated throughout the construction phase of the Project. The Project Owner is expected to implement the following measures:

- **Regular Reviews:** The CHMP should be reviewed at least quarterly, or more frequently if required, to ensure that it remains aligned with site conditions and construction progress.
- **Integration of Monitoring Results:** Findings from archaeological monitoring, chance finds, and baseline surveys in newly accessible areas should be incorporated into updated versions of the CHMP.
- **Coordination with Authorities:** Decisions, instructions, and requirements issued by the Museum Directorate or the Regional Conservation Board should be reflected in CHMP revisions.
- **Stakeholder Input:** Updates should take into account inputs from the Community Liaison Officer (CLO) and Social Teams, particularly with regard to coordination with local communities and intangible cultural heritage.

- **Version Control and Documentation:** Each update of the CHMP should be documented with version numbers, dates, and records of changes to ensure transparency and traceability.
- **Submission of Updates:** Significant revisions to the CHMP should be shared with lenders and relevant authorities to maintain compliance with national legislation and international lender standards.

Through these measures, the CHMP is recommended to remain an effective and up-to-date tool for addressing archaeological and cultural heritage issues throughout the Project lifecycle.

5.7 Intangible Cultural Heritage

As highlighted in **Section 2 of the ESIA**, the **Yörük culture** is a dominant feature in the Project region. This is further evidenced by the **burials identified during the archaeological baseline survey**, which reinforce and complement the socio-cultural observations made in the area.

In addition to this general context, field observations and research have revealed the following findings:

- **Dependence on Traditions:** Local communities remain strongly attached to their traditions and cultural practices, which continue to shape social life and community identity.
- **Festivals Linked to Agricultural Cycles:** Various festivals are organized during the harvest season, often associated with agricultural production cycles. These events not only celebrate the yield but also provide important opportunities for community members to come together.
- **Social and Cultural Significance:** Beyond promoting agricultural products, these festivals serve as critical social gatherings where people strengthen bonds, socialize, and reinforce communal solidarity.
- **Preservation of Ethnic Identity:** Communities actively maintain their ethnic identities and continue to practice their cultural traditions across generations.
- **No Adverse Impacts Identified:** No intangible cultural heritage elements were identified in the immediate vicinity of the Project site that would be negatively affected by the Project.

However, it is recommended that **household surveys** be conducted in the surrounding region to further document and reveal any intangible cultural heritage elements that may not have been captured during the preliminary assessments. This approach will ensure that the Project remains sensitive to community values and traditions, while also contributing to the safeguarding of cultural heritage in line with international standards.

5.8 Intangible Cultural Heritage (ICH) Actions

Taking into consideration ESIA Chapter XIII together with the accompanying Archaeology Baseline Report, observations will be conducted particularly in districts, villages, and neighbourhoods where cemetery areas are located.

This work will proceed under the oversight and coordination of the Project Archaeologist and the Project CLOs. A review of Chapter XIII indicates that the ICH-related locations primarily comprise areas where the public congregates or performs religious rites—such as cemeteries—and that several such locations are affected by the Project, with some graves requiring relocation.

Grave relocation is a matter that may be assessed under IFC Performance Standard 5 (PS5). In this context, initial steps will include consultations with the relevant local authorities (the Municipality; the Ministry of Environment, Urbanization and Climate Change / Directorate of Local Administrations; the Directorate of Cemeteries). Official letters will be submitted to these entities; notices regarding the planned works in villages will be posted; the public posting period will be monitored; and one-to-one meetings will be held with grave owners to obtain signed consent forms.

Prior to construction, meetings will be held with village/neighbourhood headmen (muhtars) and the outcomes will be recorded. During the construction phase, potential construction-related issues will be identified through these meetings and the corresponding needs will be listed. As an initial action, during the muhtar meetings, communities will be informed to ensure that no difficulties are encountered regarding access to cemeteries; in addition to other potential complaints, it will be reiterated that complaints related to ICH can also be submitted through the established Project's Grievance Mechanism.

This issue, detailed in the Stakeholder Engagement Plan, will be monitored by the Project Archaeologist and the CLO team and will be reported regularly in monthly reports (see ESIA Annex-9 SEP).

6. ARCHAEOLOGICAL FINDINGS

The procedure given below that must be followed in case of encountering a chance find is based on national legislation and provisions in international standards. The significance of the archaeological finding may vary upon evaluation opinions of related museum experts.

6.1 Baseline Surveys in Previously Inaccessible Areas

The Project Owner commits to undertaking preliminary archaeological investigations in areas that were previously inaccessible and therefore not covered during the initial surveys. These investigations will be conducted by the Project Archaeologist prior to the commencement of construction, once such areas become accessible following vegetation clearance or other preparatory activities.

The ongoing surveys will include systematic walkover inspections, documentation and recording of cultural heritage features, and coordination with the Museum Directorate for verification. In the event of any discoveries, the Chance Find Procedure will be immediately implemented.

In addition, all vegetation clearance activities following tree cutting will be carried out under the supervision of the Project archaeologist to ensure that potential cultural heritage assets are not disturbed or overlooked.

Findings from these surveys will be reported to the relevant authorities and integrated into the Cultural Heritage Management Plan (CHMP), ensuring that the entire Project footprint is fully assessed and that cultural heritage should be appropriately managed throughout the Project lifecycle.

6.2 Intangible Cultural Heritage

Project Owner will liaise with local authorities to identify if project activities can interfere with traditional celebrations or festivities; alternative solutions will be agreed with local authorities. Furthermore, Project Owner will liaise with local authorities to identify if project activities restrict access to elements of traditional culture; alternative solutions will be agreed with local authorities

Some of the cemeteries identified along the project route have been formally registered and placed under legal protection. However, burials are still taking place in these cemetery areas today. As a result, some graves are of historical significance, while others belong to the modern period. This situation brings specific responsibilities.

The presence of modern-period burials within these registered cemeteries indicates that there are communities who regularly visit the site and pay their respects. Therefore, in addition to considering the matter from the perspective of tangible cultural heritage, it is also appropriate to include the perspective of intangible cultural heritage.

This circumstance makes it necessary to adopt additional precautionary measures to ensure that both the tangible and intangible cultural values are appropriately protected and respected. The following measures are recommended:

Recommended Precautionary Measures

- Stakeholder and Community Engagement:

- Conduct regular and documented consultations with families and local religious/community leaders to understand ongoing burial practices and ceremonial needs.

- Provide advance notice of any planned works and agree on temporary access routes for visitors.

- Access and Respect Measures:

- Ensure uninterrupted and respectful access for relatives and community members who wish to visit or perform rituals.

- Establish clearly marked buffer zones and quiet hours during community visits or religious ceremonies.

- Archaeological and Heritage Protection:

- Demarcate and fence historical burial areas and modern graves separately to avoid accidental disturbance.

- Implement vibration, dust and noise control measures during any nearby construction works.

- **Chance Find and Monitoring:**

- Apply a formal Chance Find Procedure for any unexpected discoveries of historical graves or artefacts.

- Maintain continuous archaeological monitoring during all ground-disturbing activities within or adjacent to the registered cemeteries.

By implementing these measures, the project will protect the legally registered cemeteries, respect ongoing modern burial practices and ensure that **both tangible and intangible cultural heritage values are preserved** in accordance with national regulations and international standards.

6.3 Archaeological Findings of Minor Significance

This type of archaeological findings is comprised of a finding isolated from its environment or findings in notably small sizes which may be found by chance. In this case, chance find procedure (CHMP, Appendix-1) will be followed.

The finding will be reported to the archaeologist. The construction activities will be ceased in the field where the finding is discovered and the finding will be reported to the

relevant museum expert by archaeologist. Following the completion of investigation of the notified relevant Museum Directorate, the necessary arrangements, such as the identification of the boundaries of the archaeological asset/site (finding), preservation by a protection band, notification of workers in order to prevent any physical intervention.

The preservation methods and mitigation measures to be applied are also listed in the CHIA report.

6.4 Archaeological Findings of Moderate Significance

This type of archaeological findings is small scale findings in groups or single findings with medium size architectural elements such as tombs. In this case, chance find procedure (CHMP, Appendix- 1) will be followed. In order to prevent a possible damage, necessary arrangements must be made to determine the boundaries of the archaeological remains to keep the construction equipment out of access.

The finding will be reported to the construction manager and archaeologist by the Project Owner. The construction activities will be ceased in the field where the finding is discovered and the finding will be reported to the relevant museum expert by archaeologist. Following the completion of investigation of the notified relevant Museum Directorate, the necessary arrangements will be taken, such as the identification of the boundaries of the archaeological asset/site (finding), preservation by a protection band, notification of workers in order to prevent any physical intervention.

6.5 Archaeological Findings of Major Significance

This type of findings is comprised of findings with great importance such as a settlement area, a tumulus, a mound or a big necropolis (wide graveyard areas with archaeological characteristic) and the construction activities must be immediately stopped and chance find procedure (CHMP, Appendix-1) will be followed. This type of chance find may cover the entire construction site in such a way that the entrance and exit of the construction equipment and vehicles cannot be managed without giving any damage to the archaeological remains.

The finding will be reported to the construction manager and archaeologist by the archaeologist of Project Owner. The construction activities will be ceased in the field where the finding is discovered and the finding will be reported to the relevant museum expert by archaeologist. Following the completion of investigation of the notified relevant Museum Directorate, the necessary arrangements will be taken, such as the identification of the boundaries of the archaeological asset/site (finding), preservation by a protection band, notification of workers in order to prevent any physical intervention.

6.6 Archaeologist.Pre-Construction Evaluation and Construction Phase Monitoring

It is considered appropriate for the Project Owner to conduct additional investigations in areas identified during the baseline surveys where only limited surface finds were observed but which have not been formally registered by the Regional Conservation Board. Although these areas are not officially designated, they may still contain archaeological potential. In locations identified as having such potential, and where land acquisition has been completed, the opening of test pits is recommended. The purpose of these works is to confirm the presence or absence of possible subsurface archaeological deposits prior to construction and to minimize the likelihood of chance finds during construction, thereby reducing the risk of potential delays.

Pre-construction survey activities will be carried out with the participation of the Project Archaeologist. This work can be regarded as a pro-active archaeological measure, as it ensures that potential risks are addressed in advance. **If potential archaeological sites are reported as a result of these pre-construction surveys, an archaeological watching brief will be established to oversee the follow-up works. Under this watching brief, and under the supervision of the Project Archaeologist—including during the excavation itself—trial trenches may be excavated using construction machinery.**

In this way, any potential archaeological sites will be identified prior to the construction phase, and the necessary preventive measures can be implemented in advance.

For the construction phase, the Project Owner will implement a clearly defined monitoring methodology in sensitive locations. This methodology will include:

- Continuous presence of qualified archaeologists during ground-disturbance activities in high-risk areas,
- Regular inspections and spot checks in medium-risk areas,
- Immediate suspension of works and initiation of the Chance Find Procedure in case of discoveries,
- Detailed documentation of all monitoring activities (photographs, GPS, forms, registers),
- Coordination with the Museum Directorate to arrange site inspections and obtain binding decisions where required.

Both the results of the pre-construction evaluation works and the construction-phase monitoring—including the archaeological watching brief—will be documented and integrated into the Cultural Heritage Management Plan (CHMP), ensuring that the Project is implemented in full compliance with national legislation and international lender standards.

6.7 Monitoring and Updating of the CHMP

The Cultural Heritage Management Plan (CHMP) should be regarded as a living document and is expected to be continuously monitored and updated throughout the construction phase. Regular reviews should be conducted at least quarterly, with findings from archaeological monitoring, chance finds, and surveys of newly accessible areas incorporated into updated versions.

Revisions should also reflect instructions or decisions from the Museum Directorate and the Regional Conservation Board, as well as inputs from the Community Liaison Officer (CLO) and Social Teams regarding community coordination. Each update should be recorded with version numbers, dates, and a summary of changes to ensure transparency. Significant revisions should be shared with relevant authorities and lenders to maintain compliance with national legislation and international standards.

7. REFERENCES and STANDARDS

7.1 International Financial Institutions and Standards

- IFC – International Finance Corporation
  - Performance Standard 8 (PS8): Cultural Heritage
  - Performance Standard 1 (PS1): Assessment and Management of Environmental and Social Risks and Impacts
  - Performance Standard 5 (PS5): Land Acquisition and Involuntary Resettlement
- EBRD – European Bank for Reconstruction and Development
  - Performance Requirement 8 (PR8): Cultural Heritage
  - Performance Requirement 1 (PR1): Assessment and Management of Environmental and Social Impacts
- AIIB – Asian Infrastructure Investment Bank
  - Environmental and Social Standard 1 (ESS1): Environmental and Social Assessment and Management
  - Environmental and Social Standard 2 (ESS2): Involuntary Resettlement
  - Environmental and Social Standard 3 (ESS3): Indigenous Peoples

7.2 International Conventions and Guidelines

- UNESCO World Heritage Convention (1972)
- UNESCO Convention for the Safeguarding of the Intangible Cultural Heritage (2003)
- ICOMOS Guidelines:
- International Charter for the Management of Archaeological Heritage (1990)
- Principles for the Preservation and Management of Archaeological Heritage
- Valetta (Malta) Convention (1992) – Protection of the Archaeological Heritage of Europe

7.3 National Framework (Türkiye)

- Law No. 2863 on the Protection of Cultural and Natural Assets
- Principle Decision No. 658 (Conservation Board)
- Ministry of Culture and Tourism Annual Unit Price Lists (for cost estimations in CHMP budgets)
- “The relocation of cemeteries will be carried out in accordance with the provisions of Law No. 3998 on the Protection of Cemeteries (adopted on 9 June 1994).”
- “Relevant activities will be undertaken in line with national legislation, including Law No. 2863 on the Protection of Cultural and Natural Assets and Law No. 3998 on the Protection of Cemeteries.”

7.4 Other References

- Council of Europe ETS No 143, “European Convention on the Protection of the

Archaeological Heritage (Revised) (The Valletta Convention)", 1992.

- General Directorate of Preservation of Cultural and Historical Heritage, "Law on Protection of Cultural and Natural Assets (1) Law No. 2863", 1983.
- ICOMOS (International Council of Monuments and Sites) "Guidance on Impact Assessment for Cultural World Heritage", January 2011.
- IFA (Institute of Field Archaeologists) Standard and Guidance for the Collection, "Documentation, Conservation and Research of Archaeological Materials", 2001.
- IFA (Institute of Field Archaeologists) 1994, "Standard and Guidance for an Archaeological Desk Based Assessment" (revised 1999)
- IFA (Institute of Field Archaeologists) 1994, "Standard and Guidance for an Archaeological Watching Brief" (revised 1999)
- IFA (Institute of Field Archaeologists) 1994, "Standard and Guidance for an Archaeological Field Evaluation" (revised 1999)
- Municipality Law (No. 5393) – Responsibilities of municipalities regarding cemeteries
- Directorate of Local Administrations, Ministry of Environment, Urbanization and Climate Change (Yerel Yönetimler Şube Müdürlüğü)
- Official practices communicated by the Provincial Directorate of Environment and local municipalities
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APPENDIX-1: Chance Find Procedure

APPENDIX 2: CONTACT INFORMATION OF RELATED MUSEUM DIRECTORATES AND REGIONAL BOARD DIRECTORATES

Table 10 Museum Contact Information

Name	Phone	Adress
Antalya Archaeology Museum	Tel: 0242 238 56 88/89	Bahçelievler Mahallesi, Konyaaltı Caddesi, No 88, 07050 ANTALYA E-posta: antalyamuzesi@kultur.gov.tr
Side Archaeology Museum	Tel: (0242) 280 23 00	Side, Liman Cd., 07330 Manavgat/Antalya

Table 11 Contact Information of Regional Board Directorates

Name	Phone	Adress
Antalya Cultural Assets Regional Board Directorate	0242) 243 21 60 (0242) 247 87 61 (0242) 244 55 74	Kılıçaslan Mahç Zafer Sk. No: 6 07100 KALEİÇİ / ANTALYA

APPENDIX 3: BOARD DECISIONS

Folder of the Antalya Regional Board for the Protection of Cultural Heritage decisions, received up to 20 September 2025.

Table 12 General Archaeology Status Table

Code	Location	Name/Type	Period	Distance with respect to Centreline of the Road*	Does it overlap with Project's expropriation corridor?	Registration Status	Register Degree	Register Decision No	Description	Current Status	Value of the Heritage Asset	PS 8 Heritage Value	Measures to be Taken (Land Preparation and Construction)	Measures to be Taken (Operation)
HRM 1	South of Kocayatak Antalya/Serik/Yukarıkocayatak	Cemetery	Late Ottoman	Within	Yes-partially	**1st Degree**	**1st Degree**	13.06.2025/20016	Late Ottoman-Modern Cemetery Area: The site contains hundreds of graves dating back to the Late Ottoman (18th-19th century) and modern periods Some of the graves have suffered damage due to illegal excavations.	**ARHB permitting process is <u>ongoing</u>.** A partial corridor narrowing has been implemented; however, due to the condition of the existing highway and settlement activities in the area, it was decided to carry out a salvage excavation and relocate the graves within the same cemetery. In order to carry out works in these areas, a Technical Justification Report has been submitted to the ARHB. The consultant academics within the ARHB, in line with the relevant legislation and taking into account the opinion of the Museum Directorate, have completed their evaluation and the permits for excavation have been obtained. The finalization of the design is awaited.	High	Replicable	• All works shall be carried out under the supervision of the Project Archaeologist and the Museum Directorate. • Establish a fenced no-go buffer zone, show the area on the constraint maps • The site will be assessed in accordance with the relevant thresholds specified in the ESIA report. • The stages and requirements set out in the CHMP must be fully implemented. • Chance Find Procedure shall be followed immediately with a stop-work protocol, upon discovery of any artefact. * Document all graves prior to relocation, including photography, GPS mapping, and headstone inventory. • Provide heritage awareness training to all construction personnel before works commence. • Provide safe and uninterrupted access routes for relatives and community members. • Monitoring will be carried out by the Project Archaeologist continuously. • No activities will be carried out until the salvage excavation has been completed.	• Maintain fencing and signage to prevent unauthorized access. • Conduct periodic monitoring in coordination with ARHB and the Museum Directorate. * Continue vibration monitoring if traffic load is high. • Prohibit maintenance activities or expansion within the buffer zone. • Implement community engagement to raise awareness and respect for the site. • Provide safe and uninterrupted access routes for relatives and community members.

Code	Location	Name/Type	Period	Distance with respect to Centreline of the Road*	Does it overlap with Project's expropriation corridor?	Registration Status	Register Degree	Register Decision No	Description	Current Status	Value of the Heritage Asset	PS 8 Heritage Value	Measures to be Taken (Land Preparation and Construction)	Measures to be Taken (Operation)
HRM 2	South of Kocayatak Antalya/Serik/Yukarıkocayatak	Rural Settlement	Late Byzantium	138 m	No - does not overlap	**Non-registered**	**Not Registered**	13.03.2025/19388	Single Phase Rural Settlement: Surface findings include sherds from late-period daily-use vessels. This settlement falls within the project corridor.	**ARHB permitting process is complete.** The identified area has been reported to the Museum Directorate, and the procedures at the ARHB have been completed. It was evaluated by the Board and was not registered.	Low	Replicable	• All works shall be carried out under the supervision of the Project Archaeologist and the Museum Directorate. • Establish no-go buffer zone, show the area on the constraint maps • The site will be assessed in accordance with the relevant thresholds specified in the ESIA report. • The stages and requirements set out in the CHMP must be fully implemented. • Chance Find Procedure shall be followed immediately with a stop-work protocol, upon discovery of any artefact. • Provide heritage awareness training to all construction personnel before works commence. • Document and monitor all visible surface materials (GPS, photographs) before, during, and after works near the site in coordination with the Project Archeologist.	-

Code	Location	Name/Type	Period	Distance with respect to Centreline of the Road*	Does it overlap with Project's expropriation corridor?	Registration Status	Register Degree	Register Decision No	Description	Current Status	Value of the Heritage Asset	PS 8 Heritage Value	Measures to be Taken (Land Preparation and Construction)	Measures to be Taken (Operation)
HRM 3	Serik K3 Interchange Access Road Km 8+800 Antalya/Serik/Burmahancı	Rural Settlement	Late Roman - Early Byzantium	26 m	Yes-partially	**1st Degree**	**1st Degree**	13.03.2025/19390 16.05.2025/19760	Single-Phase Settlement: Sherds of daily-use vessels from the Late Roman-Early Byzantine period have been identified on the surface. No architectural remains are visible. The site is situated between fields and the canal.	**ARHB permitting process is <u>complete</u>.** The identified area has been reported to the Museum Directorate, and the procedures at the ARHB have been completed. **There are no constraints for proceeding with the construction works.** There is a high probability of chance finds in these areas.	High	Replicable	• All works shall be carried out under the supervision of the Project Archaeologist and the Museum Directorate. • Establish no-go buffer zone, show the area on the constraint maps • The site will be assessed in accordance with the relevant thresholds specified in the ESIA report. • The stages and requirements set out in the CHMP must be fully implemented. • Chance Find Procedure shall be followed immediately with a stop-work protocol, upon discovery of any artefact. • Provide heritage awareness training to all construction personnel before works commence. • Document and monitor all visible surface materials (GPS, photographs) before, during, and after works near the site in coordination with the Project Archeologist. • If necessary, it is recommended to carry out a preliminary investigation along the project alignment, including survey and trial trenching. • No construction, excavation, or soil movement within the 1st-degree registered archaeological boundary. • Monitoring will be carried out by the Project Archaeologist continuously. • Quarterly monitoring (four times per year) is recommended.	

Code	Location	Name/Type	Period	Distance with respect to Centreline of the Road*	Does it overlap with Project's expropriation corridor?	Registration Status	Register Degree	Register Decision No	Description	Current Status	Value of the Heritage Asset	PS 8 Heritage Value	Measures to be Taken (Land Preparation and Construction)	Measures to be Taken (Operation)
HRM 4	Serik K3 Interchange Access Road Km 8+800 Antalya/Serik/Belpınar	Settlement	Late Byzantium	177 m	No - does not overlap	**Non-registered**	**Not Registered**	13.03.2025/19390 16.05.2025/19760	Late Period Settlement: Likely dating back to the 14th-15th centuries, this settlement is characterized by a distinct elevation. The site is situated between a stream bed and a road. The surface is scattered with dense tile fragments and sherds of daily-use vessels.	**ARHB permitting process is <u>complete</u>.** The identified area has been reported to the Museum Directorate, and the procedures at the ARHB have been completed. It was evaluated by the Board and was not registered. **All necessary permits have been obtained from the ARHB, and there are no constraints for proceeding with the construction works**.	Low	Replicable	• All works shall be carried out under the supervision of the Project Archaeologist and the Museum Directorate. • Establish no-go buffer zone, show the area on the constraint maps • The site will be assessed in accordance with the relevant thresholds specified in the ESIA report. • The stages and requirements set out in the CHMP must be fully implemented. • Chance Find Procedure shall be followed immediately with a stop-work protocol, upon discovery of any artefact. • Provide heritage awareness training to all construction personnel before works commence. • Document and monitor all visible surface materials (GPS, photographs) before, during, and after works near the site in coordination with the Project Archeologist.	

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HRM 5	Serik K1 Interchange Km 52+500 Antalya/Serik/Deniztepesi	Cemetery	Late Ottoman	Within	Yes-partially	**Non-reigstered**	**Not Registered**	16.01.2025/18992 24.03.2025/19489 16.05.2025/19761	It is a cemetery spread over a vast area, located within the borders of Antalya, Serik, Deniztepesi neighborhood, on parcel 139-5/135-9. The land registry record, when queried from the system, identifies the area as a cemetery. It is likely an Early Republic to modern-era cemetery.	**ARHB permitting process is <u>ongoing</u>.** In order to carry out works in these areas, a Technical Justification Report has been submitted to the ARHB. The consultant academics within the ARHB, in line with the relevant legislation and taking into account the opinion of the Museum Directorate, have completed their evaluation and the permits for excavation have been obtained. The necessary permits have been obtained from the ARHB, and the **salvage excavations will commence.**	Low	Replicable	• All works shall be carried out under the supervision of the Project Archaeologist and the Museum Directorate. • Establish a fenced no-go buffer zone, show the area on the constraint maps • The site will be assessed in accordance with the relevant thresholds specified in the ESIA report. • The stages and requirements set out in the CHMP must be fully implemented. • Chance Find Procedure shall be followed immediately with a stop-work protocol, upon discovery of any artefact. • Provide heritage awareness training to all construction personnel before works commence. • Document and monitor all visible surface materials (GPS, photographs) before, during, and after works near the site in coordination with the Project Archeologist. • No activities will be carried out until the salvage excavation has been completed. • Blasting shall be planned conservatively with a safe vibration threshold; mechanical breaking shall be used in unsafe areas. • Blasting should take place in coordination with the ARHB and the relevant Museum Directorate, under the supervision of a qualified archaeologist. • A shoring (IKSA) wall will be installed to minimize vibration, and stemming applied to limit air overpressure near the site. • Apply vibration and dust-control measures. • Conduct continuous monitoring during and after blasting and excavation by the Project Archaeologist. • Provide safe and uninterrupted access routes for relatives and community members.	

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HRM 6	Serik K1 Interchange Km 52+500 Antalya/Serik/Deniztepesi	Building Remains	Roman	Within	Yes-partially	**1st Degree**	**1st Degree**		Remains of an architectural structure, possibly from the Roman Period, likely representing a frontier garrison settlement. A dense accumulation of rubble stone and visible wall rows, which may belong to the structure, are present on the surface. Additionally, numerous roof tile fragments and a small number of sherds from daily use vessels have been observed.	**ARHB permitting process is <u>ongoing</u>.** Design change was completed before the trial pits study.In order to carry out works in these areas, a Technical Justification Report has been submitted to the ARHB. Trial pits will start.	High	Replicable	• All works shall be carried out under the supervision of the Project Archaeologist and the Museum Directorate. • Establish no-go buffer zone, show the area on the constraint maps • The site will be assessed in accordance with the relevant thresholds specified in the ESIA report. • The stages and requirements set out in the CHMP must be fully implemented. • Chance Find Procedure shall be followed immediately with a stop-work protocol, upon discovery of any artefact. • Provide heritage awareness training to all construction personnel before works commence. • Document and monitor all visible surface materials (GPS, photographs) before, during, and after works near the site in coordination with the Project Archeologist. • No blasting will be carried out before the decision of the conservation board. After the decision a drilling operation will be done on the area. The measures determined by the Board will be implemented based on the results. • Blasting shall be planned conservatively with a safe vibration threshold; mechanical breaking shall be used in unsafe areas. • Blasting should take place in coordination with the ARHB and the relevant Museum Directorate, under the supervision of a qualified archaeologist. • A shoring (IKSA) wall will be installed to minimize vibration, and stemming applied to limit air overpressure near the site. • No construction, excavation, or soil movement within the 1st-degree registered archaeological boundary. * Working areas will be kept as small as practicable. Visual barriers will be implemented if the area is subjected to high visual impacts. • Conduct continuous monitoring during and after blasting by the Project Archaeologist.	

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HRM 7	Serik K1 Interchange Km 52+500 Antalya/Serik/Sarıabalı	Tumulus	Roman	70 m	Yes-partially	**1st Degree**	**1st and 3rd Degree**	26.06.2025/20087	Tumulus: A row of stones, possibly belonging to the wall of the tomb, is visible on the surface. In the vicinity of the artificial hill, there are densely packed roof tile fragments and a sparse number of ceramic pieces from daily use vessels.	**ARHB permitting process is complete.** **All necessary permits have been obtained from the ARHB, and there are no constraints for proceeding with the construction works.**	High	Replicable	• All works shall be carried out under the supervision of the Project Archaeologist and the Museum Directorate. • Establish no-go buffer zone, show the area on the constraint maps • The site will be assessed in accordance with the relevant thresholds specified in the ESIA report. • The stages and requirements set out in the CHMP must be fully implemented. • Chance Find Procedure shall be followed immediately with a stop-work protocol, upon discovery of any artefact. • Provide heritage awareness training to all construction personnel before works commence. • Document and monitor all visible surface materials (GPS, photographs) before, during, and after works near the site in coordination with the Project Archeologist. • No construction, excavation, or soil movement within the 1st-degree registered archaeological boundary. • Monitoring will be carried out by the Project Archaeologist continuously.	

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HRM 8	Viaduct-4 Km 56+000	Manavgat Natural Site Border	Archeological or Natural Site Border	Within	Yes - fully	Natural Preservation Area	**1st Degree Natural Area**	Natural Site Border	Manavgat Natural Preservation Area	**Permitting process is <u>complete</u>.** All necessary permits have been obtained and there are no constraints for proceeding with the construction works.	Medium	Non-replicable	• All works shall be carried out under the supervision of the Project Archaeologist and the Museum Directorate. • Establish no-go buffer zone, show the area on the constraint maps • The site will be assessed in accordance with the relevant thresholds specified in the ESIA report. • The stages and requirements set out in the CHMP must be fully implemented. • Chance Find Procedure shall be followed immediately with a stop-work protocol, upon discovery of any artefact. • Provide heritage awareness training to all construction personnel before works commence. • Document and monitor all visible surface materials (GPS, photographs) before, during, and after works near the site in coordination with the Project Archeologist. • Blasting shall be planned conservatively with a safe vibration threshold; mechanical breaking shall be used in unsafe areas. • Blasting should take place in coordination with the ARHB and the relevant Museum Directorate, under the supervision of a qualified archaeologist. • No construction, excavation, or soil movement within the 1st-degree registered archaeological boundary. • Conduct continuous monitoring during and after blasting by the Project Archaeologist. • Apply vibration and dust-control measures. • Weekly ecological surveys and compliance reporting to the Ministry of Environment will be maintained throughout construction.	

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HRM 9	Km 59+000 Antalya / Manavgat/ Taşağıl	Late Roman Settlement	Late Roman	Within	Yes - fully	**Non-registered**	**Not Registered**	26.12.24/18914	Late Roman Settlement: Due to its location, the settlement is believed to have been constructed for surveillance purposes. It is situated on a hill overlooking the valley and features a dense layer of rubble stone that may belong to architectural structures. Additionally, roof tile fragments and ceramic fragments from daily use vessels are visible on the surface.	**ARHB permitting process is <u>complete</u>.** All necessary permits have been obtained from the ARHB, and there are no constraints for proceeding with the construction works It was evaluated by the Board and was not registered. Board permit has been obtained.	Low	Replicable	• All works shall be carried out under the supervision of the Project Archaeologist and the Museum Directorate. • Establish no-go buffer zone, show the area on the constraint maps • The site will be assessed in accordance with the relevant thresholds specified in the ESIA report. • The stages and requirements set out in the CHMP must be fully implemented. • Chance Find Procedure shall be followed immediately with a stop-work protocol, upon discovery of any artefact. • Provide heritage awareness training to all construction personnel before works commence. • Document and monitor all visible surface materials (GPS, photographs) before, during, and after works near the site in coordination with the Project Archeologist. • Blasting shall be planned conservatively with a safe vibration threshold; mechanical breaking shall be used in unsafe areas. • Blasting should take place in coordination with the ARHB and the relevant Museum Directorate, under the supervision of a qualified archaeologist. • A shoring (IKSA) wall will be installed to minimize vibration, and stemming applied to limit air overpressure near the site. • Apply vibration and dust-control measures. • Conduct continuous monitoring during and after blasting by the Project Archaeologist. • Weekly ecological surveys and compliance reporting to the Ministry of Environment.	

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HRM 10	Km 62+000 Antalya / Manavgat Taşağıl	Settlement	-	Within (Tunnel)	Yes - fully	**1st Degree**	**1st Degree**	26.12.24/18916	1st Degree Registered Archaeological Site	**ARHB permitting process is complete.** **All necessary permits have been obtained from the Regional Conservation Board, and there are no constraints for proceeding with the construction works**	High	Non-replicable	• All works shall be carried out under the supervision of the Project Archaeologist and the Museum Directorate. • Establish no-go buffer zone, show the area on the constraint maps • The site will be assessed in accordance with the relevant thresholds specified in the ESIA report. • The stages and requirements set out in the CHMP must be fully implemented. • Chance Find Procedure shall be followed immediately with a stop-work protocol, upon discovery of any artefact. • Provide heritage awareness training to all construction personnel before works commence. • Document and monitor all visible surface materials (GPS, photographs) before, during, and after works near the site in coordination with the Project Archeologist • No construction, excavation, or soil movement within the 1st-degree registered archaeological boundary. • Monitoring will be carried out by the Project Archaeologist continuously. • Quarterly monitoring (four times per year) by the Project Archaeologist is recommended	

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HRM 11	Km 62+750 Antalya / Manavgat Taşağıl	Archaeological Settlement	Roman	Within	Yes-partially	**Non-registered**	**Not Registered**	26.12.24/18913	Late Roman Settlement: Features a dense layer of rubble stone that may belong to architectural structures. Additionally, roof tile fragments and ceramic fragments from daily use vessels and terra sigilatta are visible on the surface.	**ARHB permitting process is complete.** All necessary permits have been obtained from the ARHB, and there are no constraints for proceeding with the construction works It was evaluated by the Board and was not registered.	Low	Replicable	• All works shall be carried out under the supervision of the Project Archaeologist and the Museum Directorate. • Establish no-go buffer zone, show the area on the constraint maps • The site will be assessed in accordance with the relevant thresholds specified in the ESIA report. • The stages and requirements set out in the CHMP must be fully implemented. • Chance Find Procedure shall be followed immediately with a stop-work protocol, upon discovery of any artefact. • Document all visible features and artifacts through GPS mapping and photography before construction. • Establish a fenced buffer zone where feasible around visible remains. • Implement vibration and dust control measures (e.g., wetting surfaces, limiting heavy machinery use). • Provide heritage awareness training to all construction personnel.	

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HRM 12	Taşağıl Interchange Km 67+000 Antalya / Manavgat Hocalar	Necropolis	Roman	174 m	No - does not overlap	**1st Degree**	**1st Degree**	27.06.2025/20118	Roman Period Necropolis: In addition to high-quality ceramic and tile fragments dating back to the 4th-6th centuries AD, many slabs and covering stones that may belong to graves are present on the surface and in the section. It is anticipated that there is a nearby settlement area associated with this necropolis.	**ARHB permitting process is <u>complete</u>.** All necessary permits have been obtained from the ARHB, and there are no constraints for proceeding with the construction works	High	Replicable	• All works shall be carried out under the supervision of the Project Archaeologist and the Museum Directorate. • Establish no-go buffer zone, show the area on the constraint maps • The site will be assessed in accordance with the relevant thresholds specified in the ESIA report. • The stages and requirements set out in the CHMP must be fully implemented. • Chance Find Procedure shall be followed immediately with a stop-work protocol, upon discovery of any artefact. • Avoid any ground disturbance within the 1st Degree boundary; clearly demarcate and fenced buffer zone. • Conduct vibration baseline measurements and continuous monitoring during construction to ensure thresholds are not exceeded. • Apply dust-control measures (watering, surface cover) and limit heavy-equipment operation near the buffer. • Provide heritage-awareness training to construction personnel. • No construction, excavation, or soil movement within the 1st-degree registered archaeological boundary. • Monitoring will be carried out by the Project Archaeologist continuously.	

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HRM 13	Taşağıl Interchange Km 67+000 Antalya / Manavgat Hocalar	Settlement	Roman	800 m	No - does not overlap	**Non-registered**	**Not Registered**	13.03.2025/19375 12.06.2025/19878	Roman Period Settlement: No traces of architecture are visible on the surface. Thin-walled, high-quality ceramic fragments dating back to the 4th-6th centuries AD have been found. The site is situated on a hillside in a sheltered location overlooking the surrounding area.	**ARHB permitting process is <u>complete</u>.** All necessary permits have been obtained from the ARHB, and there are no constraints for proceeding with the construction works It was evaluated by the Board and was not registered. Route change was completed before the permit process	Low	Replicable	• All works shall be carried out under the supervision of the Project Archaeologist and the Museum Directorate. • Establish no-go buffer zone, show the area on the constraint maps • The site will be assessed in accordance with the relevant thresholds specified in the ESIA report. • The stages and requirements set out in the CHMP must be fully implemented. • Chance Find Procedure shall be followed immediately with a stop-work protocol, upon discovery of any artefact. • Provide heritage awareness training to all construction personnel before works commence. • Document and monitor all visible surface materials (GPS, photographs) before, during, and after works near the site in coordination with the Project Archeologist. • A route change has been implemented to shift the construction footprint outside the boundaries of the registered archaeological site. • Conduct continuous monitoring during and after blasting by the Project Archaeologist.	

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HRM 14	Taşağıl Interchange Km 67+000 Antalya / Manavgat Hocalar	Cemetery	Early Republic	916 m	No - does not overlap	**1st Degree**	**1st Degree**	27.06.2025/20117	Hocalar Köyü Cemetery: Early Republican and modern cemetery.	**ARHB permitting process is complete.** All necessary permits have been obtained from the ARHB, and there are no constraints for proceeding with the construction works Route change was completed before the permit process.	High	Replicable	• All works shall be carried out under the supervision of the Project Archaeologist and the Museum Directorate. • Establish no-go buffer zone, show the area on the constraint maps • The site will be assessed in accordance with the relevant thresholds specified in the ESIA report. • The stages and requirements set out in the CHMP must be fully implemented. • Chance Find Procedure shall be followed immediately with a stop-work protocol, upon discovery of any artefact. • Provide heritage awareness training to all construction personnel before works commence. • Document and monitor all visible surface materials (GPS, photographs) before, during, and after works near the site in coordination with the Project Archeologist. • A route change has been implemented to shift the construction footprint outside the boundaries of the registered archaeological site. • No construction, excavation, or soil movement within the 1st-degree registered archaeological boundary. • Conduct continuous monitoring during and after blasting by the Project Archaeologist. • Provide safe and uninterrupted access routes for relatives and community members.	

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HRM 15	Taşağıl Interchange Access Road Antalya /Manavgat Taşağıl	Cemetery	Early Republic	Within	Yes-partially	**1st Degree**	**1st Degree**	30.01.2025/19088	Cemetery: Early Republican and modern cemetery. Use of spolia in some graves.	**ARHB permitting process is <u>ongoing</u>.** The necessary permits have been obtained from the ARHB), and the **salvage excavations will commence.**	High	Replicable	• All works shall be carried out under the supervision of the Project Archaeologist and the Museum Directorate. • Establish a fenced no-go buffer zone, show the area on the constraint maps • The site will be assessed in accordance with the relevant thresholds specified in the ESIA report. • The stages and requirements set out in the CHMP must be fully implemented. • Chance Find Procedure shall be followed immediately with a stop-work protocol, upon discovery of any artefact. • Provide heritage awareness training to all construction personnel before works commence. • Document and monitor all visible surface materials (GPS, photographs) before, during, and after works near the site in coordination with the Project Archeologist. • No activities will be carried out until the salvage excavation has been completed. • Provide safe and uninterrupted access routes for relatives and community members.	• Maintain fencing and signage to prevent unauthorized access. • Conduct periodic monitoring in coordination with ARHB and the Museum Directorate. * Continue vibration monitoring if traffic load is high. • Prohibit maintenance activities or expansion within the buffer zone. • Implement community engagement to raise awareness and respect for the site. • Provide safe and uninterrupted access routes for relatives and community members.

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HRM 16	Km 70+400 Antalya /Manavgat Gündoğdu	Tumulus and Necropolis	Roman	Within (Tunnel)	Yes-partially	**1st Degree**	**1st Degree**	16.01.2025/18980	Tumulus-Necropolis: In addition to high-quality ceramic and glass fragments from the 4th-5th centuries AD, a large number of tile fragments are also visible on the surface.	**ARHB permitting process is <u>complete</u>.** All necessary permits have been obtained from the Regional Conservation Board, and there are no constraints for proceeding with the construction works	High	Non-Replicable	• All works shall be carried out under the supervision of the Project Archaeologist and the Museum Directorate. • Establish no-go buffer zone, show the area on the constraint maps • The site will be assessed in accordance with the relevant thresholds specified in the ESIA report. • The stages and requirements set out in the CHMP must be fully implemented. • Chance Find Procedure shall be followed immediately with a stop-work protocol, upon discovery of any artefact. • Document all visible surface materials (GPS, photographs) before construction. • Blasting shall be planned conservatively with a safe vibration threshold; mechanical breaking shall be used in unsafe areas. • Blasting should take place in coordination with the ARHB and the relevant Museum Directorate, under the supervision of a qualified archaeologist. • A shoring (IKSA) wall will be installed to minimize vibration, and stemming applied to limit air overpressure near the site. • Apply vibration and dust-control measures. • No construction, excavation, or soil movement within the 1st-degree registered archaeological boundary. • Conduct continuous monitoring during and after blasting and excavation by the Project Archaeologist.	

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HRM 17	Km 70+500 Antalya /Manavgat Yavrudoğan	Settlement	Roman	125 m	No - does not overlap	**Non-registered**	**Not Registered**	13.03.2025/19378 12.06.2025/19877	Tumulus-Necropolis Area: Various ceramic fragments from different shapes are visible on the surface, including bases of amphorae, handle pieces from very large amphorae, and fragments of daily use vessels.	**ARHB permitting process is <u>complete</u>.** All necessary permits have been obtained from the ARHB, and there are no constraints for proceeding with the construction works It was evaluated by the Board and was not registered.	Low	Replicable	• All works shall be carried out under the supervision of the Project Archaeologist and the Museum Directorate. • Establish no-go buffer zone, show the area on the constraint maps • The site will be assessed in accordance with the relevant thresholds specified in the ESIA report. • The stages and requirements set out in the CHMP must be fully implemented. • Chance Find Procedure shall be followed immediately with a stop-work protocol, upon discovery of any artefact. • Confirm the precise location and ensure the 125 m distance is maintained throughout construction. • Apply dust suppression (water spraying, speed control) during excavation and haulage. • Conduct periodic inspections by the Project Archaeologist during nearby excavation works.	

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HRM 18	Manavgat K1 İnterchange Km 83+500 Antalya /Manavgat Yukarıışıklar	Mound	Roman	313 m	No - does not overlap	**1st Degree**	**1st Degree**		Registered Archaeological Site: Dense ceramic and tile fragments from the Roman Period are visible on the surface. Illegal excavation pits containing numerous rubble stones have been identified in the area.	**Process is <u>complete.</u>** As a result of the route change, the area has been excluded from the project's impact corridor	High	Non-Replicable	• All works shall be carried out under the supervision of the Project Archaeologist and the Museum Directorate. • Establish no-go buffer zone, show the area on the constraint maps • The site will be assessed in accordance with the relevant thresholds specified in the ESIA report. • The stages and requirements set out in the CHMP must be fully implemented. • Chance Find Procedure shall be followed immediately with a stop-work protocol, upon discovery of any artefact. • Provide heritage awareness training to all construction personnel before works commence. • Document and monitor all visible surface materials (GPS, photographs) before, during, and after works near the site in coordination with the Project Archeologist. • A route change has been implemented to shift the construction footprint outside the boundaries of the registered archaeological site. • No construction, excavation, or soil movement within the 1st-degree registered archaeological boundary. • Conduct continuous monitoring during and after blasting by the Project Archaeologist.	

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HRM 19	Manavgat K3 İnterchange Km 88+000	Manavgat Waterfall Protected Area	-	2900 m	No - does not overlap	Natural Preservation Area	**1st Degree Natural Area**		Registered Natural Site: Manavgat Waterfall Preservation Area. Although it is not in direct contact with the Project area, it falls within the 400 m corridor. Due to its status as a natural asset, the Antalya Environment and Urbanization Provincial Directorate and the Antalya Board of Preservation must be informed before any work is conducted.	**Process is <u>complete.</u>** As a result of the route change, the area has been excluded from the project's impact corridor	Medium	Non-Replicable	• All works shall be carried out under the supervision of the Project Archaeologist and the Museum Directorate. • Establish no-go buffer zone, show the area on the constraint maps • The site will be assessed in accordance with the relevant thresholds specified in the ESIA report. • The stages and requirements set out in the CHMP must be fully implemented. • Chance Find Procedure shall be followed immediately with a stop-work protocol, upon discovery of any artefact. • Provide heritage awareness training to all construction personnel before works commence. • Document and monitor all visible surface materials (GPS, photographs) before, during, and after works near the site in coordination with the Project Archeologist. • A route change has been implemented to shift the construction footprint outside the boundaries of the registered archaeological site. • No construction, excavation, or soil movement within the 1st-degree registered archaeological boundary. • Conduct continuous monitoring during and after blasting by the Project Archaeologist.	

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HRM 20	Manavgat K2 Interchange Km 84+000 Antalya /Manavgat Sarılar	Aqueduct	Roman	1780 m	No - does not overlap	**1st Degree**	**1st Degree**	30.01.2025/19092	Registered Archaeological Site: This is the aqueduct supplying water to the ancient city of Side. Since the Project involves a first-degree archaeological site, the opinion of the Antalya Board of Preservation must be obtained before proceeding with any work.	**Process is <u>complete.</u>** As a result of the route change, the area has been excluded from the project's impact corridor	High	Non-Replicable	• All works shall be carried out under the supervision of the Project Archaeologist and the Museum Directorate. • Establish no-go buffer zone, show the area on the constraint maps • The site will be assessed in accordance with the relevant thresholds specified in the ESIA report. • The stages and requirements set out in the CHMP must be fully implemented. • Chance Find Procedure shall be followed immediately with a stop-work protocol, upon discovery of any artefact. • Provide heritage awareness training to all construction personnel before works commence. • Document and monitor all visible surface materials (GPS, photographs) before, during, and after works near the site in coordination with the Project Archeologist. • Blasting shall be planned conservatively with a safe vibration threshold; mechanical breaking shall be used in unsafe areas. • Blasting should take place in coordination with the ARHB and the relevant Museum Directorate, under the supervision of a qualified archaeologist. • Apply vibration and dust-control measures. • No construction, excavation, or soil movement within the 1st-degree registered archaeological boundary. • Conduct continuous monitoring during and after blasting by the Project Archaeologist • A shoring (IKSA) wall will be installed to minimize vibration, and stemming applied to limit air overpressure near the site.	

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HRM 21	Manavgat Interchange Access Road Km 83+000 Antalya /Manavgat Yukarıışıklar	Settlement	Roman	1433 m	No - does not overlap	**1st Degree**	**1st Degree**		Registered Archaeological Site: This is the aqueduct supplying water to the ancient city of Side. Since the Project involves a first-degree archaeological site, the opinion of the Antalya Board of Preservation must be obtained before proceeding with any work.	**Process is <u>complete.</u>** As a result of the route change, the area has been excluded from the project's impact corridor	High	Non-Replicable	• All works shall be carried out under the supervision of the Project Archaeologist and the Museum Directorate. • Establish no-go buffer zone, show the area on the constraint maps • The site will be assessed in accordance with the relevant thresholds specified in the ESIA report. • The stages and requirements set out in the CHMP must be fully implemented. • Provide heritage awareness training to all construction personnel before works commence. • Document and monitor all visible surface materials (GPS, photographs) before, during, and after works near the site in coordination with the Project Archeologist. • A route change has been implemented to shift the construction footprint outside the boundaries of the registered archaeological site. • No construction, excavation, or soil movement within the 1st-degree registered archaeological boundary. • Conduct continuous monitoring during and after blasting by the Project Archaeologist	

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HRM 22	Manavgat K3 Interchange Km 86+000	Aqueduct	Roman	2200 m	No - does not overlap	**Non-registered**	**Not Registered**	30.01.19089	Aqueduc Feet: For reference see kültürvarlıkları.gov.tr. However, no archaeological evidence was encountered during the examination.	**Process is <u>complete.</u>** As a result of the route change, the area has been excluded from the project's impact corridor	Low	Replicable	• All works shall be carried out under the supervision of the Project Archaeologist and the Museum Directorate. • Establish no-go buffer zone, show the area on the constraint maps • The site will be assessed in accordance with the relevant thresholds specified in the ESIA report. • The stages and requirements set out in the CHMP must be fully implemented. • Chance Find Procedure shall be followed immediately with a stop-work protocol, upon discovery of any artefact. • Provide heritage awareness training to all construction personnel before works commence. • Document and monitor all visible surface materials (GPS, photographs) before, during, and after works near the site in coordination with the Project Archeologist. • A route change has been implemented to shift the construction footprint outside the boundaries of the registered archaeological site. • Conduct continuous monitoring during and after blasting by the Project Archaeologist.	

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HRM 23	Manavgat K4 Interchange Km 82+000 Antalya /Manavgat Hatipler	Cemetery	Late Ottoman	3900 m	No - does not overlap	**1st Degree**	**1st Degree**		Hatipler Village Cemetery Area: This site encompasses a cemetery from the Late Ottoman to the Early Republican period, as well as modern graves. Reused columns and column capitals are incorporated into the graves, and spiralled, monolithic columns are also present. Additionally, there are quilted gravestones dating from the Late Ottoman period.	**Process is <u>complete.</u>** As a result of the route change, the area has been excluded from the project's impact corridor	High	Replicable	• All works shall be carried out under the supervision of the Project Archaeologist and the Museum Directorate. • Establish no-go buffer zone, show the area on the constraint maps • The site will be assessed in accordance with the relevant thresholds specified in the ESIA report. • The stages and requirements set out in the CHMP must be fully implemented. • Chance Find Procedure shall be followed immediately with a stop-work protocol, upon discovery of any artefact. • Provide heritage awareness training to all construction personnel before works commence. • Document and monitor all visible surface materials (GPS, photographs) before, during, and after works near the site in coordination with the Project Archeologist. • A route change has been implemented to shift the construction footprint outside the boundaries of the registered archaeological site. • Provide safe and uninterrupted access routes for relatives and community members. • No excavation, stockpiling, or machinery movement permitted within the confirmed cemetery boundary. • Conduct continuous monitoring during and after blasting by the Project Archaeologist	

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HRM 24	Manavgat K5 Interchange Km 81+000 Antalya /Manavgat Hatipler	Mound	Roman	4500 m	No - does not overlap	**3rd Degree**	**3rd Degree**		Mound: The site is situated at a high elevation relative to the surrounding settlement. Ceramic fragments from the Late Roman to Early Byzantine period have been observed in great numbers. However, due to the area being a cultivated field, a detailed examination could not be conducted.	**Process is <u>complete.</u>** As a result of the route change, the area has been excluded from the project's impact corridor	Medium	Non-Replicable	• All works shall be carried out under the supervision of the Project Archaeologist and the Museum Directorate. • Establish no-go buffer zone, show the area on the constraint maps • The site will be assessed in accordance with the relevant thresholds specified in the ESIA report. • The stages and requirements set out in the CHMP must be fully implemented. • Chance Find Procedure shall be followed immediately with a stop-work protocol, upon discovery of any artefact. • Provide heritage awareness training to all construction personnel before works commence. • Document and monitor all visible surface materials (GPS, photographs) before, during, and after works near the site in coordination with the Project Archeologist. • A route change has been implemented to shift the construction footprint outside the boundaries of the registered archaeological site. • Conduct continuous monitoring during and after blasting by the Project Archaeologist.	

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HRM 25	Manavgat K4-K5 Interchange Km 81+000 Antalya /Manavgat Hatipler	Tumulus	Roman	3100 m	No - does not overlap	**Non-registered**	**Not Registered**	13.03.2025/19376 16.05.2025/19768	Tumulus: A small number of ceramic fragments dating back to the Late Roman to Early Byzantine period are visible on the surface.	**Process is <u>complete.</u>** As a result of the route change, the area has been excluded from the project's impact corridor	Low	Replicable	• All works shall be carried out under the supervision of the Project Archaeologist and the Museum Directorate. • Establish no-go buffer zone, show the area on the constraint maps • The site will be assessed in accordance with the relevant thresholds specified in the ESIA report. • The stages and requirements set out in the CHMP must be fully implemented. • Chance Find Procedure shall be followed immediately with a stop-work protocol, upon discovery of any artefact. • Provide heritage awareness training to all construction personnel before works commence. • Document and monitor all visible surface materials (GPS, photographs) before, during, and after works near the site in coordination with the Project Archeologist. • A route change has been implemented to shift the construction footprint outside the boundaries of the registered archaeological site. • Conduct continuous monitoring during and after blasting by the Project Archaeologist.	

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HRM 26	Manavgat K4-K5 Interchange Km 81+000 Antalya /Manavgat Hatipler	Hilltop Settlement	Roman	3300 m	No - does not overlap	**1st Degree**	**1 st Degree**	13.03.2025/19377 16.05.2025/19769	Mound: A large number of ceramic fragments dating to the Late Roman period are visible on the surface. No traces of architecture have been observed.	**Process is <u>complete.</u>** As a result of the route change, the area has been excluded from the project's impact corridor	High	Non-Replicable	• All works shall be carried out under the supervision of the Project Archaeologist and the Museum Directorate. • Establish no-go buffer zone, show the area on the constraint maps • The site will be assessed in accordance with the relevant thresholds specified in the ESIA report. • The stages and requirements set out in the CHMP must be fully implemented. • Chance Find Procedure shall be followed immediately with a stop-work protocol, upon discovery of any artefact. • Provide heritage awareness training to all construction personnel before works commence. • Document and monitor all visible surface materials (GPS, photographs) before, during, and after works near the site in coordination with the Project Archeologist. • A route change has been implemented to shift the construction footprint outside the boundaries of the registered archaeological site. • No construction, excavation, or soil movement within the 1st-degree registered archaeological boundary. • Conduct continuous monitoring during and after blasting by the Project Archaeologist	

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HRM 27	Km 84+400 Antalya /Manavgat Yukarıışıklar	Settlement	Roman	84 m	No - does not overlap	**3rd Degree**	**3rd Degree**	28.07.2025/20294	Mound: A large number of ceramic and tile fragments dating back to the Roman period are visible on the surface and in the section. No traces of architecture have been observed.	**Process is <u>complete.</u>** The area is outside of the project's expropration corridor.	Medium	Non-Replicable	• All works shall be carried out under the supervision of the Project Archaeologist and the Museum Directorate. • Establish no-go buffer zone, show the area on the constraint maps • The site will be assessed in accordance with the relevant thresholds specified in the ESIA report. • The stages and requirements set out in the CHMP must be fully implemented. • Chance Find Procedure shall be followed immediately with a stop-work protocol, upon discovery of any artefact. • Provide heritage awareness training to all construction personnel before works commence. • Document and monitor all visible surface materials (GPS, photographs) before, during, and after works near the site in coordination with the Project Archeologist. • Conduct continuous monitoring during and after blasting by the Project Archaeologist	

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HRM 28	Km 85+900 Antalya/Manavgat Bucakşeyhler	Tumulus	Roman	Within	Yes - fully	**Non-registered**	**Not Registered**	16.01.2025/18981	Tumulus: The surface contains a small number of ceramic pieces dating back to the Roman period. The dense presence of stream stones at the top of the hill suggests that the hill was intentionally created.	**ARHB permitting process is complete.** It was evaluated by the Board and was not registered. And trial pits was completed and no archaeological material. Construction activities can be implemented	Low	Replicable	• All works shall be carried out under the supervision of the Project Archaeologist and the Museum Directorate. • Establish no-go buffer zone, show the area on the constraint maps • The site will be assessed in accordance with the relevant thresholds specified in the ESIA report. • The stages and requirements set out in the CHMP must be fully implemented. • Chance Find Procedure shall be followed immediately with a stop-work protocol, upon discovery of any artefact. • Provide heritage awareness training to all construction personnel before works commence. • Document and monitor all visible surface materials (GPS, photographs) before, during, and after works near the site in coordination with the Project Archeologist. • Conduct continuous monitoring during and after blasting by the Project Archaeologist	

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HRM 29	Km 86+500 Antalya/Manavgat Bucakşeyhler	Aqueduct	Roman	74 m	No - does not overlap	**1st Degree**	**1st Degree**		Registered Archaeological Site: This is the aqueduct supplying water to the ancient city of Side. Although it is not in direct contact with the Project area, it falls within the 400 m corridor.	**Process is <u>complete</u>.** The area is outside of the project's expropration corridor.	High	Non-Replicable	• All works shall be carried out under the supervision of the Project Archaeologist and the Museum Directorate. • Establish no-go buffer zone, show the area on the constraint maps • The site will be assessed in accordance with the relevant thresholds specified in the ESIA report. • The stages and requirements set out in the CHMP must be fully implemented. • Chance Find Procedure shall be followed immediately with a stop-work protocol, upon discovery of any artefact. • Provide heritage awareness training to all construction personnel before works commence. • Document and monitor all visible surface materials (GPS, photographs) before, during, and after works near the site in coordination with the Project Archeologist. • No construction, excavation, or soil movement within the 1st-degree registered archaeological boundary. • Conduct continuous monitoring during and after blasting by the Project Archaeologist	

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HRM 30	Km 86+500 Antalya/Manavgat Bucakşeyhler	Fountain	Ottoman	128 m	No - does not overlap	**1st Degree**	**1st Degree**	24.03.2025/19480	Fountain: An Ottoman-period fountain structure. The stones used in the construction were sourced from the nearby aqueduct.	**Process is <u>complete</u>.** The area is outside of the project's expropration corridor.	Hig	Replicable	• All works shall be carried out under the supervision of the Project Archaeologist and the Museum Directorate. • Establish no-go buffer zone, show the area on the constraint maps • The site will be assessed in accordance with the relevant thresholds specified in the ESIA report. • The stages and requirements set out in the CHMP must be fully implemented. • Chance Find Procedure shall be followed immediately with a stop-work protocol, upon discovery of any artefact. • Provide heritage awareness training to all construction personnel before works commence. • Document and monitor all visible surface materials (GPS, photographs) before, during, and after works near the site in coordination with the Project Archeologist. • No construction, excavation, or soil movement within the 1st-degree registered archaeological boundary. • Conduct continuous monitoring during and after blasting by the Project Archaeologist	

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HRM 31	Km 87+00 Antalya/Manavgat Bucakşeyhler	Necropolis	Roman	7 m	Yes-partially	**Non-registered**	**Not Registered**	16.01.2025/18981	Necropolis: A necropolis area. Skeletal remains and numerous covering tile fragments were found in the sections.	**ARHB permitting process is ongoing.** Design change was completed The area is outside of the project's expropration corridor.	Low	Replicable	• All works shall be carried out under the supervision of the Project Archaeologist and the Museum Directorate. • Establish no-go buffer zone, show the area on the constraint maps • The site will be assessed in accordance with the relevant thresholds specified in the ESIA report. • The stages and requirements set out in the CHMP must be fully implemented. • Chance Find Procedure shall be followed immediately with a stop-work protocol, upon discovery of any artefact. • Provide heritage awareness training to all construction personnel before works commence. • Document and monitor all visible surface materials (GPS, photographs) before, during, and after works near the site in coordination with the Project Archeologist. • No construction, excavation, or soil movement within the 1st-degree registered archaeological boundary. • Conduct continuous monitoring during and after blasting by the Project Archaeologist	

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HRM 32	Km 87+100 Antalya /Manavgat/Bucakşeyhler	Church Remains	Roman	Within	Yes-partially	**1st Degree**	**1st Degree**	16.01.2025/18982 12.06.2025/19879	Registered Archaeological Site: The architectural walls from the Roman period are still standing, and a large number of ceramics and tile fragments from the same period can be observed in the surrounding area.	**ARHB permitting process is <u>ongoing.</u>** The necessary permits have been obtained from the Antalya Regional Board for the Protection of Cultural Heritage (RHB), and the salvage excavation is ongoing.	High	Replicable	• All works shall be carried out under the supervision of the Project Archaeologist and the Museum Directorate. • Establish a fenced no-go buffer zone, show the area on the constraint maps • The site will be assessed in accordance with the relevant thresholds specified in the ESIA report. • The stages and requirements set out in the CHMP must be fully implemented. • Chance Find Procedure shall be followed immediately with a stop-work protocol, upon discovery of any artefact. • Provide heritage awareness training to all construction personnel before works commence. • Document and monitor all visible surface materials (GPS, photographs) before, during, and after works near the site in coordination with the Project Archeologist. • No activities will be carried out until the salvage excavation has been completed. • Once all archaeological works have been finalized and construction permits have been granted, all construction activities must be carried out under the supervision of both the Museum archaeologist and the Project archaeologist. • The structure and other remains uncovered during the excavation will be relocated to a site close to their current location and in an area that will not be affected by the Project. At the new relocation site, monitoring of the structure is recommended. The structure will be completed and restored; however, to guard against any potential damage caused by construction activities, monthly monitoring is recommended, to be carried out by the Project Archaeologist through surface inspections and reporting.	

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HRM 33	Km 87+700 Antalya/Manavgat Bucakşeyhler	Settlement	Roman	260 m	No - does not overlap	**1st Degree**	**1st Degree**		Mound: The surface features a dense concentration of high-quality ceramic pieces dating back to the Roman period. However, no architectural remains have been observed.	**Pocess is complete.** The area is outside of the project's expropration corridor.	High	Non-Replicable	• All works shall be carried out under the supervision of the Project Archaeologist and the Museum Directorate. • Establish no-go buffer zone, show the area on the constraint maps • The site will be assessed in accordance with the relevant thresholds specified in the ESIA report. • The stages and requirements set out in the CHMP must be fully implemented. • Chance Find Procedure shall be followed immediately with a stop-work protocol, upon discovery of any artefact. • Provide heritage awareness training to all construction personnel before works commence. • Document and monitor all visible surface materials (GPS, photographs) before, during, and after works near the site in coordination with the Project Archeologist. • No construction, excavation, or soil movement within the 1st-degree registered archaeological boundary. • Conduct continuous monitoring during and after blasting by the Project Archaeologist	

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HRM 34	Km 87+500 Antalya/Manavgat Bucakşeyhler	Cemetery	Ottoman	160 m	No - does not overlap	**Non-registered**	**Status of Protected Area****		Cemetery Area: Despite the intensive use of the cemetery, no uniform orientation of the graves was observed. It is believed that the cemetery was in use during both the Byzantine and Ottoman periods.	**Process is <u>complete</u>.** It was evaluated by the Board and was not registered. The area is outside of the project's expropration corridor.	Low	Replicable	• All works shall be carried out under the supervision of the Project Archaeologist and the Museum Directorate. • Establish a fenced no-go buffer zone, show the area on the constraint maps • The site will be assessed in accordance with the relevant thresholds specified in the ESIA report. • The stages and requirements set out in the CHMP must be fully implemented. • Chance Find Procedure shall be followed immediately with a stop-work protocol, upon discovery of any artefact. • Provide heritage awareness training to all construction personnel before works commence. • Document all graves prior to relocation, including photography, GPS mapping, and headstone inventory. • Provide safe and uninterrupted access routes for relatives and community members. • No excavation, stockpiling, or machinery movement permitted within the confirmed cemetery boundary.	

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HRM 35	Km 88+200 Antalya/Manavgat Bucakşeyhler	Building Remains	Ottoman	1 m	Yes-partially	**1st Degree**	**1st Degree**		Building: The main walls are visible on the surface. However, due to the location, the area surrounding the structure could not be thoroughly examined. It is located along the camp road alignment.	**ARHB permitting process is complete.** All necessary permits have been obtained from the Regional Conservation Board, and there are no constraints for proceeding with the construction works	High	Replicable	• All works shall be carried out under the supervision of the Project Archaeologist and the Museum Directorate. • Establish no-go buffer zone, show the area on the constraint maps • The site will be assessed in accordance with the relevant thresholds specified in the ESIA report. • The stages and requirements set out in the CHMP must be fully implemented. • Chance Find Procedure shall be followed immediately with a stop-work protocol, upon discovery of any artefact. • Provide heritage awareness training to all construction personnel before works commence. • Document and monitor all visible surface materials (GPS, photographs) before, during, and after works near the site in coordination with the Project Archeologist. • No construction, excavation, or soil movement within the 1st-degree registered archaeological boundary. • Conduct continuous monitoring during and after blasting by the Project Archaeologist	

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HRM 36	Km 89+800 Antalya /Manavgat Ulukapı	Rural Settlement	Ottoman	65 m	No - does not overlap	**Non-registered**	**Not Registered**	24.03.2025/19481	Area with Pottery: Sparse pottery and tile fragments are visible on the surface. However, no architectural remains have been identified.	**Process is <u>complete</u>.** It was evaluated by the Board and was not registered. The area is outside of the project's expropration corridor.	Low	Replicable	• All works shall be carried out under the supervision of the Project Archaeologist and the Museum Directorate. • Establish no-go buffer zone, show the area on the constraint maps • The site will be assessed in accordance with the relevant thresholds specified in the ESIA report. • The stages and requirements set out in the CHMP must be fully implemented. • Chance Find Procedure shall be followed immediately with a stop-work protocol, upon discovery of any artefact. • Provide heritage awareness training to all construction personnel before works commence. • Document and monitor all visible surface materials (GPS, photographs) before, during, and after works near the site in coordination with the Project Archeologist. • No construction, excavation, or soil movement within the 1st-degree registered archaeological boundary. • Conduct continuous monitoring during and after blasting by the Project Archaeologist	

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HRM 37	Km 92+200 Antalya /Manavgat Aşağıışıklar	Settlement	Roman	Within	Yes-partially	**1st and 3rd Degree**	**1st and 3rd Degree**		Roman Period Settlement: A dense accumulation of rubble stones, likely belonging to architectural structures, is visible on the surface. Additionally, a large number of tiles and fragments of daily use vessels from the 4th-5th centuries AD are present throughout the area.	**ARHB permitting process is <u>ongoing</u>.** An application has been submitted to the Antalya Regional Board for the Protection of Cultural Heritage (ARHB) regarding this area, consisting of 1st Degree and 3rd Degree sites. The ARHB required that archaeological trial (sondaj) excavations be carried out and the results submitted to the Board. For the 1st degree site, following the route revision (design change), the alignment has been shifted outside the boundaries of the 1st-degree archaeological site and impact on this site has been avoided However, for the 3rd degree site, since no route revision (design change) could be implemented within the 3rd-degree registered area, archaeological trial (sondaj) excavations, including vegetation clearance, will be undertaken at this site in accordance with the applicable legislation. Following the completion archaeological trial excavation and vegetation clearance, a final decision will be obtained from ARHB.	High	Non-Replicable	• All works shall be carried out under the supervision of the Project Archaeologist and the Museum Directorate. • Establish no-go buffer zone, show the area on the constraint maps • The site will be assessed in accordance with the relevant thresholds specified in the ESIA report. • The stages and requirements set out in the CHMP must be fully implemented. • Chance Find Procedure shall be followed immediately with a stop-work protocol, upon discovery of any artefact. • Provide heritage awareness training to all construction personnel before works commence. • Document and monitor all visible surface materials (GPS, photographs) before, during, and after works near the site in coordination with the Project Archeologist. • No construction, excavation, or soil movement within the 1st-degree registered archaeological boundary. • Conduct continuous monitoring during and after blasting by the Project Archaeologist	

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													• All works shall be carried out under the supervision of the Project Archaeologist and the Museum Directorate. • Establish no-go buffer zone, show the area on the constraint maps • The site will be assessed in accordance with the relevant thresholds specified in the ESIA report. • The stages and requirements set out in the CHMP must be fully implemented. • Chance Find Procedure shall be followed immediately with a stop-work protocol, upon discovery of any artefact. • Provide heritage awareness training to all construction personnel before works commence. • Document and monitor all visible surface materials (GPS, photographs) before, during, and after works near the site in coordination with the Project Archeologist. • Blasting shall be planned conservatively with a safe vibration threshold; mechanical breaking shall be used in unsafe areas. • Blasting should take place in coordination with the ARHB and the relevant Museum Directorate, under the supervision of a qualified archaeologist. • A shoring (IKSA) wall will be installed to minimize vibration, and stemming applied to limit air overpressure near the site. • Apply vibration and dust-control measures. • No construction, excavation, or soil movement within the 1st-degree registered archaeological boundary. • Conduct continuous monitoring during and after blasting and excavation by the Project Archaeologist. • Cover sensitive areas with protective geotextile or sandbag barriers during blasting. • A shoring (IKSA) wall will be installed to minimize vibration, and stemming applied to limit air overpressure near the site. • Based on the external contractor the charge can be modified based on the attenuation. • No construction, excavation, or soil movement within the 1st-degree registered archaeological boundary.	
HRM 38	Km 95+600 Antalya /Manavgat Aksaz	Settlement	Roman	65 m	Yes-partially	**1st Degree**	**1st Degree**	30.01.2025/19090	Roman Period Settlement: The settlement, which dominates the valley, features a wide range of material dating from the Early Roman Period to the 4th-5th centuries AD. Numerous high-quality ceramic fragments, in various forms, are found on the surface, along with tile and glass pieces.	**Process is complete.** Design change was completed	High	Non-replicable		

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HRM 39	Km 102+500 Antalya /Manavgat Hacıobası	Tumulus	Roman	35 m	Yes-partially	**Non-registered**	**Not Registered**	16.01.2025/18983	Tumulus: Tile fragments dating back to the Roman Period are visible on the surface. The site is situated on the edge of a slope filling area.	**Process is complete** It was evaluated by the Board and was not registered	Low	Replicable	• All works shall be carried out under the supervision of the Project Archaeologist and the Museum Directorate. • Establish no-go buffer zone, show the area on the constraint maps • The site will be assessed in accordance with the relevant thresholds specified in the ESIA report. • The stages and requirements set out in the CHMP must be fully implemented. • Chance Find Procedure shall be followed immediately with a stop-work protocol, upon discovery of any artefact. • Provide heritage awareness training to all construction personnel before works commence. • Document and monitor all visible surface materials (GPS, photographs) before, during, and after works near the site in coordination with the Project Archeologist. • No construction, excavation, or soil movement within the 1st-degree registered archaeological boundary. • Conduct continuous monitoring during and after blasting by the Project Archaeologist	

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HRM 40	Manavgat Interchange East Access Road Antalya /Manavgat Hacıobası	Cemetery	Late Ottoman	32 m	Yes-partially	**1st Degree**	**1st Degree**	30.01.2025/19091	Cemetery: This is a Late Ottoman period cemetery area with a dense number of burials observed throughout the site.	**ARHB permitting process is <u>ongoing</u>.** Design Processes are ongoing Salvage excavation and relocation will be carried out for certain graves after the necessary permits have been obtained. The expropriation corridor remains within the cemetery limits; however, no graves are affected according to the latest measurements. This has been ensured through a design change implemented along both the main route and the access road, effectively avoiding any physical interaction with the burial area.	High	Replicable	• All works shall be carried out under the supervision of the Project Archaeologist and the Museum Directorate. • Establish a fenced no-go buffer zone, show the area on the constraint maps • The site will be assessed in accordance with the relevant thresholds specified in the ESIA report. • The stages and requirements set out in the CHMP must be fully implemented. • Chance Find Procedure shall be followed immediately with a stop-work protocol, upon discovery of any artefact. • Provide heritage awareness training to all construction personnel before works commence. • Document and monitor all visible surface materials (GPS, photographs) before, during, and after works near the site in coordination with the Project Archeologist. • No activities will be carried out until the salvage excavation has been completed. • Provide safe and uninterrupted access routes for relatives and community members.	• Maintain fencing and signage to prevent unauthorized access. • Conduct periodic monitoring in coordination with ARHB and the Museum Directorate. * Continue vibration monitoring if traffic load is high. • Prohibit maintenance activities or expansion within the buffer zone. • Implement community engagement to raise awareness and respect for the site. • Provide safe and uninterrupted access routes for relatives and community members.

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HRM 41	Km 104+500 Antalya /Manavgat Uzunlar	Church or Build Remains	Byzantium	61 m	No - does not overlap	**1st Degree**	**1st Degree**		Byzantine Period Church-Administrative Building: The structure, with its main walls standing approximately 2 meters high, features an apsidal section on its eastern facade. Numerous roof tile fragments are visible on the surface.	**Process is <u>complete</u>.** Design change was completed The area is outside of the project's expropration corridor.	High	Replicable	• All works shall be carried out under the supervision of the Project Archaeologist and the Museum Directorate. • Establish no-go buffer zone, show the area on the constraint maps • The site will be assessed in accordance with the relevant thresholds specified in the ESIA report. • The stages and requirements set out in the CHMP must be fully implemented. • Chance Find Procedure shall be followed immediately with a stop-work protocol, upon discovery of any artefact. • Provide heritage awareness training to all construction personnel before works commence. • Document and monitor all visible surface materials (GPS, photographs) before, during, and after works near the site in coordination with the Project Archeologist. • Blasting shall be planned conservatively with a safe vibration threshold; mechanical breaking shall be used in unsafe areas. • Blasting should take place in coordination with the ARHB and the relevant Museum Directorate, under the supervision of a qualified archaeologist. • A shoring (IKSA) wall will be installed to minimize vibration, and stemming applied to limit air overpressure near the site. * Working areas will be kept as small as practicable. Visual barriers will be implemented if the area is subjected to high visual impacts. • Apply vibration and dust-control measures. • Conduct continuous monitoring during and after blasting and excavation by the Project Archaeologist. • Quarterly monitoring (four times per year) is recommended.	

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HRM 42	Km 105+000 Antalya /Manavgat Uzunlar	Settlement	Roman	Within	Yes-partially	**1st Degree**	**1st Degree**	24.03.2025/19482 12.06.2025/19876	Mound: The surface of the settlement, located in a sheltered area by the river, contains a very dense concentration of ceramic and glass fragments dating back to the Late Roman period. The slope facing the river consists of natural rock, while the rear section is a landfill area suitable for settlement.	**ARHB permitting process is <u>ongoing</u>** Vegetation clearance has been completed, the excavation contractor has been appointed, and excavation works was completed. A report which is inclueded resul of excavation was submitted Museum Directorate. Final decision is awaited.	High	Replicable	• All works shall be carried out under the supervision of the Project Archaeologist and the Museum Directorate. • Establish a fenced no-go buffer zone, show the area on the constraint maps • The site will be assessed in accordance with the relevant thresholds specified in the ESIA report. • The stages and requirements set out in the CHMP must be fully implemented. • Chance Find Procedure shall be followed immediately with a stop-work protocol, upon discovery of any artefact. • Provide heritage awareness training to all construction personnel before works commence. • Document and monitor all visible surface materials (GPS, photographs) before, during, and after works near the site in coordination with the Project Archeologist. • No construction, excavation, or soil movement within the 1st-degree registered archaeological boundary. • Quarterly monitoring (four times per year) is recommended by the Project Archaeologist.	

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HRM 43	Km 108+750 Antalya /Manavgat Kadılar	Cemetery	Early Republic	60 m	No - does not overlap	**Non-registered**	**Status of Protected Area****		Cemetery Area: Early Republican Period and modern cemetery. As the reference point is located adjacent to the cemetery, it is believed that the route passes through the cemetery. In this case, it must be remembered that Cemetery Laws will apply on anything related to the area.	**Process is <u>complete</u>.** It was evaluated by the Board and was not registered. The area is outside of the project's expropration corridor.	Low	Replicable	• All works shall be carried out under the supervision of the Project Archaeologist and the Museum Directorate. • Establish a fenced no-go buffer zone, show the area on the constraint maps • The site will be assessed in accordance with the relevant thresholds specified in the ESIA report. • The stages and requirements set out in the CHMP must be fully implemented. • Chance Find Procedure shall be followed immediately with a stop-work protocol, upon discovery of any artefact. • Provide heritage awareness training to all construction personnel before works commence. • Document all graves prior to relocation, including photography, GPS mapping, and headstone inventory. • Provide safe and uninterrupted access routes for relatives and community members. • No excavation, stockpiling, or machinery movement permitted within the confirmed cemetery boundary.	

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HRM 44	Km 109+600 Antalya /Manavgat Kadılar	Historical Plane Tree	-	24 m	Yes-partially	**Non-registered**	**Not Registered**		Historical Plane Tree: As a natural asset, notification should be made to the Antalya Provincial Directorate of Environment and Urbanization. Since the plane tree meets the criteria for a natural asset, with a diameter of 2 m and a height of 15-17 m, it must be protected in situ.	**Process is complete.** It was evaluated by the Board and was not registered.	Low	Replicable	• All works shall be carried out under the supervision of the Project Archaeologist and the Museum Directorate. • Establish no-go buffer zone, show the area on the constraint maps • The site will be assessed in accordance with the relevant thresholds specified in the ESIA report. • The stages and requirements set out in the CHMP must be fully implemented. • Chance Find Procedure shall be followed immediately with a stop-work protocol, upon discovery of any artefact. • Provide heritage awareness training to all construction personnel before works commence. • Document and monitor all visible surface materials (GPS, photographs) before, during, and after works near the site in coordination with the Project Archeologist. • No construction, excavation, or soil movement within the 1st-degree registered archaeological boundary. * Working areas will be kept as small as practicable. Visual barriers will be implemented if the area is subjected to high visual impacts. • Conduct continuous monitoring during and after blasting by the Project Archaeologist	

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HRM 45	Km 112+250 Antalya /Manavgat Yalçıdibi	Cemetery	Late Ottoman	42 m	Yes-partially	**Non-registered**	**Status of Protected Area****		Cemetery: The area is a late Ottoman, early Republican, and modern cemetery. Numerous skullcap tombstones are also notable within the cemetery.	**Process is <u>complete</u>.** Design change was completed	Low	Replicable	• All works shall be carried out under the supervision of the Project Archaeologist and the Museum Directorate. • Establish a fenced no-go buffer zone, show the area on the constraint maps • The site will be assessed in accordance with the relevant thresholds specified in the ESIA report. • The stages and requirements set out in the CHMP must be fully implemented. • Chance Find Procedure shall be followed immediately with a stop-work protocol, upon discovery of any artefact. • Provide heritage awareness training to all construction personnel before works commence. • Document and monitor all visible surface materials (GPS, photographs) before, during, and after works near the site in coordination with the Project Archeologist. • Blasting shall be planned conservatively with a safe vibration threshold; mechanical breaking shall be used in unsafe areas. • Blasting should take place in coordination with the ARHB and the relevant Museum Directorate, under the supervision of a qualified archaeologist. • A shoring (IKSA) wall will be installed to minimize vibration, and stemming applied to limit air overpressure near the site. • Apply vibration and dust-control measures. • Provide safe and uninterrupted access routes for relatives and community members. • Conduct continuous monitoring during and after blasting and excavation by the Project Archaeologist.	

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HRM 46	Km 112+250 Antalya /Manavgat Yalçıdibi	Yalçıdibi Waterfall	-	168 m	No - does not overlap	Natural Preservation Area	**1st Degree (Natural Area)**		Registered 1st Degree Site: Yalçıdibi Waterfall is a registered natural asset.	**Process is <u>complete</u>.** The area is outside of the project's expropration corridor.	Medium	Non-replicable	• All works shall be carried out under the supervision of the Project Archaeologist and the Museum Directorate. • Establish no-go buffer zone, show the area on the constraint maps • The site will be assessed in accordance with the relevant thresholds specified in the ESIA report. • The stages and requirements set out in the CHMP must be fully implemented. • Chance Find Procedure shall be followed immediately with a stop-work protocol, upon discovery of any artefact. • Provide heritage awareness training to all construction personnel before works commence. • Document and monitor all visible surface materials (GPS, photographs) before, during, and after works near the site in coordination with the Project Archeologist. • No construction, excavation, or soil movement within the 1st-degree registered archaeological boundary. * Working areas will be kept as small as practicable. Visual barriers will be implemented if the area is subjected to high visual impacts. • Conduct continuous monitoring during and after blasting by the Project Archaeologist	

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HRM 47	Alarahan K2 Interchange Access Road Km 116+000 Antalya/Alanya Alara	Çardaktepe	Roman / Byzantium	266 m	No - does not overlap	**1st Degree**	**1st Degree**		Registered 1st Degree Archaeological Site: This site is registered by the Antalya Preservation Board. The main walls of the structure are visible on the surface. The opinion of the Board must be obtained before construction.	**Process is <u>complete</u>.** The area is outside of the project's expropration corridor.	High	Non-replicable	• All works shall be carried out under the supervision of the Project Archaeologist and the Museum Directorate. • Establish no-go buffer zone, show the area on the constraint maps • The site will be assessed in accordance with the relevant thresholds specified in the ESIA report. • The stages and requirements set out in the CHMP must be fully implemented. • Chance Find Procedure shall be followed immediately with a stop-work protocol, upon discovery of any artefact. • Provide heritage awareness training to all construction personnel before works commence. • Document and monitor all visible surface materials (GPS, photographs) before, during, and after works near the site in coordination with the Project Archeologist. • No construction, excavation, or soil movement within the 1st-degree registered archaeological boundary. • Conduct continuous monitoring during and after blasting by the Project Archaeologist	

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HRM 48	Konaklı K1 Interchange Access Road Antalya/Alanya Payallar	Building Remains	Roman	9 m	No - does not overlap	**1st Degree**	**1st Degree**		Registered 1st Degree Archaeological Site: Building remains are visible on the surface.	**Process is <u>complete</u>.** The area is outside of the project's expropration corridor.	High	Replicable	• All works shall be carried out under the supervision of the Project Archaeologist and the Museum Directorate. • Establish no-go buffer zone, show the area on the constraint maps • The site will be assessed in accordance with the relevant thresholds specified in the ESIA report. • The stages and requirements set out in the CHMP must be fully implemented. • Chance Find Procedure shall be followed immediately with a stop-work protocol, upon discovery of any artefact. • Provide heritage awareness training to all construction personnel before works commence. • Document and monitor all visible surface materials (GPS, photographs) before, during, and after works near the site in coordination with the Project Archeologist. • No construction, excavation, or soil movement within the 1st-degree registered archaeological boundary. * Working areas will be kept as small as practicable. Visual barriers will be implemented if the area is subjected to high visual impacts. • Conduct continuous monitoring during and after blasting by the Project Archaeologist	

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HRM 49	Konaklı K1 Interchange Access Road Antalya/Alanya Emişbeleni	Building Remains	Roman / Byzantium	Within	Yes-partially	**1st Degree**	**1st Degree**		Registered 1st Degree Archaeological Site: There is no indication of the function of the structure, whose main walls are preserved up to 3 meters. The structure is located within a 400-meter corridor.	**ARHB permitting process is <u>ongoing</u>.** The route has minimal contact with the building remain's conservation area. Design changes are ongoing there.	High	Replicable	• All works shall be carried out under the supervision of the Project Archaeologist and the Museum Directorate. • Establish no-go buffer zone, show the area on the constraint maps • The site will be assessed in accordance with the relevant thresholds specified in the ESIA report. • The stages and requirements set out in the CHMP must be fully implemented. • Chance Find Procedure shall be followed immediately with a stop-work protocol, upon discovery of any artefact. • Provide heritage awareness training to all construction personnel before works commence. • Document and monitor all visible surface materials (GPS, photographs) before, during, and after works near the site in coordination with the Project Archeologist. • No construction, excavation, or soil movement within the 1st-degree registered archaeological boundary. * Working areas will be kept as small as practicable. Visual barriers will be implemented if the area is subjected to high visual impacts. • Conduct continuous monitoring during and after blasting by the Project Archaeologist	

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HRM 50	Km 134+000 Antalya/Alanya Emişbeleni	Building Remains	Roman / Byzantium	113 m	No - does not overlap	**1st Degree**	**1st Degree**		Building: There is no indication of the function of the structure, with only 3 meters of the main walls preserved.	**Process is <u>complete</u>.** The area is outside of the project's expropriation corridor.	High	Replicable	• All works shall be carried out under the supervision of the Project Archaeologist and the Museum Directorate. • Establish no-go buffer zone, show the area on the constraint maps • The site will be assessed in accordance with the relevant thresholds specified in the ESIA report. • The stages and requirements set out in the CHMP must be fully implemented. • Chance Find Procedure shall be followed immediately with a stop-work protocol, upon discovery of any artefact. • Provide heritage awareness training to all construction personnel before works commence. • Document and monitor all visible surface materials (GPS, photographs) before, during, and after works near the site in coordination with the Project Archeologist. • Blasting shall be planned conservatively with a safe vibration threshold; mechanical breaking shall be used in unsafe areas. • Blasting should take place in coordination with the ARHB and the relevant Museum Directorate, under the supervision of a qualified archaeologist. • A shoring (IKSA) wall will be installed to minimize vibration, and stemming applied to limit air overpressure near the site. • Apply vibration and dust-control measures. • No construction, excavation, or soil movement within the 1st-degree registered archaeological boundary. * Working areas will be kept as small as practicable. Visual barriers will be implemented if the area is subjected to high visual impacts. • Conduct continuous monitoring during and after blasting and excavation by the Project Archaeologist.	

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HRM 51	Km 136+200 Antalya/Alanya Toslak	Cemetery	Early Republic	17 m	Yes-partially	**Non-registered**	**Status of Protected Area****		Cemetery: Early Republican and modern cemetery. There may also be late Ottoman period graves in the area, which should be verified through further examination.	**Process is completed.** It was evaluated by the Board and was not registered.	Low	Replicable	• All works shall be carried out under the supervision of the Project Archaeologist and the Museum Directorate. • Establish a fenced no-go buffer zone, show the area on the constraint maps • The site will be assessed in accordance with the relevant thresholds specified in the ESIA report. • The stages and requirements set out in the CHMP must be fully implemented. • Chance Find Procedure shall be followed immediately with a stop-work protocol, upon discovery of any artefact. • Provide heritage awareness training to all construction personnel before works commence. • Document and monitor all visible surface materials (GPS, photographs) before, during, and after works near the site in coordination with the Project Archeologist. • Blasting shall be planned conservatively with a safe vibration threshold; mechanical breaking shall be used in unsafe areas. • Blasting should take place in coordination with the ARHB and the relevant Museum Directorate, under the supervision of a qualified archaeologist. • A shoring (IKSA) wall will be installed to minimize vibration, and stemming applied to limit air overpressure near the site. • Apply vibration and dust-control measures. • Provide safe and uninterrupted access routes for relatives and community members. • Conduct continuous monitoring during and after blasting and excavation by the Project Archaeologist.	

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HRM 52	Km 136+000 Antalya/Alanya Toslak	Settlement	-	122 m	No - does not overlap	**1st Degree**	**1st Degree**		Registered 1st Degree Site	**Process is <u>complete</u>.** The area is outside of the project's expropration corridor.	High	Non-Replicable	• All works shall be carried out under the supervision of the Project Archaeologist and the Museum Directorate. • Establish no-go buffer zone, show the area on the constraint maps • The site will be assessed in accordance with the relevant thresholds specified in the ESIA report. • The stages and requirements set out in the CHMP must be fully implemented. • Chance Find Procedure shall be followed immediately with a stop-work protocol, upon discovery of any artefact. • Provide heritage awareness training to all construction personnel before works commence. • Document and monitor all visible surface materials (GPS, photographs) before, during, and after works near the site in coordination with the Project Archeologist. • Blasting shall be planned conservatively with a safe vibration threshold; mechanical breaking shall be used in unsafe areas. • Blasting should take place in coordination with the ARHB and the relevant Museum Directorate, under the supervision of a qualified archaeologist. • A shoring (IKSA) wall will be installed to minimize vibration, and stemming applied to limit air overpressure near the site. • Apply vibration and dust-control measures. • No construction, excavation, or soil movement within the 1st-degree registered archaeological boundary. • Conduct continuous monitoring during and after blasting and excavation by the Project Archaeologist.	

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HRM 53	Km 140+000	Building Remains	Roman / Byzantium	39 m	No - does not overlap	**1st Degree**	**1st Degree**		Registered 1st Degree Archaeological Site: The presence of an apse on the eastern facade of the building, with main walls preserved up to 3-4 meters, indicates that the structure may have been a church.	**Process is <u>complete</u>.** The area is outside of the project's expropration corridor.	High	Non-Replicable	• All works shall be carried out under the supervision of the Project Archaeologist and the Museum Directorate. • Establish no-go buffer zone, show the area on the constraint maps • The site will be assessed in accordance with the relevant thresholds specified in the ESIA report. • The stages and requirements set out in the CHMP must be fully implemented. • Chance Find Procedure shall be followed immediately with a stop-work protocol, upon discovery of any artefact. • Provide heritage awareness training to all construction personnel before works commence. • Document and monitor all visible surface materials (GPS, photographs) before, during, and after works near the site in coordination with the Project Archeologist. • Blasting shall be planned conservatively with a safe vibration threshold; mechanical breaking shall be used in unsafe areas. • Blasting should take place in coordination with the ARHB and the relevant Museum Directorate, under the supervision of a qualified archaeologist. • A shoring (IKSA) wall will be installed to minimize vibration, and stemming applied to limit air overpressure near the site. • Apply vibration and dust-control measures. • No construction, excavation, or soil movement within the 1st-degree registered archaeological boundary. * Working areas will be kept as small as practicable. Visual barriers will be implemented if the area is subjected to high visual impacts. • Conduct continuous monitoring during and after blasting and excavation by the Project Archaeologist.	

Code	Location	Name/Type	Period	Distance with respect to Centreline of the Road*	Does it overlap with Project's expropriation corridor?	Registration Status	Register Degree	Register Decision No	Description	Current Status	Value of the Heritage Asset	PS 8 Heritage Value	Measures to be Taken (Land Preparation and Construction)	Measures to be Taken (Operation)
HRM 54	Alanya West Interchange Access Road End Antalya/Alanya Telatiye	Building Remains	Roman / Byzantium	55 m	No - does not overlap	**1st Degree**	**1st Degree**		Registered 1st Degree Archaeological Site: Numerous well-preserved structures are observed in the area near the coast.	**Process is <u>complete</u>.** The area is outside of the project's expropration corridor.	High	Non-Replicable	• All works shall be carried out under the supervision of the Project Archaeologist and the Museum Directorate. • Establish no-go buffer zone, show the area on the constraint maps • The site will be assessed in accordance with the relevant thresholds specified in the ESIA report. • The stages and requirements set out in the CHMP must be fully implemented. • Chance Find Procedure shall be followed immediately with a stop-work protocol, upon discovery of any artefact. • Provide heritage awareness training to all construction personnel before works commence. • Document and monitor all visible surface materials (GPS, photographs) before, during, and after works near the site in coordination with the Project Archeologist. • No construction, excavation, or soil movement within the 1st-degree registered archaeological boundary. * Working areas will be kept as small as practicable. Visual barriers will be implemented if the area is subjected to high visual impacts. • Conduct continuous monitoring during and after blasting by the Project Archaeologist	

Code	Location	Name/Type	Period	Distance with respect to Centreline of the Road*	Does it overlap with Project's expropriation corridor?	Registration Status	Register Degree	Register Decision No	Description	Current Status	Value of the Heritage Asset	PS 8 Heritage Value	Measures to be Taken (Land Preparation and Construction)	Measures to be Taken (Operation)
HRM 55	Alanya West Interchange Access Road End Antalya/Alanya Telatiye	Building Remains	Roman / Byzantium	178 m	No - does not overlap	**1st Degree**	**1st Degree**		Registered 1st Degree Archaeological Site: The structure is situated in an elevated location with a commanding view of the surrounding area. Its main walls are preserved up to a height of 4 meters.	**Process is <u>complete</u>.** The area is outside of the project's expropration corridor.	High	Non-Replicable	• All works shall be carried out under the supervision of the Project Archaeologist and the Museum Directorate. • Establish no-go buffer zone, show the area on the constraint maps • The site will be assessed in accordance with the relevant thresholds specified in the ESIA report. • The stages and requirements set out in the CHMP must be fully implemented. • Chance Find Procedure shall be followed immediately with a stop-work protocol, upon discovery of any artefact. • Provide heritage awareness training to all construction personnel before works commence. • Document and monitor all visible surface materials (GPS, photographs) before, during, and after works near the site in coordination with the Project Archeologist. • No construction, excavation, or soil movement within the 1st-degree registered archaeological boundary. * Working areas will be kept as small as practicable. Visual barriers will be implemented if the area is subjected to high visual impacts. • Conduct continuous monitoring during and after blasting by the Project Archaeologist	

Code	Location	Name/Type	Period	Distance with respect to Centreline of the Road*	Does it overlap with Project's expropriation corridor?	Registration Status	Register Degree	Register Decision No	Description	Current Status	Value of the Heritage Asset	PS 8 Heritage Value	Measures to be Taken (Land Preparation and Construction)	Measures to be Taken (Operation)
HRM 56	Km 56+750 Antalya / Manavgat Çakış	Building Remains	Roman / Byzantium	Within	Yes - fully	**1st Degree**	**1st Degree**	26.12.24/18915	Registered 1st Degree Archaeological Site : The relevant matter was evaluated by the Regional Conservation Council on 26.12.2024. With Council Decision No. 6162842 dated 31.12.2024, the issue was approved by the Council, and the project design for this section was endorsed.	**Process is <u>complete</u>.** Design change was completed	High	Replicable	• All works shall be carried out under the supervision of the Project Archaeologist and the Museum Directorate. • Establish no-go buffer zone, show the area on the constraint maps • The site will be assessed in accordance with the relevant thresholds specified in the ESIA report. • The stages and requirements set out in the CHMP must be fully implemented. • Chance Find Procedure shall be followed immediately with a stop-work protocol, upon discovery of any artefact. • Provide heritage awareness training to all construction personnel before works commence. • Document and monitor all visible surface materials (GPS, photographs) before, during, and after works near the site in coordination with the Project Archeologist. • No construction, excavation, or soil movement within the 1st-degree registered archaeological boundary. * Working areas will be kept as small as practicable. Visual barriers will be implemented if the area is subjected to high visual impacts. • Conduct continuous monitoring during and after blasting by the Project Archaeologist	

Code	Location	Name/Type	Period	Distance with respect to Centreline of the Road*	Does it overlap with Project's expropriation corridor?	Registration Status	Register Degree	Register Decision No	Description	Current Status	Value of the Heritage Asset	PS 8 Heritage Value	Measures to be Taken (Land Preparation and Construction)	Measures to be Taken (Operation)
HRM 57	Km 120+800 Antalya/Alanya İncekum	Settlement	Roman / Byzantium	Within	Yes-partially	**1st Degree**	**1st Degree**	31.01.2025/19138	Registered 1st Degree Archaeological Site: The updated registration list was obtained from the Conservation Council. It has been observed that, in this section of the route, there is partial overlap with an archaeological conservation site. The project design team must revise the alignment to avoid encroachment on the registered site boundaries. If such an adjustment is not feasible, an application should be submitted to the Conservation Council accompanied by a technical justification report.	**Process is <u>complete</u>.** Design change was completed Although the expropriation boundary remained within the existing boundaries, the design change moved the building boundary outside the protected area.	High	Replicable	• All works shall be carried out under the supervision of the Project Archaeologist and the Museum Directorate. • Establish a fenced no-go buffer zone, show the area on the constraint maps • The site will be assessed in accordance with the relevant thresholds specified in the ESIA report. • The stages and requirements set out in the CHMP must be fully implemented. • Chance Find Procedure shall be followed immediately with a stop-work protocol, upon discovery of any artefact. • Provide heritage awareness training to all construction personnel before works commence. • Document and monitor all visible surface materials (GPS, photographs) before, during, and after works near the site in coordination with the Project Archeologist. • Blasting shall be planned conservatively with a safe vibration threshold; mechanical breaking shall be used in unsafe areas. • Blasting should take place in coordination with the ARHB and the relevant Museum Directorate, under the supervision of a qualified archaeologist. • A shoring (IKSA) wall will be installed to minimize vibration, and stemming applied to limit air overpressure near the site. • Apply vibration and dust-control measures. • A design change has been implemented to shift the construction footprint outside the boundaries of the registered archaeological site. • Conduct continuous monitoring during and after blasting and excavation by the Project Archaeologist. • Quarterly monitoring is recommended.	

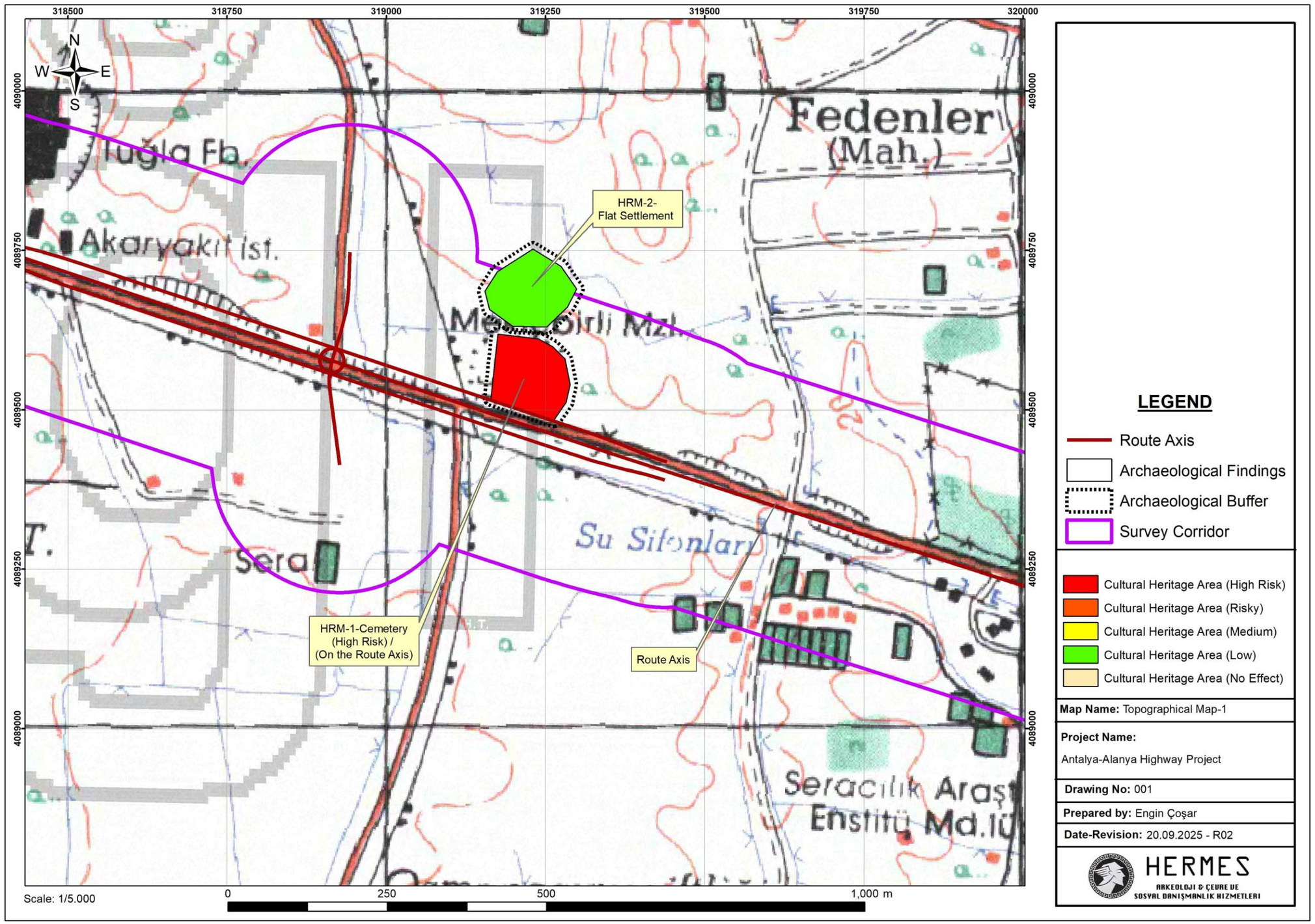
Code	Location	Name/Type	Period	Distance with respect to Centreline of the Road*	Does it overlap with Project's expropriation corridor?	Registration Status	Register Degree	Register Decision No	Description	Current Status	Value of the Heritage Asset	PS 8 Heritage Value	Measures to be Taken (Land Preparation and Construction)	Measures to be Taken (Operation)
HRM 58	Taşağıl Interchange Access Road Antalya / Manavgat Taşağıl	Settlement	Roman / Byzantium	Within	Yes-partially	**1st Degree**	**1st Degree**		Registered 1st Degree Archaeological Site: The updated registration list was obtained from the Conservation Council. It has been observed that, in this section of the route, there is partial overlap with an archaeological conservation site. The project design team must revise the alignment to avoid encroachment on the registered site boundaries. If such an adjustment is not feasible, an application should be submitted to the Conservation Council accompanied by a technical justification report.	**ARHB permitting process is <u>ongoing</u>** Design change completed The necessary permits are awaited from the Antalya Cultural Heritage Preservation Regional Board (ARHB).	High	Replicable	• All works shall be carried out under the supervision of the Project Archaeologist and the Museum Directorate. • Establish a fenced no-go buffer zone, show the area on the constraint maps • The site will be assessed in accordance with the relevant thresholds specified in the ESIA report. • The stages and requirements set out in the CHMP must be fully implemented. • Chance Find Procedure shall be followed immediately with a stop-work protocol, upon discovery of any artefact. • Provide heritage awareness training to all construction personnel before works commence. • Document and monitor all visible surface materials (GPS, photographs) before, during, and after works near the site in coordination with the Project Archeologist. • Blasting shall be planned conservatively with a safe vibration threshold; mechanical breaking shall be used in unsafe areas. • Blasting should take place in coordination with the ARHB and the relevant Museum Directorate, under the supervision of a qualified archaeologist. • A shoring (IKSA) wall will be installed to minimize vibration, and stemming applied to limit air overpressure near the site. • A design change has been implemented to shift the construction footprint outside the boundaries of the registered archaeological site. • Apply vibration and dust-control measures. • Conduct continuous monitoring during and after blasting and excavation by the Project Archaeologist. • Quarterly monitoring is recommended.	

Code	Location	Name/Type	Period	Distance with respect to Centreline of the Road*	Does it overlap with Project's expropriation corridor?	Registration Status	Register Degree	Register Decision No	Description	Current Status	Value of the Heritage Asset	PS 8 Heritage Value	Measures to be Taken (Land Preparation and Construction)	Measures to be Taken (Operation)
HRM 59	Located along the D-400 Highway and near the Taşağıl Access Road Antalya / Manavgat Taşağıl	Settlement	Roman / Byzantium	27 m	Yes-partially	**3rd Degree**	**3rd Degree**	NA	Registered 3rd Degree Archaeological Site: The updated registration list was obtained from the Conservation Council. It has been observed that, in this section of the route, there is partial overlap with an archaeological conservation site. The project design team must revise the alignment to avoid encroachment on the registered site boundaries. If such an adjustment is not feasible, an application should be submitted to the Conservation Council accompanied by a technical justification report.	**ARHB permitting process is <u>ongoing</u>** Design change completed The necessary permits are awaited from the Antalya Cultural Heritage Preservation Regional Board (ARHB).	Medium	Non-Replicable	• All works shall be carried out under the supervision of the Project Archaeologist and the Museum Directorate. • Establish no-go buffer zone, show the area on the constraint maps • The site will be assessed in accordance with the relevant thresholds specified in the ESIA report. • The stages and requirements set out in the CHMP must be fully implemented. • Chance Find Procedure shall be followed immediately with a stop-work protocol, upon discovery of any artefact. • Confirm permit validity with the Antalya Regional Conservation Board (RCHB) and maintain updated correspondence at site level. • All construction within or near the registered boundary must be archaeologically monitored. • Define and fence the approved work corridor using visible markers to prevent unauthorized entry into adjacent sensitive zones. • Mechanical stripping and excavation to be conducted under archaeologist supervision to identify and record any remaining finds. • In-situ documentation and sampling of any materials uncovered during construction, following the RCHB-approved salvage protocol. • Limit vibration and compaction by avoiding heavy machinery operation within 25 m of any structural remnants. • Implement dust suppression, sediment control, and controlled drainage to prevent erosion or runoff over sensitive areas. • Provide toolbox training for workers on archaeological awareness and reporting procedures.	

Code	Location	Name/Type	Period	Distance with respect to Centreline of the Road*	Does it overlap with Project's expropriation corridor?	Registration Status	Register Degree	Register Decision No	Description	Current Status	Value of the Heritage Asset	PS 8 Heritage Value	Measures to be Taken (Land Preparation and Construction)	Measures to be Taken (Operation)
HRM 60	Located along the D-400 Highway and near the Taşağıl Access Road Antalya / Manavgat Taşağıl	Settlement or Necropolis	Roman / Byzantium	31 m	Yes-partially	**1st Degree**	**1st Degree**	NA	Registered 1st Degree Archaeological Site: The updated registration list was obtained from the Conservation Council. It has been observed that, in this section of the route, there is partial overlap with an archaeological conservation site. The project design team must revise the alignment to avoid encroachment on the registered site boundaries. If such an adjustment is not feasible, an application should be submitted to the Conservation Council accompanied by a technical justification report.	**ARHB permitting process is <u>ongoing</u>** Design change completed The necessary permits are awaited from the Antalya Cultural Heritage Preservation Regional Board (ARHB).	High	Replicable	• All works shall be carried out under the supervision of the Project Archaeologist and the Museum Directorate. • Establish no-go buffer zone, show the area on the constraint maps • The site will be assessed in accordance with the relevant thresholds specified in the ESIA report. • The stages and requirements set out in the CHMP must be fully implemented. • Chance Find Procedure shall be followed immediately with a stop-work protocol, upon discovery of any artefact. • Provide heritage awareness training to all construction personnel before works commence. • Document and monitor all visible surface materials (GPS, photographs) before, during, and after works near the site in coordination with the Project Archeologist. • No construction, excavation, or soil movement within the 1st-degree registered archaeological boundary. • Conduct continuous monitoring during and after blasting by the Project Archaeologist	

** All distances have been calculated based on the centerline of the road to ensure consistency and accuracy in spatial assessment.*

Project Constraint Maps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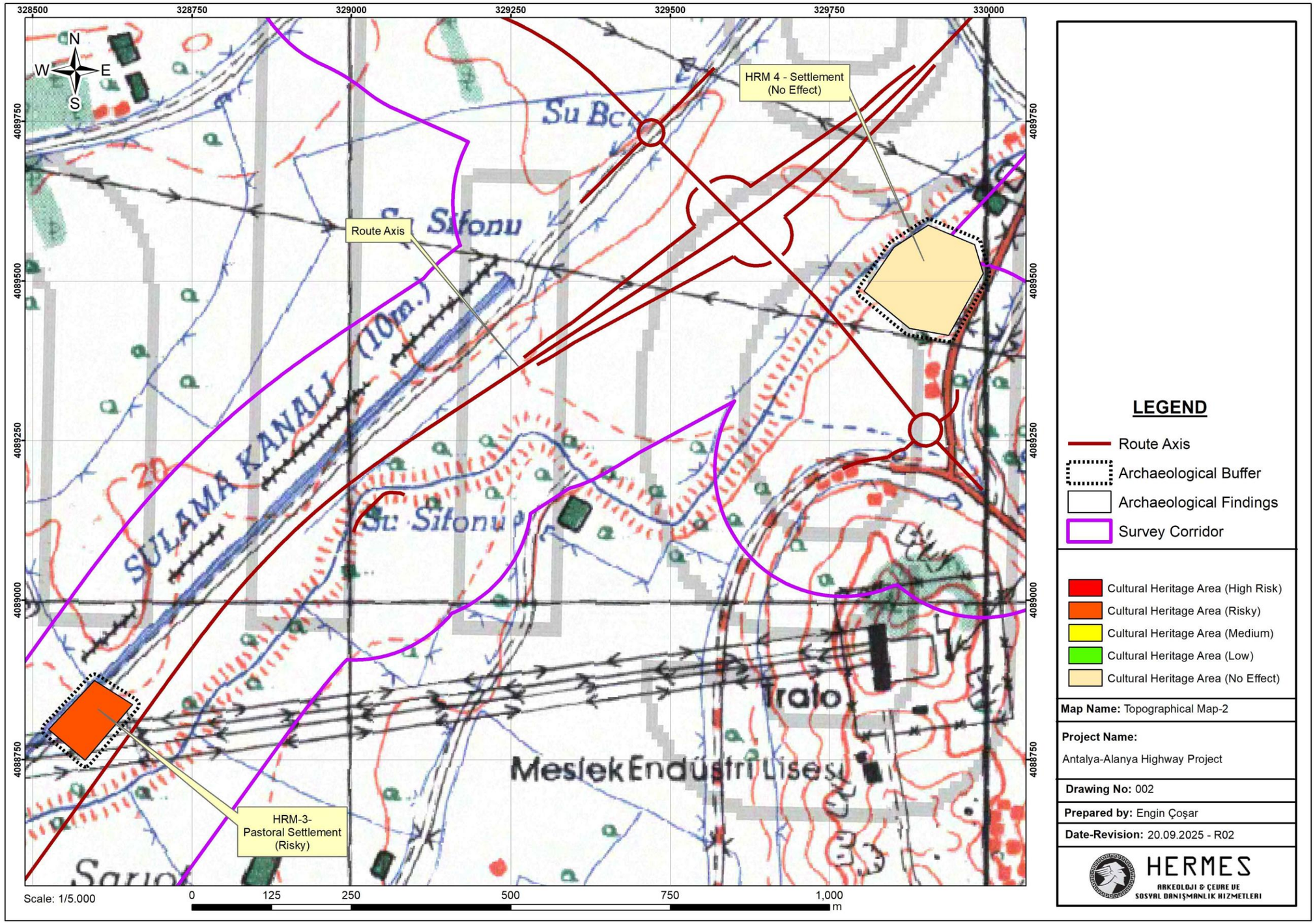
318750
319000
319250
319500
319750
320000
4090000
4089750
4089500
4089250
4089000
N
W
E
S
Fedenler
(Mah.)
Tuğla Fb.
Akaryakıt ist.
Mezarlık
Sera
Su Sifonları
Seracılık Araş
Enstitü Md.lü
HRM-2-
Flat Settlement
HRM-1-Cemetery
(High Risk) /
(On the Route Axis)
Route Axis
Scale: 1/5.000
0
250
500
1,000 m
LEGEND
Route Axis
Archaeological Findings
Archaeological Buffer
Survey Corridor
Cultural Heritage Area (High Risk)
Cultural Heritage Area (Risky)
Cultural Heritage Area (Medium)
Cultural Heritage Area (Low)
Cultural Heritage Area (No Effect)
Map Name: Topographical Map-1
Project Name:
Antalya-Alanya Highway Project
Drawing No: 001
Prepared by: Engin Çoşar
Date-Revision: 20.09.2025 - R02
HERMES
ARKEOLOJI & ÇEVRE VE
SOSYAL DANIŞMANLIK HIZMETLERI



LEGEND

- Route Axis
- Archaeological Buffer
- Archaeological Findings
- Survey Corridor

- Cultural Heritage Area (High Risk)
- Cultural Heritage Area (Risky)
- Cultural Heritage Area (Medium)
- Cultural Heritage Area (Low)
- Cultural Heritage Area (No Effect)

Map Name: Topographical Map-2

Project Name:
Antalya-Alanya Highway Project

Drawing No: 002

Prepared by: Engin Çoşar

Date-Revision: 20.09.2025 - R02

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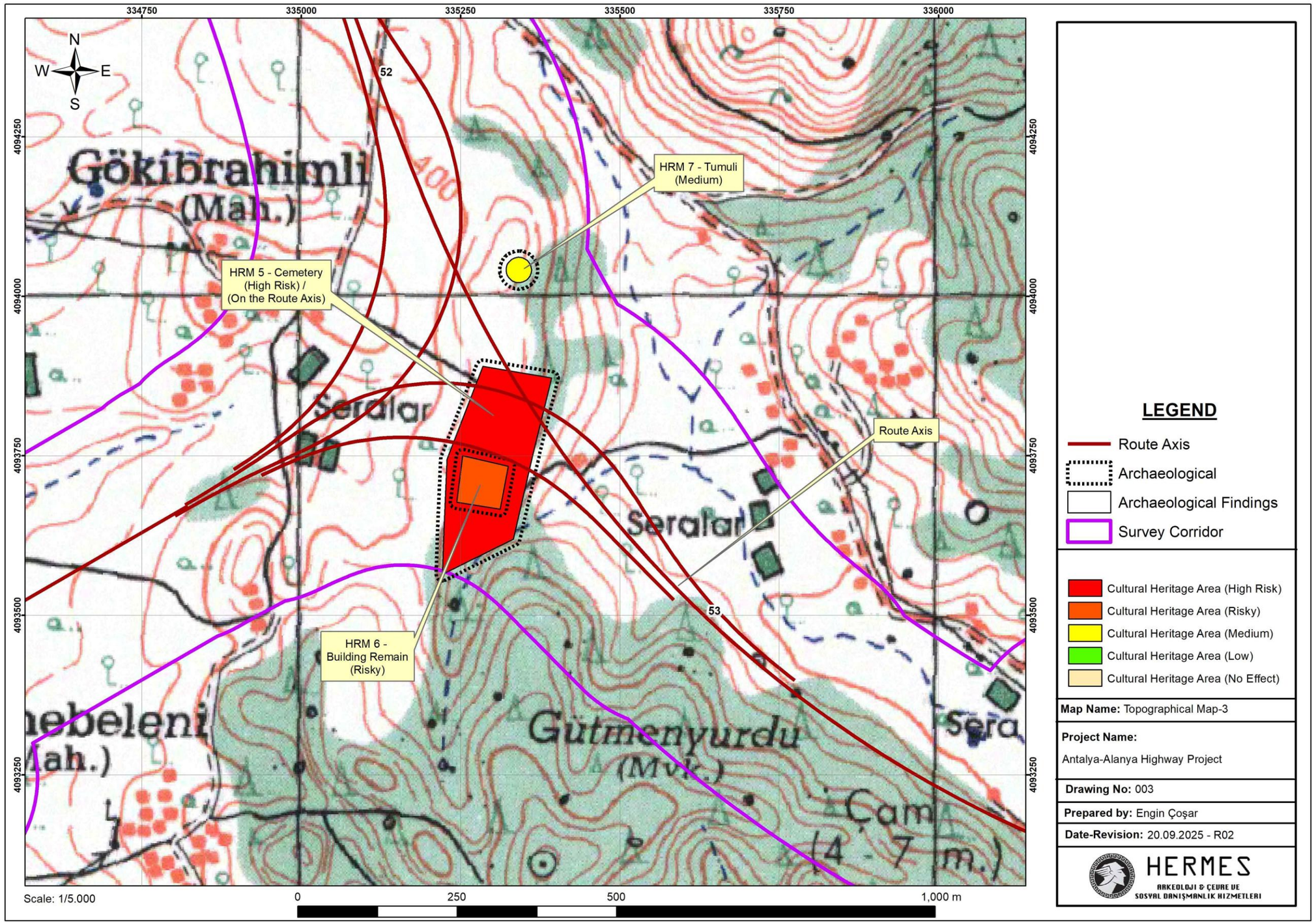
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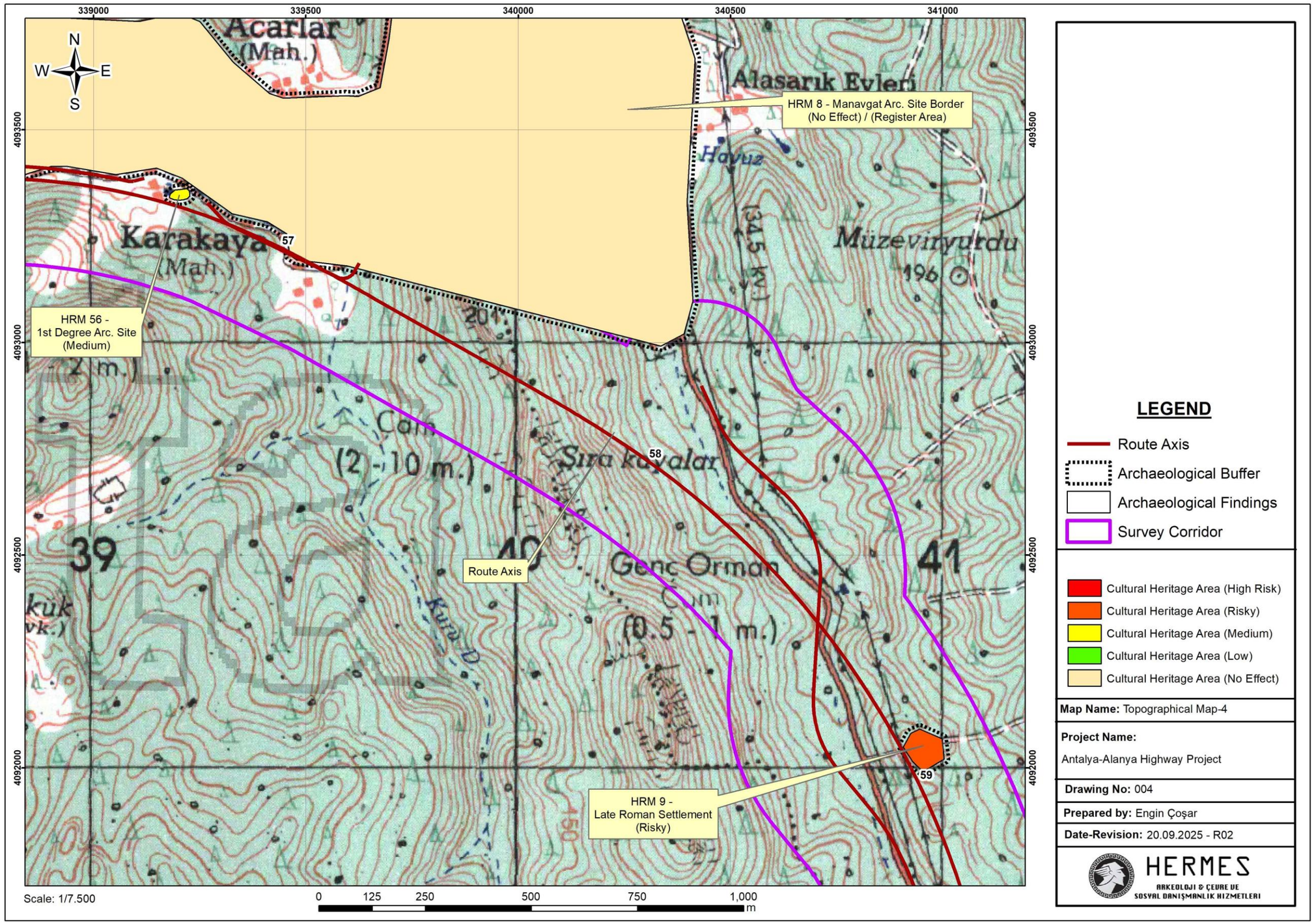
335000
335250
335500
335750
336000
4094250
4094000
4093750
4093500
4093250
N
W
E
S
52
53
Gökibrahimli
(Mah.)
Seralar
Seralar
Gütmenyurdu
(Mah.)
Çam
(4 - 7 m.)
HRM 7 - Tumuli
(Medium)
HRM 5 - Cemetery
(High Risk) /
(On the Route Axis)
HRM 6 -
Building Remain
(Risky)
Route Axis
Scale: 1/5.000
0
250
500
1,000 m
LEGEND
Route Axis
Archaeological
Archaeological Findings
Survey Corridor
Cultural Heritage Area (High Risk)
Cultural Heritage Area (Risky)
Cultural Heritage Area (Medium)
Cultural Heritage Area (Low)
Cultural Heritage Area (No Effect)
Map Name: Topographical Map-3
Project Name:
Antalya-Alanya Highway Project
Drawing No: 003
Prepared by: Engin Çoşar
Date-Revision: 20.09.2025 - R02
HERMES
ARKEOLOJI & ÇEVRE VE
SOSYAL DANIŞMANLIK HIZMETLERI



LEGEND

- Route Axis
- Archaeological Buffer
- Archaeological Findings
- Survey Corridor

- Cultural Heritage Area (High Risk)
- Cultural Heritage Area (Risky)
- Cultural Heritage Area (Medium)
- Cultural Heritage Area (Low)
- Cultural Heritage Area (No Effect)

Map Name: Topographical Map-4

Project Name:
Antalya-Alanya Highway Project

Drawing No: 004

Prepared by: Engin Çoşar

Date-Revision: 20.09.2025 - R02

HERMES
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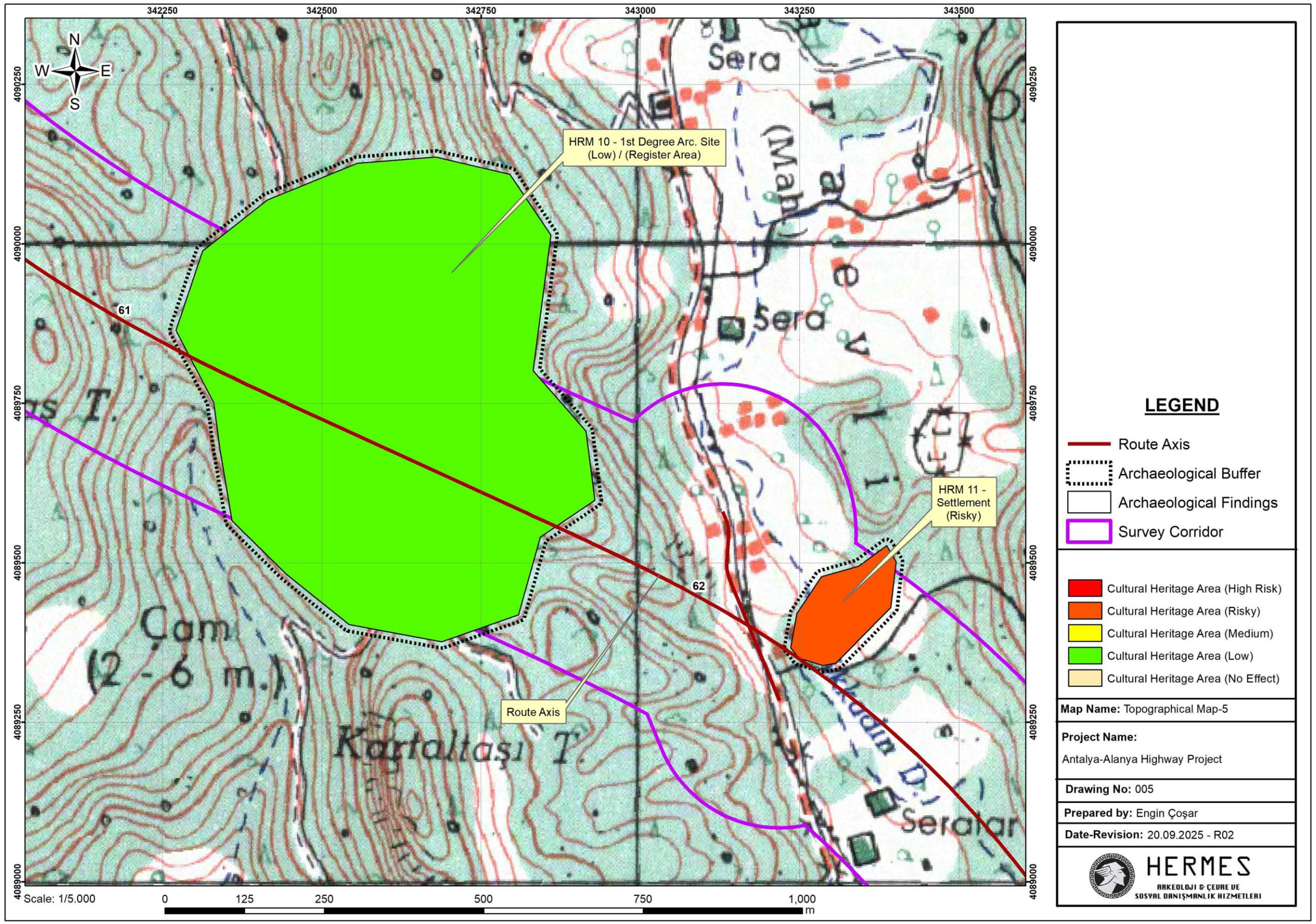
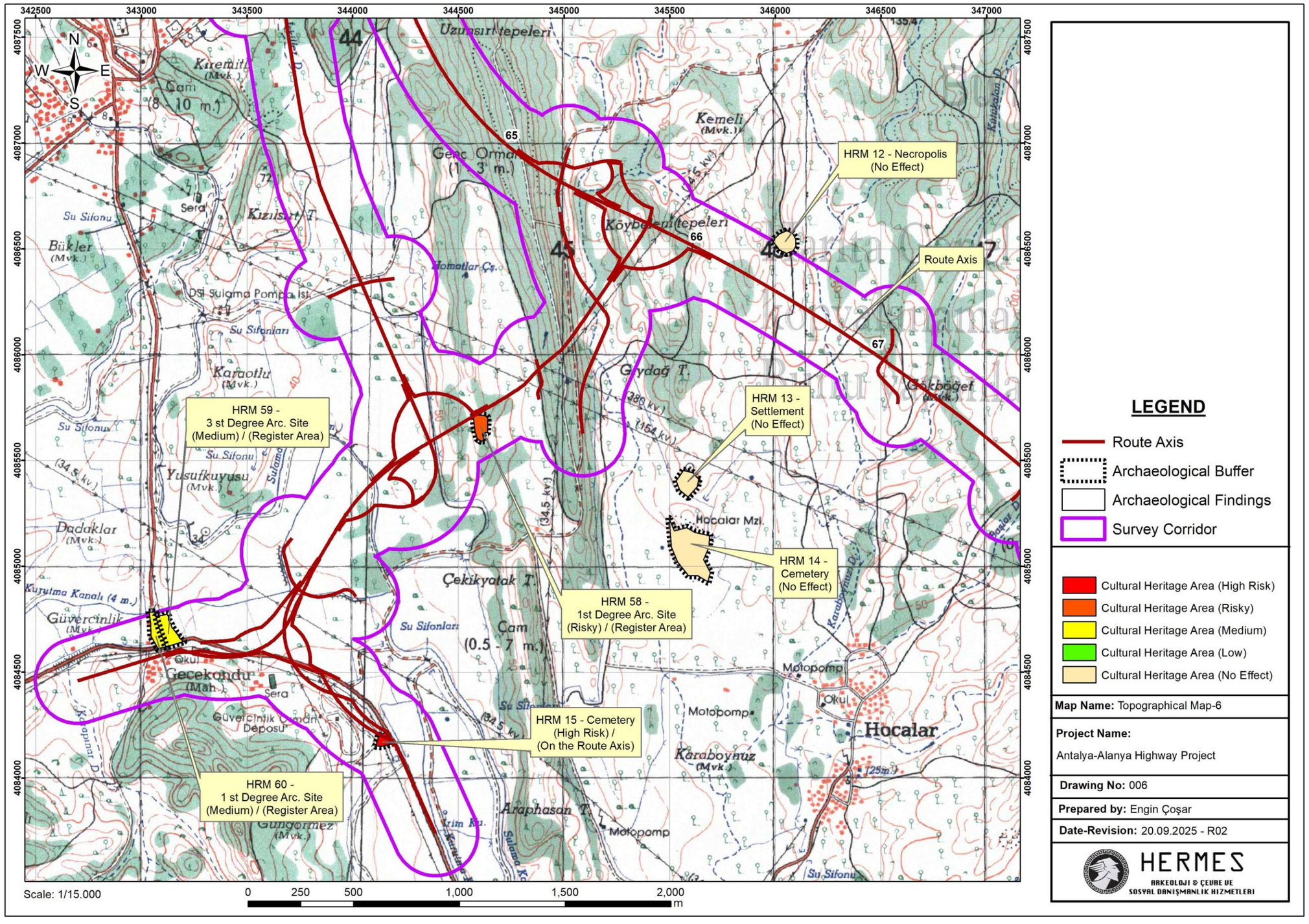
SOSYAL DANIŞMANLIK HIZMETLERI


342250
342500
342750
343000
343250
343500
4090250
4090000
4089750
4089500
4089250
4089000
N
W
E
S
HRM 10 - 1st Degree Arc. Site (Low) / (Register Area)
HRM 11 - Settlement (Risky)
Route Axis
61
62
Sera
Sera
Çam
(2 - 6 m.)
Kartalıaşı T.
Seralar
Scale: 1/5.000
0
125
250
500
750
1,000
m
LEGEND
Route Axis
Archaeological Buffer
Archaeological Findings
Survey Corridor
Cultural Heritage Area (High Risk)
Cultural Heritage Area (Risky)
Cultural Heritage Area (Medium)
Cultural Heritage Area (Low)
Cultural Heritage Area (No Effect)
Map Name: Topographical Map-5
Project Name:
Antalya-Alanya Highway Project
Drawing No: 005
Prepared by: Engin Çoşar
Date-Revision: 20.09.2025 - R02
HERMES
ARKEOLOJI & ÇEVRE VE
SOSYAL DANIŞMANLIK HIZMETLERI



LEGEND

- Route Axis
- Archaeological Buffer
- Archaeological Findings
- Survey Corridor

- Cultural Heritage Area (High Risk)
- Cultural Heritage Area (Risky)
- Cultural Heritage Area (Medium)
- Cultural Heritage Area (Low)
- Cultural Heritage Area (No Effect)

Map Name: Topographical Map-6

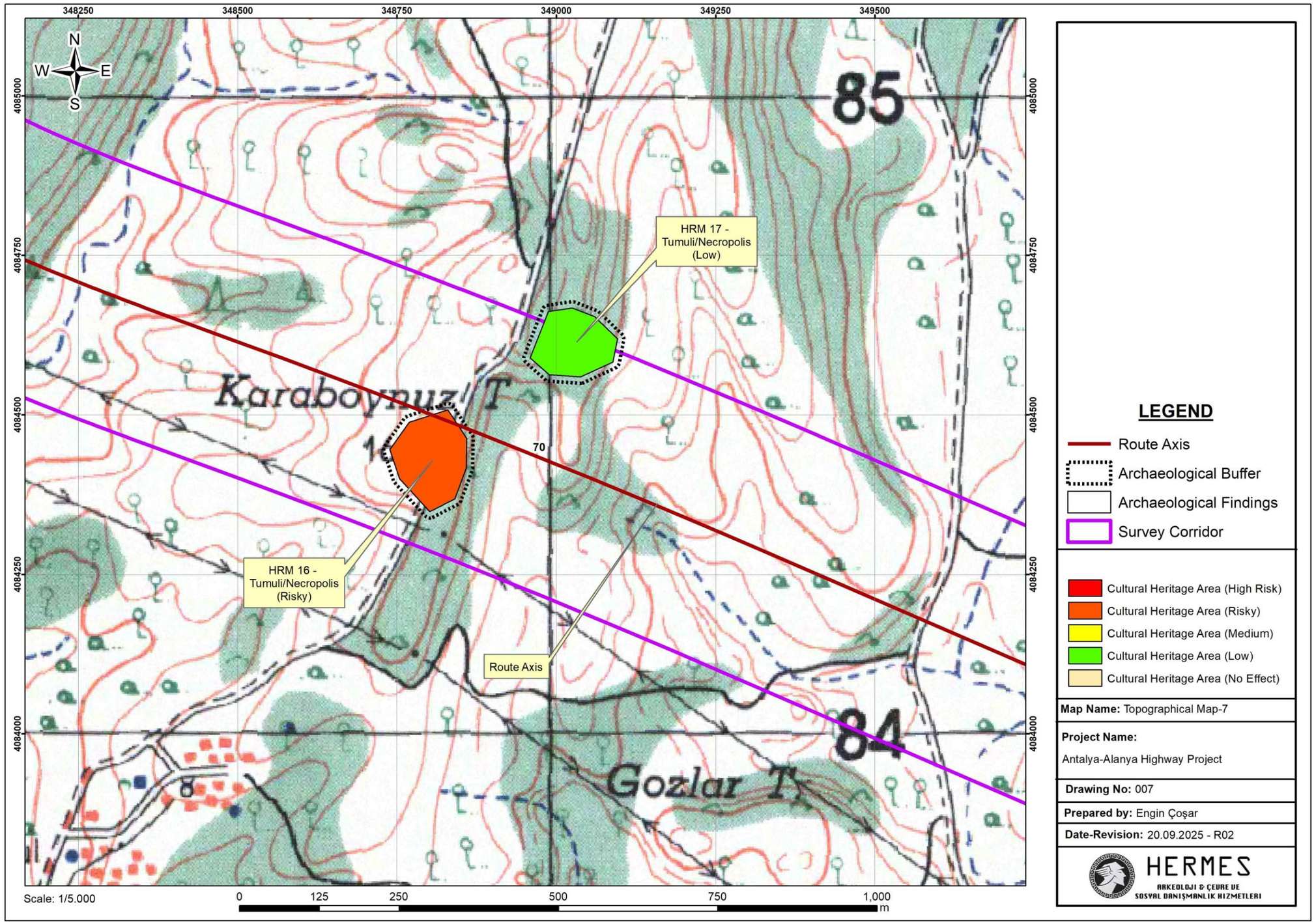
Project Name:
Antalya-Alanya Highway Project

Drawing No: 006

Prepared by: Engin Çoşar

Date-Revision: 20.09.2025 - R02

HERMES
ARKEOLOJI & ÇEVRE VE SOSYAL DANIŞMANLIK HIZMETLERI



LEGEND

- Route Axis
- Archaeological Buffer
- Archaeological Findings
- Survey Corridor

- Cultural Heritage Area (High Risk)
- Cultural Heritage Area (Risky)
- Cultural Heritage Area (Medium)
- Cultural Heritage Area (Low)
- Cultural Heritage Area (No Effect)

Map Name: Topographical Map-7

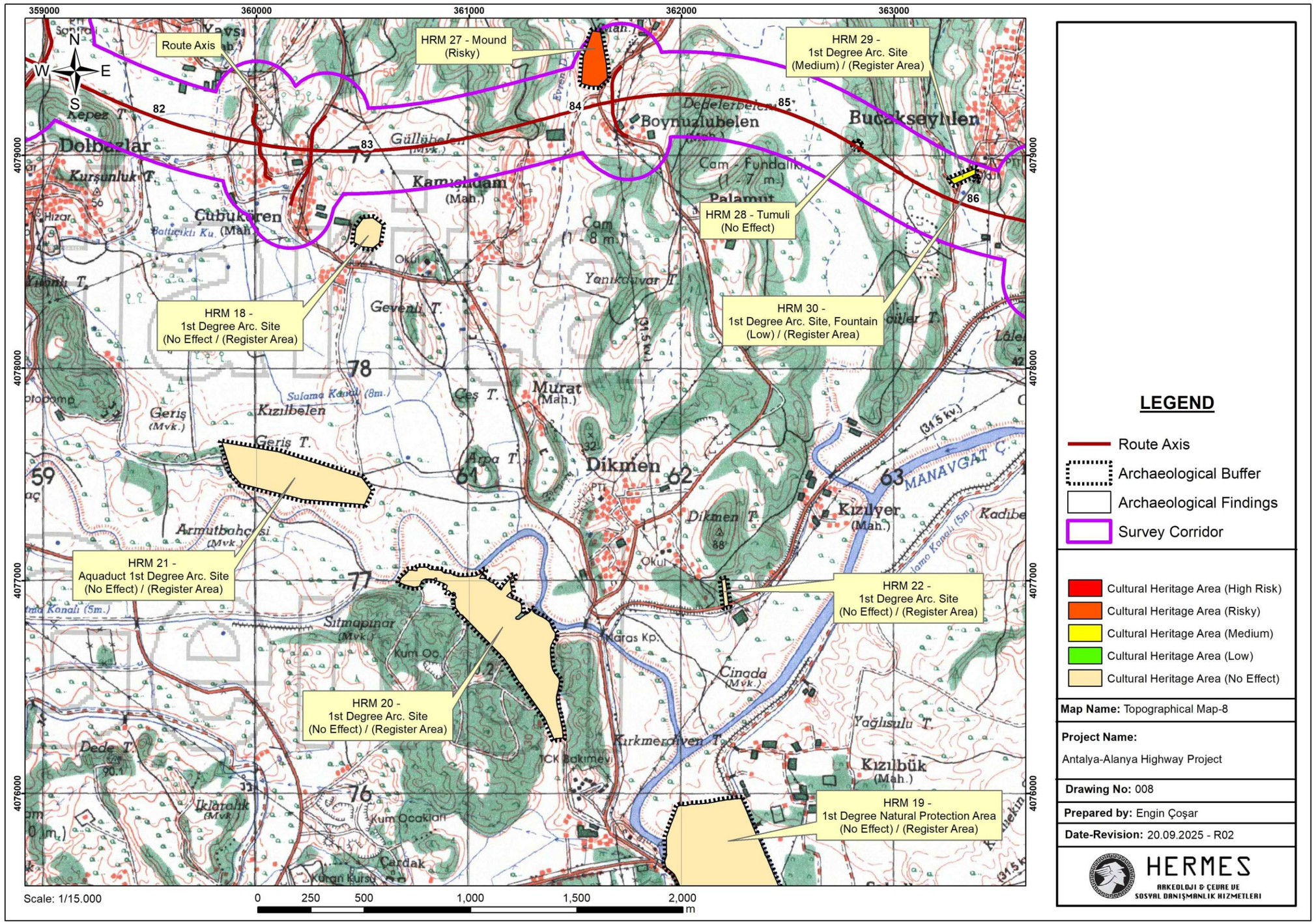
Project Name:
Antalya-Alanya Highway Project

Drawing No: 007

Prepared by: Engin Çoşar

Date-Revision: 20.09.2025 - R02

HERMES
ARKEOLOJI & ÇEVRE VE
SOSYAL DANIŞMANLIK HIZMETLERI



LEGEND

- Route Axis
- Archaeological Buffer
- Archaeological Findings
- Survey Corridor

- Cultural Heritage Area (High Risk)
- Cultural Heritage Area (Risky)
- Cultural Heritage Area (Medium)
- Cultural Heritage Area (Low)
- Cultural Heritage Area (No Effect)

Map Name: Topographical Map-8

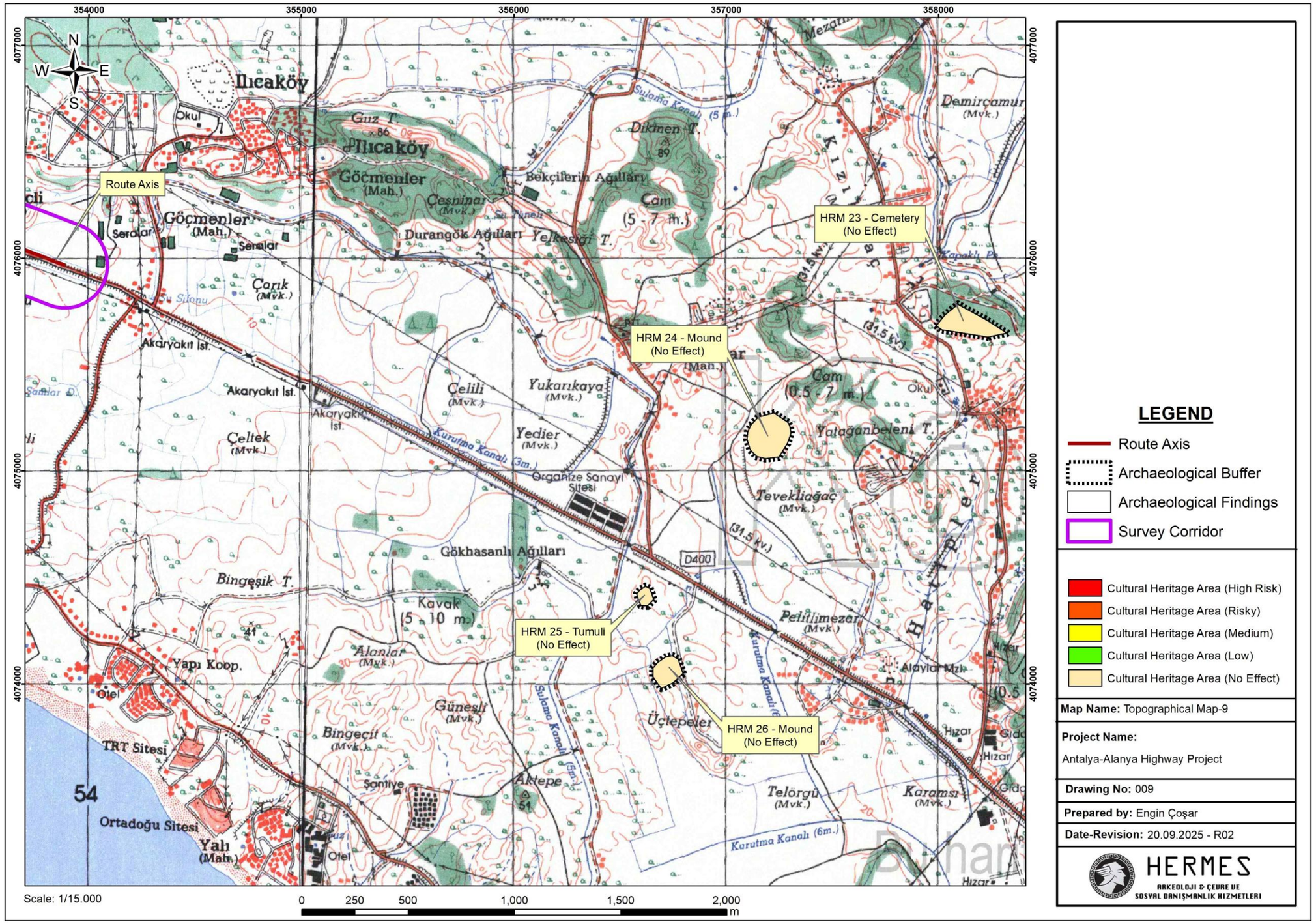
Project Name:
Antalya-Alanya Highway Project

Drawing No: 008

Prepared by: Engin Çoşar

Date-Revision: 20.09.2025 - R02

HERMES
ARKEOLOJI & ÇEVRE VE SOSYAL DANIŞMANLIK HIZMETLERI



LEGEND

- Route Axis
- Archaeological Buffer
- Archaeological Findings
- Survey Corridor

- Cultural Heritage Area (High Risk)
- Cultural Heritage Area (Risky)
- Cultural Heritage Area (Medium)
- Cultural Heritage Area (Low)
- Cultural Heritage Area (No Effect)

Map Name: Topographical Map-9

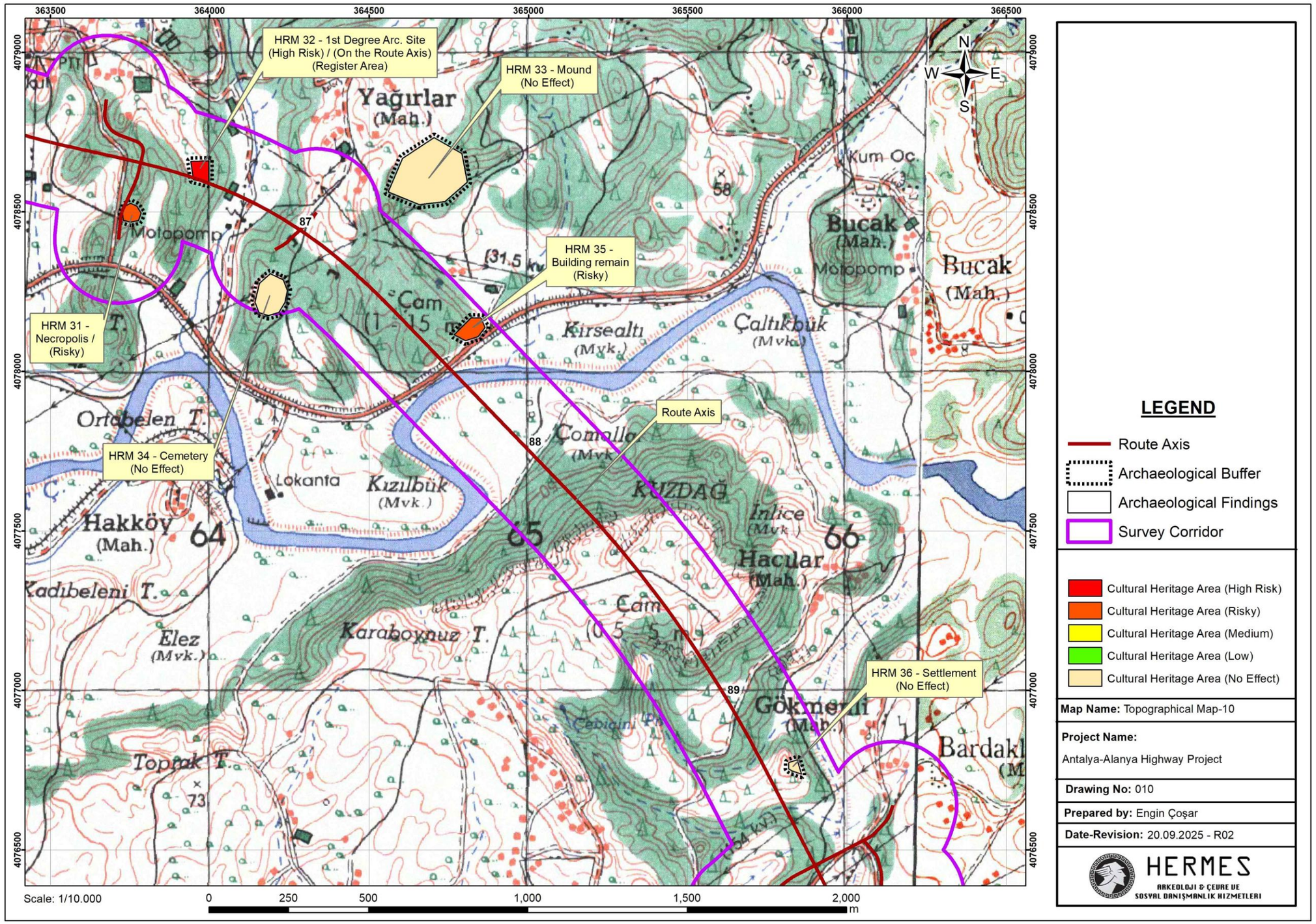
Project Name:
Antalya-Alanya Highway Project

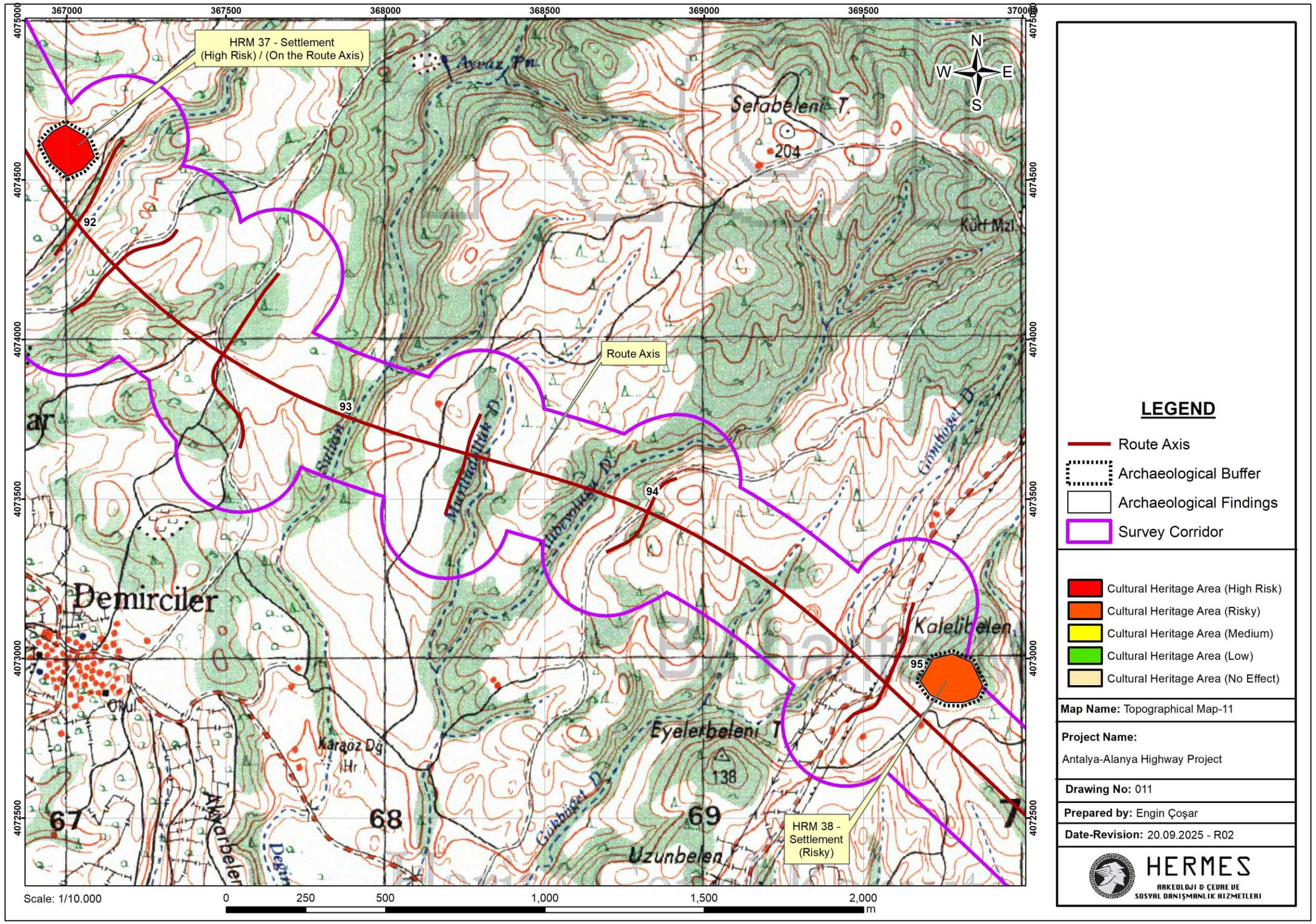
Drawing No: 009

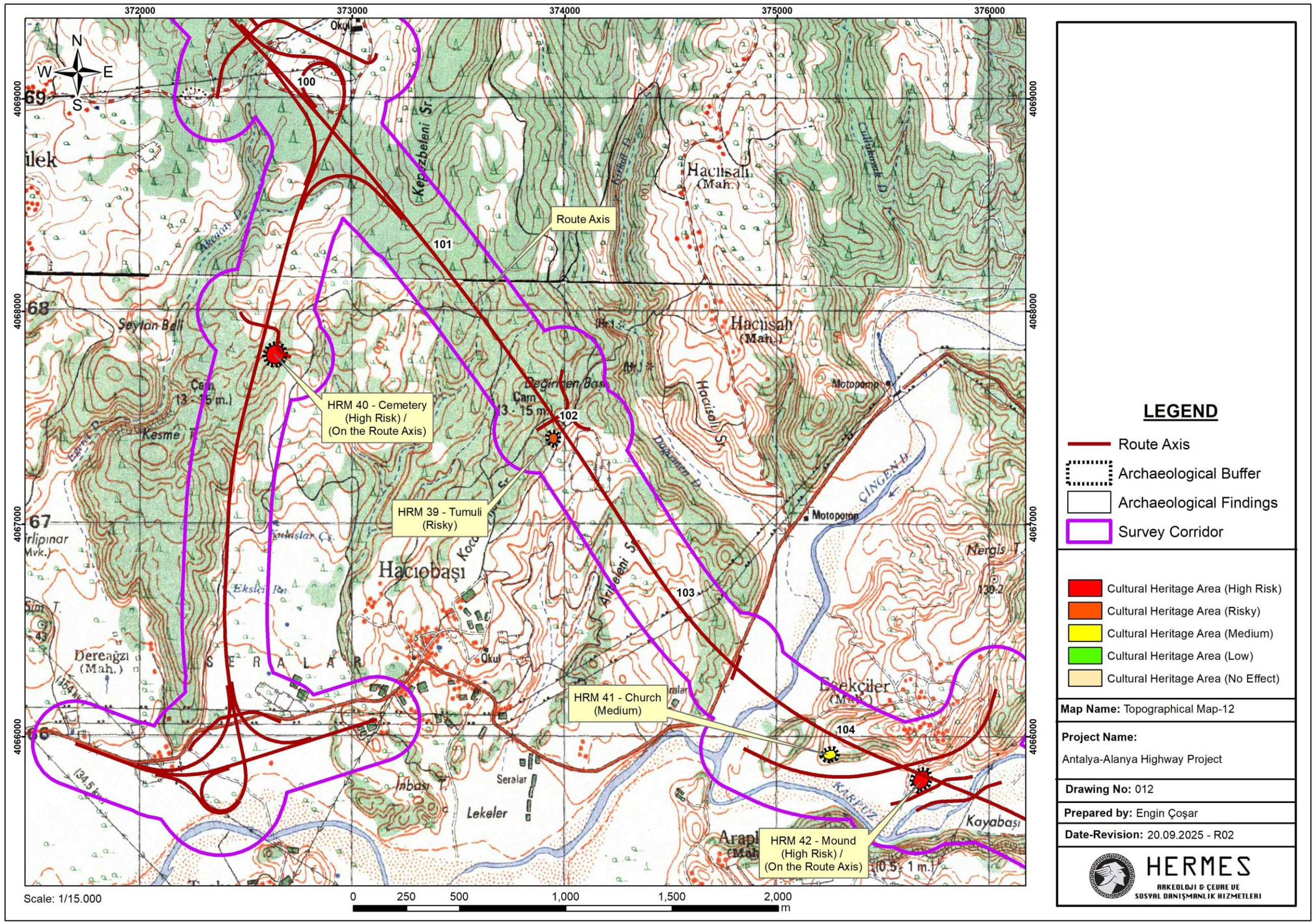
Prepared by: Engin Çoşar

Date-Revision: 20.09.2025 - R02

HERMES
ARKEOLOJI & ÇEVRE VE SOSYAL DANIŞMANLIK HIZMETLERI


HRM 32 - 1st Degree Arc. Site (High Risk) / (On the Route Axis) (Register Area)
HRM 33 - Mound (No Effect)
HRM 35 - Building remain (Risky)
HRM 31 - Necropolis / (Risky)
HRM 34 - Cemetery (No Effect)
HRM 36 - Settlement (No Effect)
Route Axis
Yağırlar (Mah.)
Bucak (Mah.)
Kum Oc.
Çaltıkbük (Mvk.)
Kırsealtı (Mvk.)
Ortabelen T.
Çomallı (Mvk.)
KIZDAĞ
Lokanta
Kızılbük (Mvk.)
Hakköy (Mah.)
İnlice (Mvk.)
Hacılar (Mah.)
Kadıbeleni T.
Elez (Mvk.)
Karaboynuz T.
Gökmeşe (Mah.)
Toprak T.
Bardakl
Scale: 1/10.000
0 250 500 1,000 1,500 2,000 m
N W E S
LEGEND
Route Axis
Archaeological Buffer
Archaeological Findings
Survey Corridor
Cultural Heritage Area (High Risk)
Cultural Heritage Area (Risky)
Cultural Heritage Area (Medium)
Cultural Heritage Area (Low)
Cultural Heritage Area (No Effect)
Map Name: Topographical Map-10
Project Name:
Antalya-Alanya Highway Project
Drawing No: 010
Prepared by: Engin Çoşar
Date-Revision: 20.09.2025 - R02
HERMES
ARKEOLOJI & ÇEVRE VE SOSYAL DANIŞMANLIK HIZMETLERI


HRM 37 - Settlement
(High Risk) / (On the Route Axis)
Route Axis
HRM 38 - Settlement
(Risky)
Ayvaz Pn.
Sefabeleni T.
204
Kürt Mzl.
92
93
94
95
Demirciler
Okul
Karaoz Dg
(Hr.)
Eyelerbeleni T.
138
Kalelibelen
Uzunbelen
67
68
69
7
N
W
E
S
367000
367500
368000
368500
369000
369500
370000
4075000
4074500
4074000
4073500
4073000
4072500
Scale: 1/10.000
0
250
500
1,000
1,500
2,000
m
LEGEND
Route Axis
Archaeological Buffer
Archaeological Findings
Survey Corridor
Cultural Heritage Area (High Risk)
Cultural Heritage Area (Risky)
Cultural Heritage Area (Medium)
Cultural Heritage Area (Low)
Cultural Heritage Area (No Effect)
Map Name: Topographical Map-11
Project Name:
Antalya-Alanya Highway Project
Drawing No: 011
Prepared by: Engin Çoşar
Date-Revision: 20.09.2025 - R02
HERMES
ARKEOLOJI & ÇEVRE VE
SOSYAL DANIŞMANLIK HIZMETLERI



LEGEND

- Route Axis
- Archaeological Buffer
- Archaeological Findings
- Survey Corridor

- Cultural Heritage Area (High Risk)
- Cultural Heritage Area (Risky)
- Cultural Heritage Area (Medium)
- Cultural Heritage Area (Low)
- Cultural Heritage Area (No Effect)

Map Name: Topographical Map-12

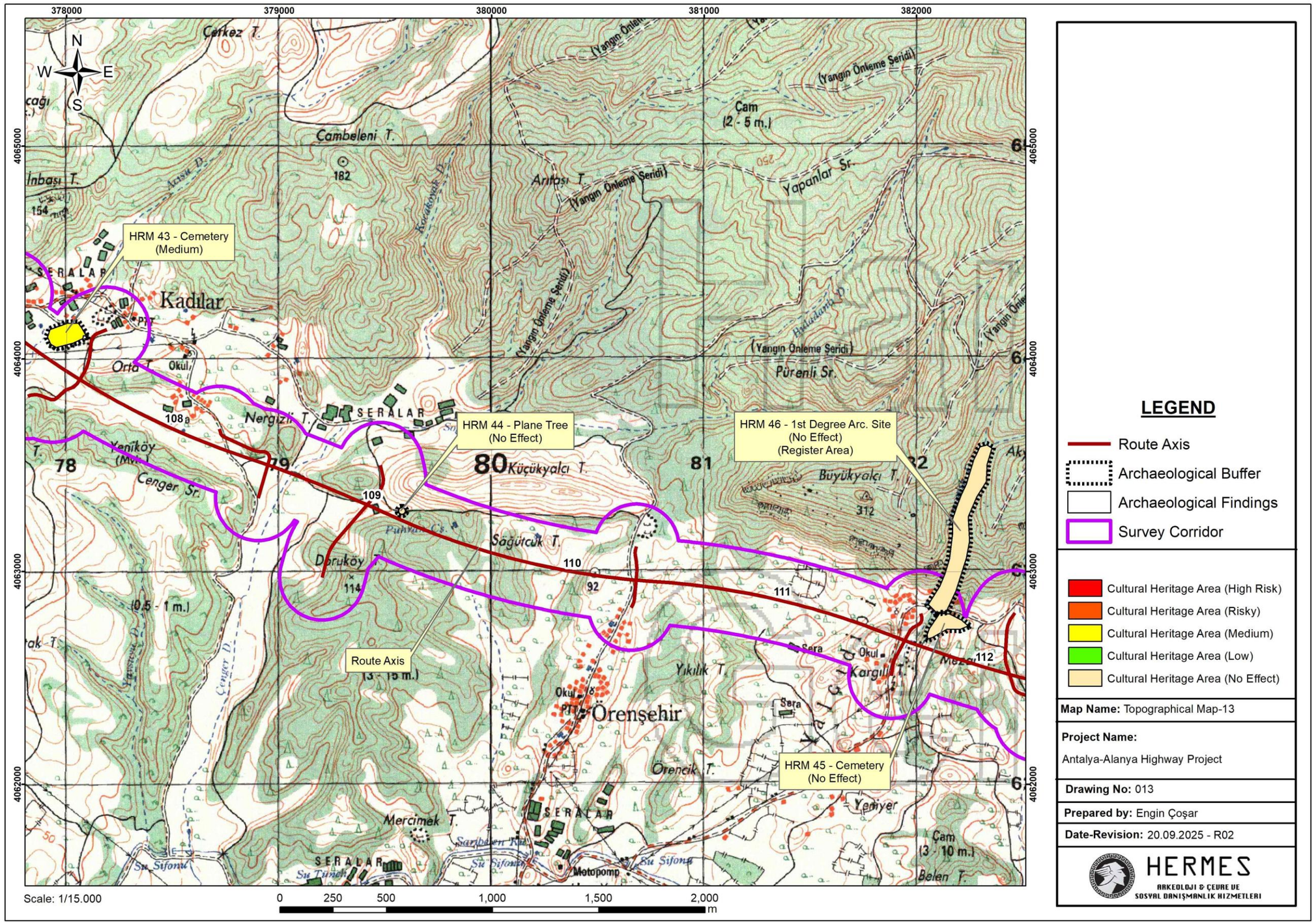
Project Name:
Antalya-Alanya Highway Project

Drawing No: 012

Prepared by: Engin Çoşar

Date-Revision: 20.09.2025 - R02

HERMES
ARKEOLOJI & ÇEVRE VE SOSYAL DANIŞMANLIK HIZMETLERI



LEGEND

- Route Axis
- Archaeological Buffer
- Archaeological Findings
- Survey Corridor

- Cultural Heritage Area (High Risk)
- Cultural Heritage Area (Risky)
- Cultural Heritage Area (Medium)
- Cultural Heritage Area (Low)
- Cultural Heritage Area (No Effect)

Map Name: Topographical Map-13

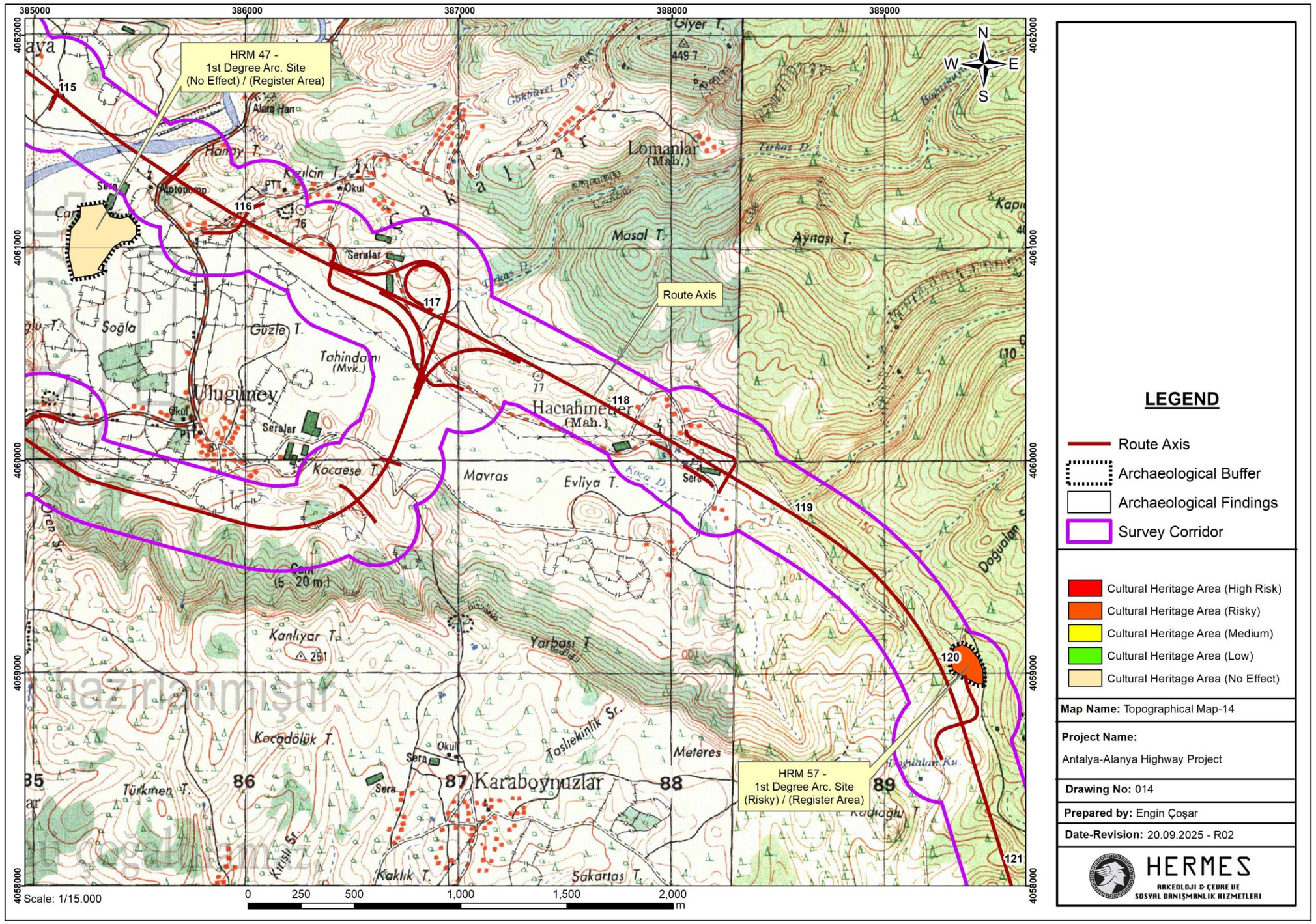
Project Name:
Antalya-Alanya Highway Project

Drawing No: 013

Prepared by: Engin Çoşar

Date-Revision: 20.09.2025 - R02

HERMES
ARKEOLOJI & ÇEVRE VE SOSYAL DANIŞMANLIK HIZMETLERI



hazırlanmıştır.

LEGEND

- Route Axis
- Archaeological Buffer
- Archaeological Findings
- Survey Corridor

- Cultural Heritage Area (High Risk)
- Cultural Heritage Area (Risky)
- Cultural Heritage Area (Medium)
- Cultural Heritage Area (Low)
- Cultural Heritage Area (No Effect)

Map Name: Topographical Map-14

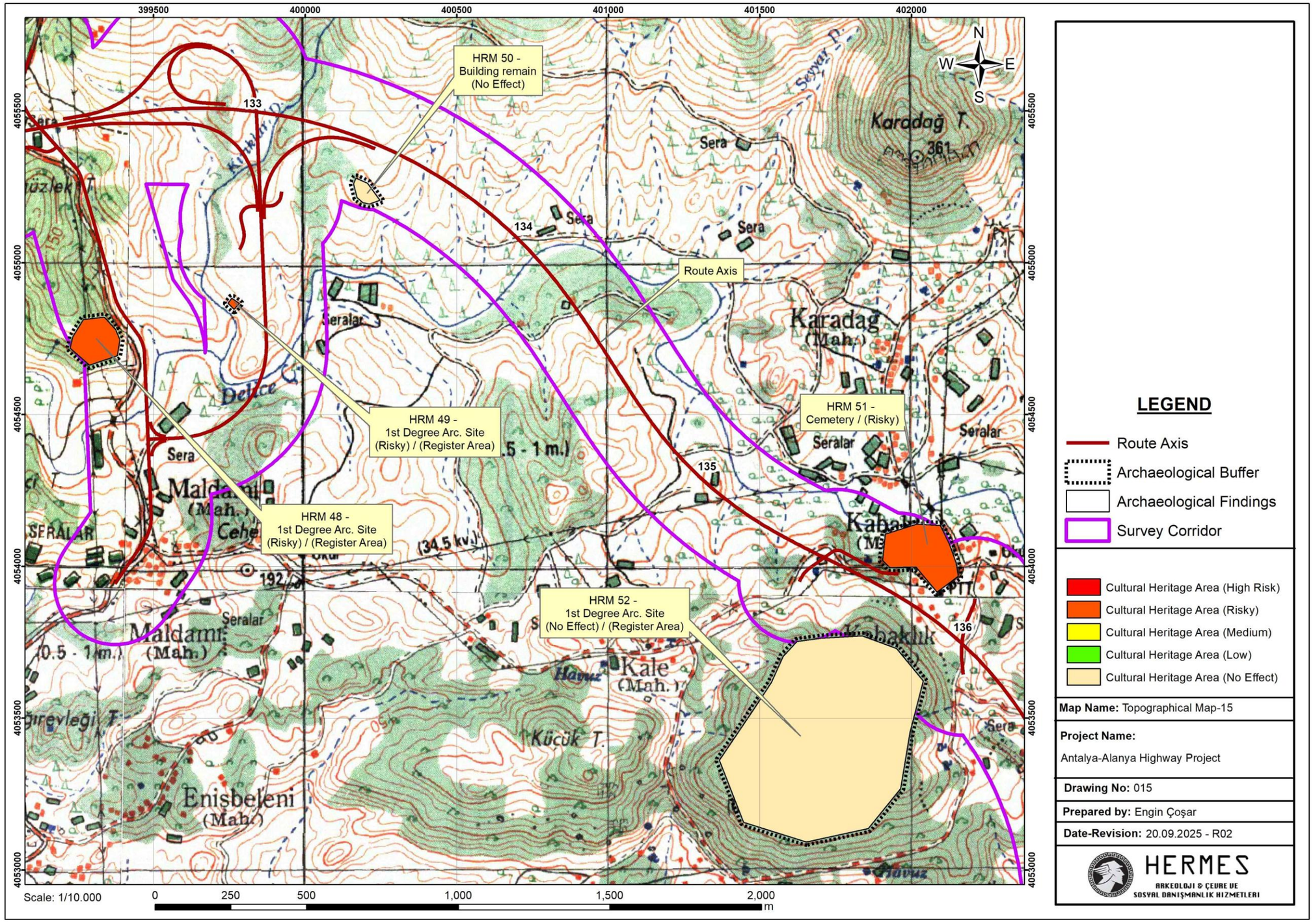
Project Name:
Antalya-Alanya Highway Project

Drawing No: 014

Prepared by: Engin Çoşar

Date-Revision: 20.09.2025 - R02

HERMES
ARKEOLOJI & ÇEVRE VE SOSYAL DANIŞMANLIK HIZMETLERI



LEGEND

- Route Axis
- Archaeological Buffer
- Archaeological Findings
- Survey Corridor

- Cultural Heritage Area (High Risk)
- Cultural Heritage Area (Risky)
- Cultural Heritage Area (Medium)
- Cultural Heritage Area (Low)
- Cultural Heritage Area (No Effect)

Map Name: Topographical Map-15

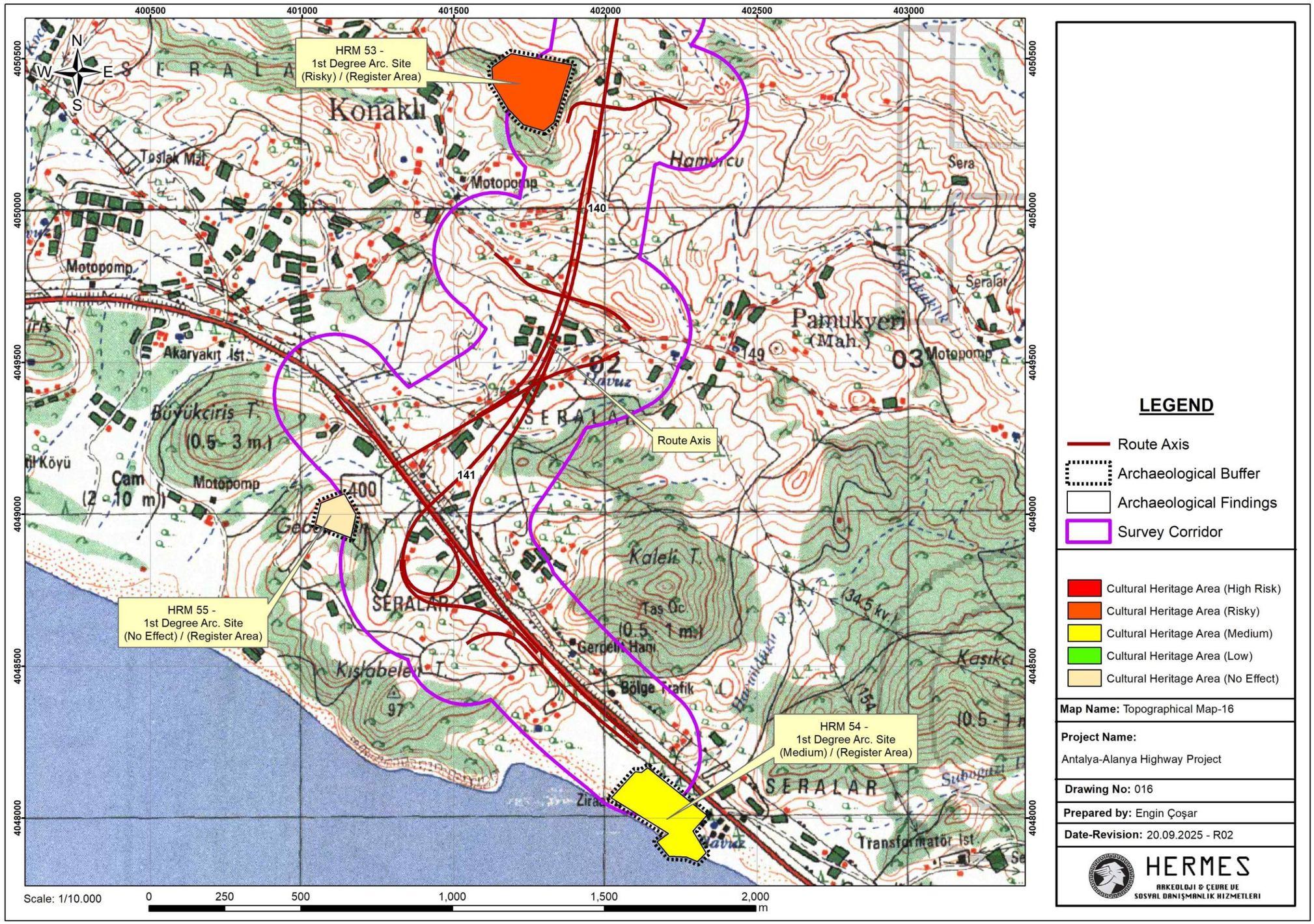
Project Name:
Antalya-Alanya Highway Project

Drawing No: 015

Prepared by: Engin Çoşar

Date-Revision: 20.09.2025 - R02

HERMES
ARKEOLOJI & ÇEVRE VE
SOSYAL DANIŞMANLIK HIZMETLERI



LEGEND

- Route Axis
- Archaeological Buffer
- Archaeological Findings
- Survey Corridor

- Cultural Heritage Area (High Risk)
- Cultural Heritage Area (Risky)
- Cultural Heritage Area (Medium)
- Cultural Heritage Area (Low)
- Cultural Heritage Area (No Effect)

Map Name: Topographical Map-16

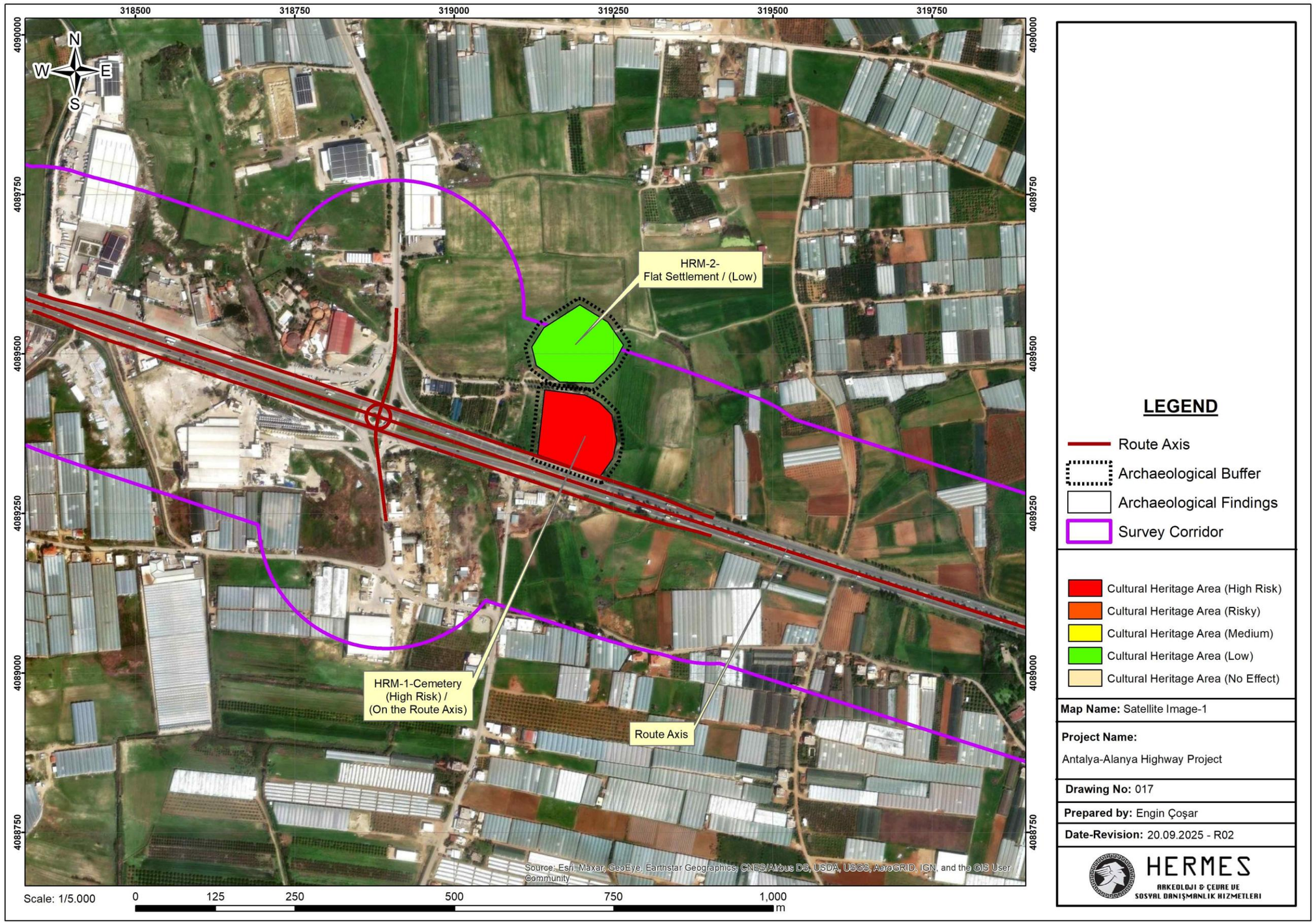
Project Name:
Antalya-Alanya Highway Project

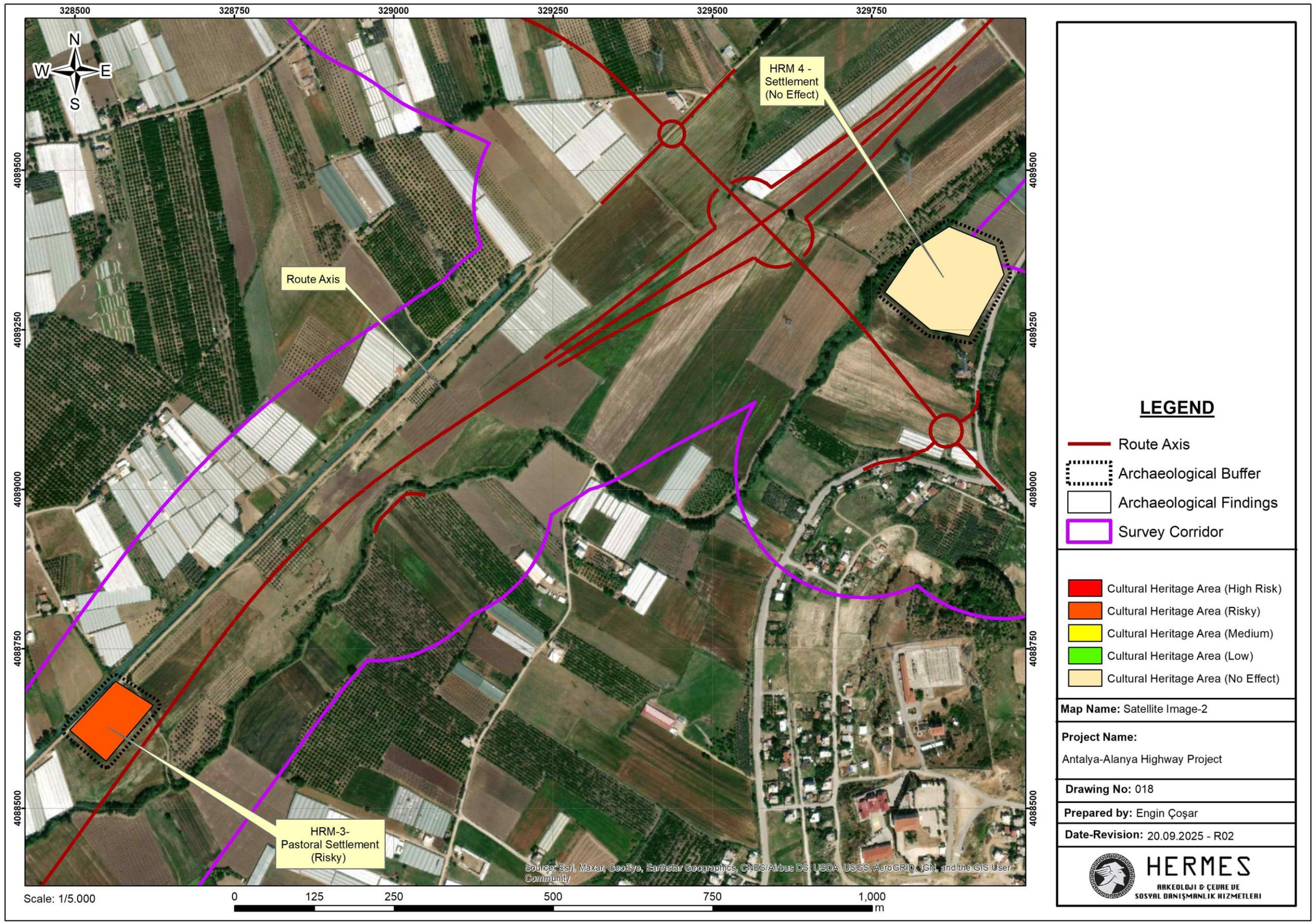
Drawing No: 016

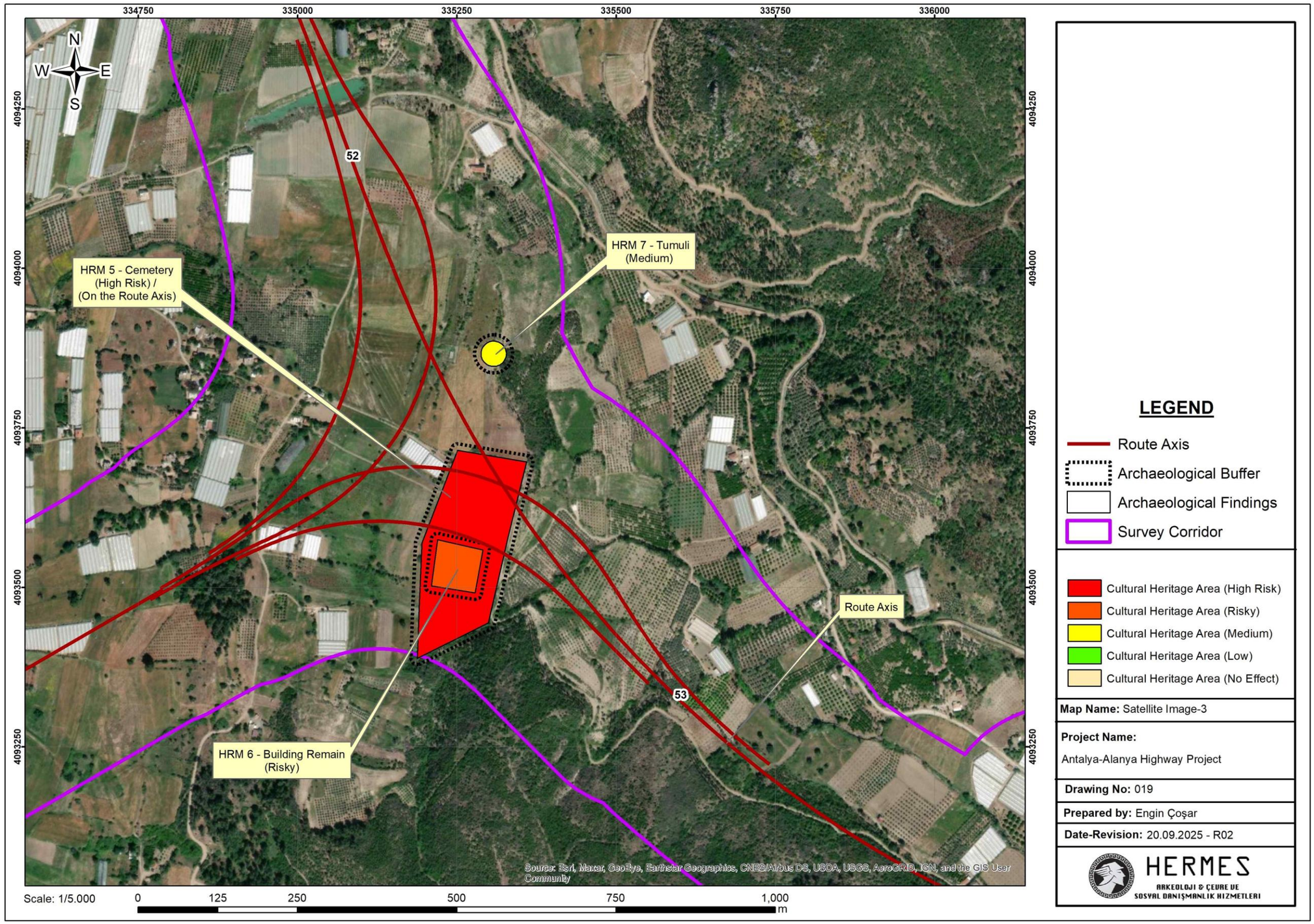
Prepared by: Engin Çoşar

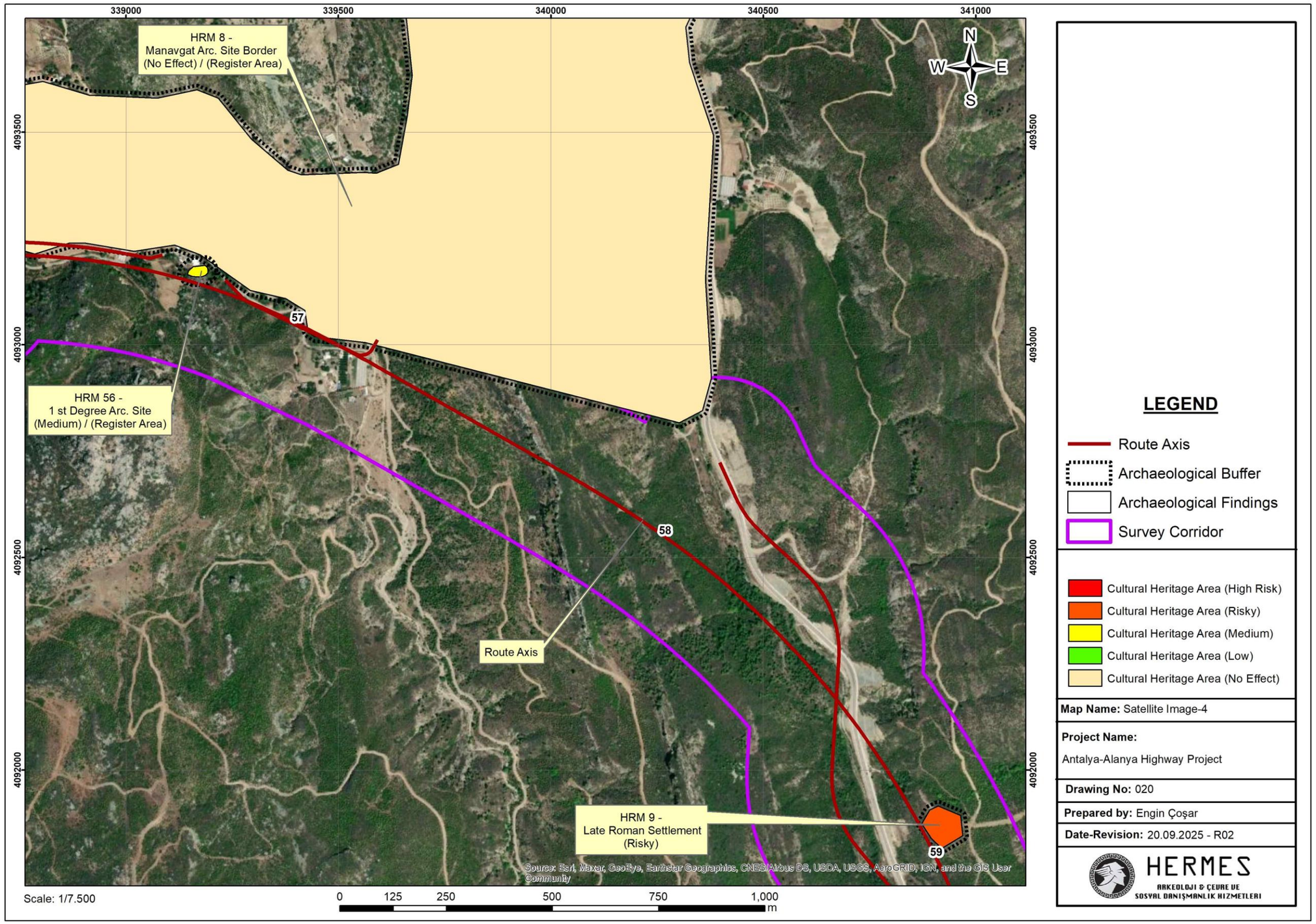
Date-Revision: 20.09.2025 - R02

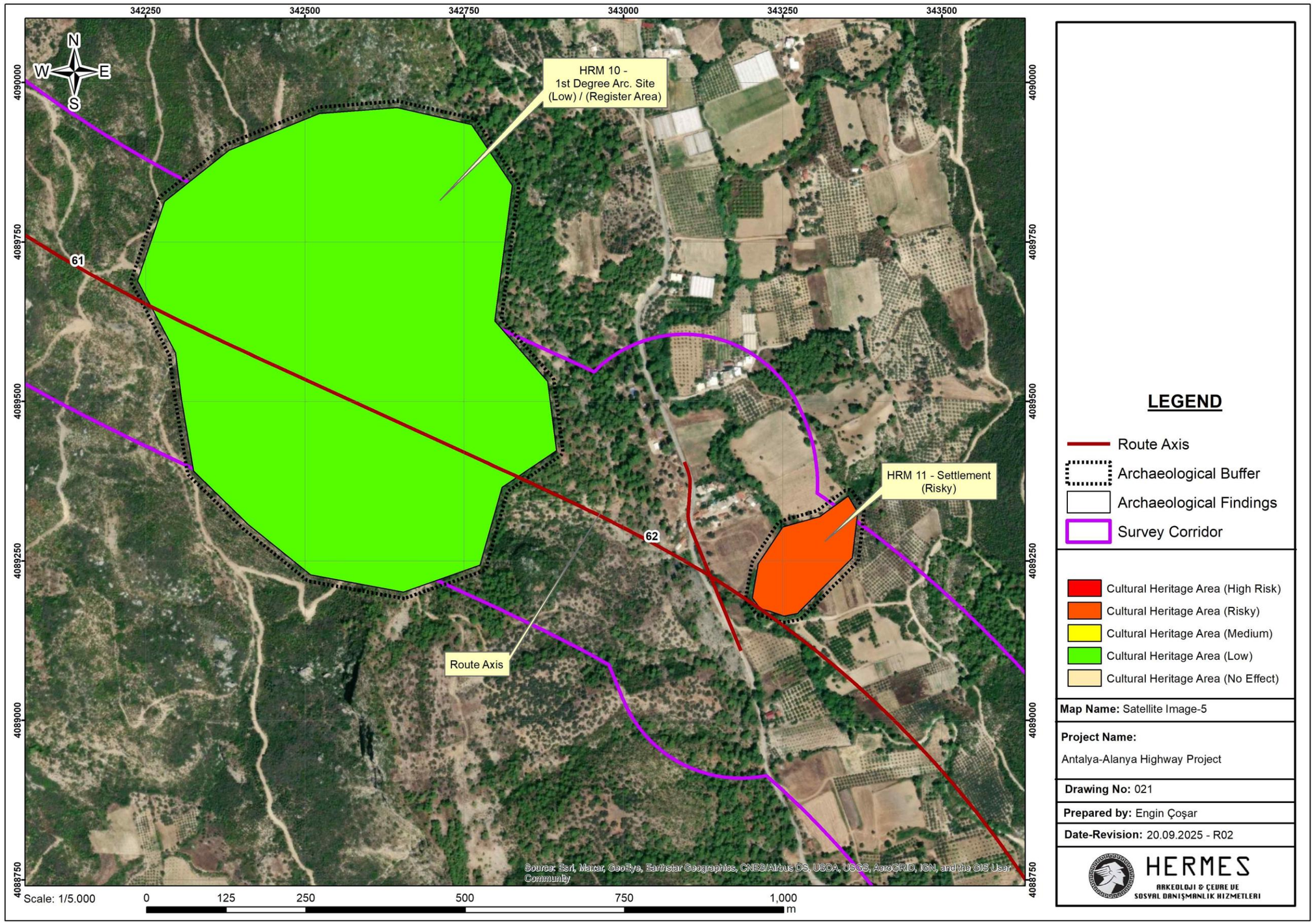
HERMES
ARKEOLOJI & ÇEVRE VE
SOSYAL DANIŞMANLIK HIZMETLERI

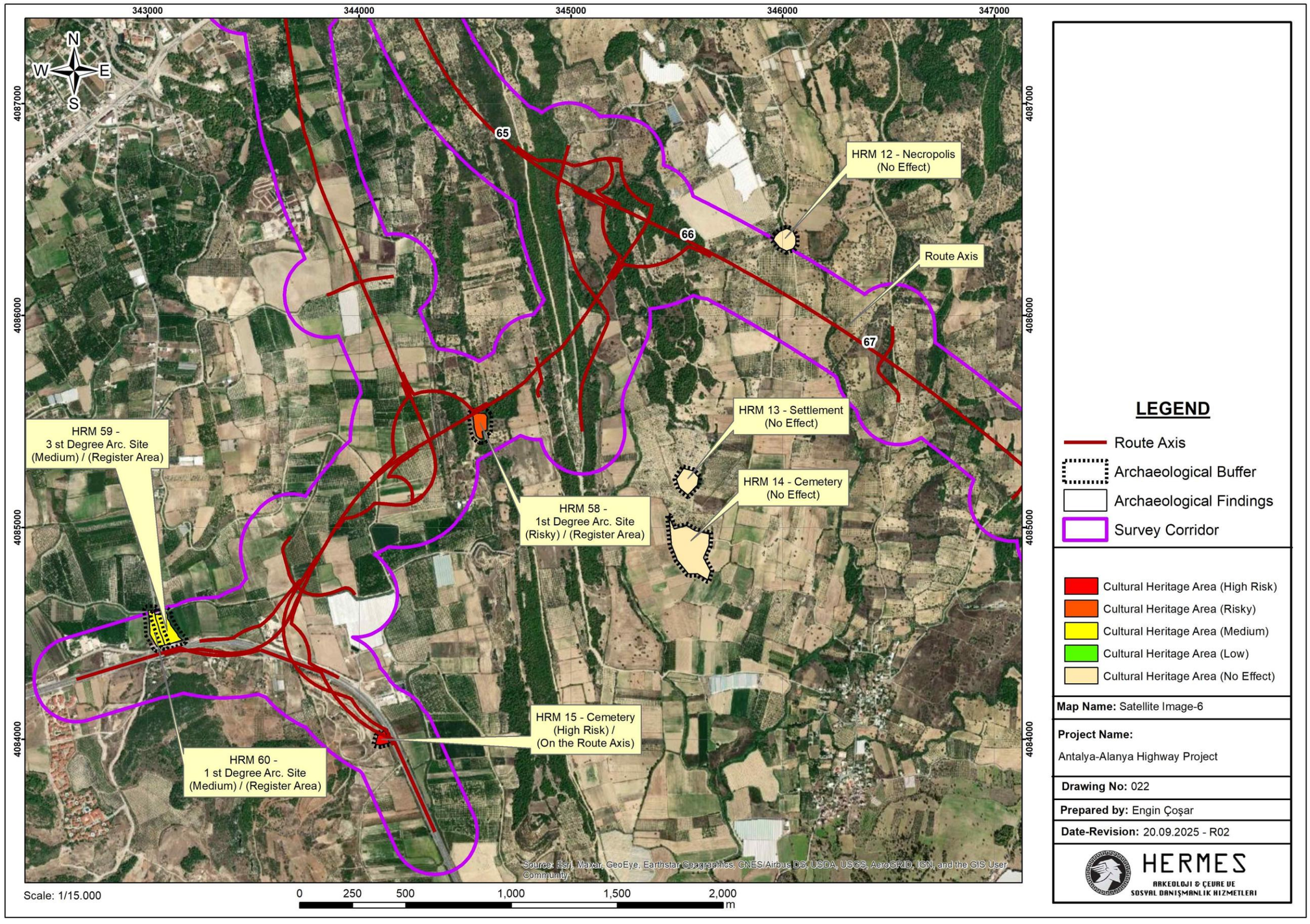

318500
318750
319000
319250
319500
319750
4090000
4089750
4089500
4089250
4089000
4088750
N
W
E
S
HRM-2-
Flat Settlement / (Low)
HRM-1-Cemetery
(High Risk) /
(On the Route Axis)
Route Axis
Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
Scale: 1/5.000
0
125
250
500
750
1,000
m
LEGEND
Route Axis
Archaeological Buffer
Archaeological Findings
Survey Corridor
Cultural Heritage Area (High Risk)
Cultural Heritage Area (Risky)
Cultural Heritage Area (Medium)
Cultural Heritage Area (Low)
Cultural Heritage Area (No Effect)
Map Name: Satellite Image-1
Project Name:
Antalya-Alanya Highway Project
Drawing No: 017
Prepared by: Engin Çoşar
Date-Revision: 20.09.2025 - R02
HERMES
ARKEOLOJI & ÇEVRE VE
SOSYAL DANIŞMANLIK HIZMETLERI

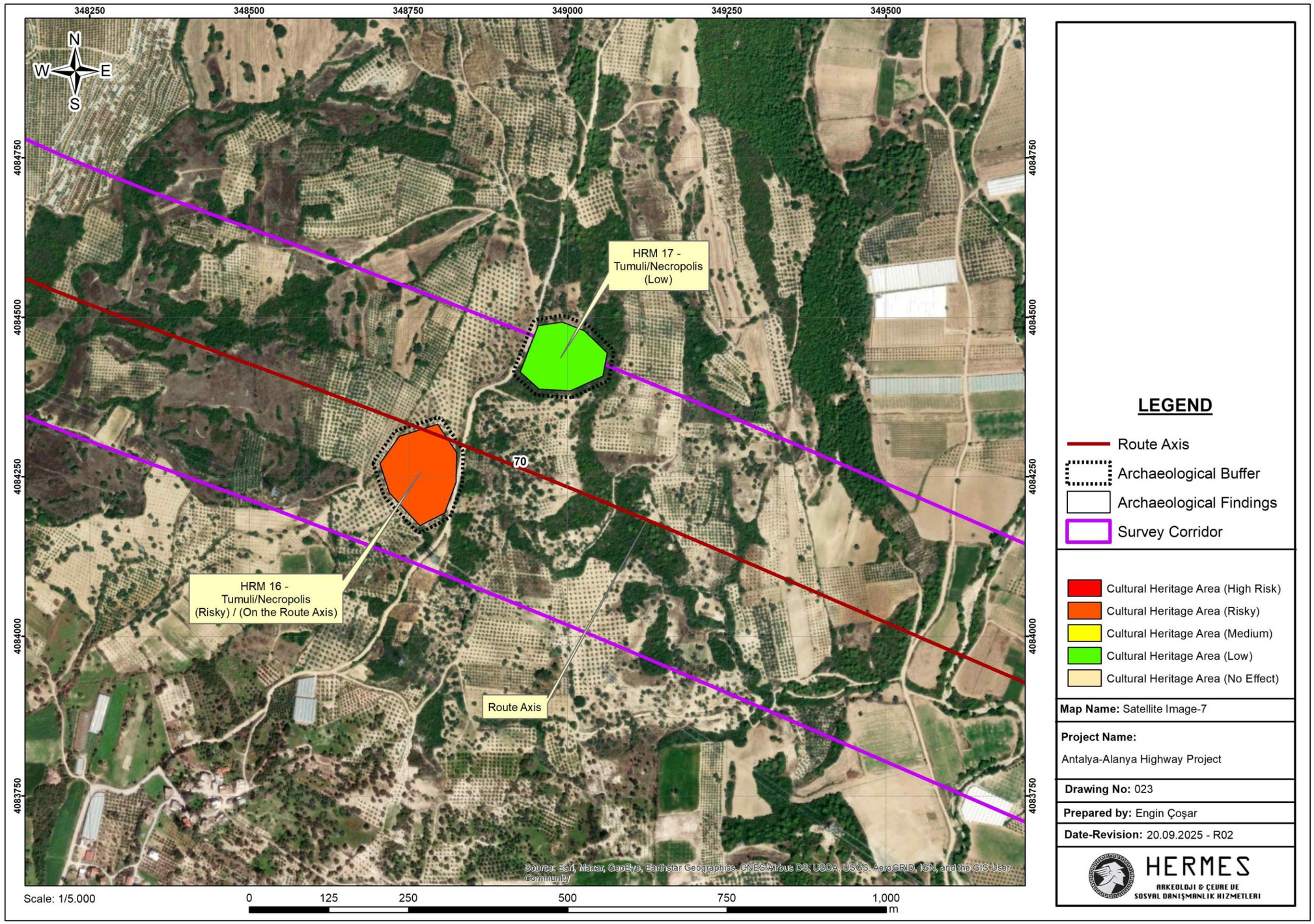

328500
328750
329000
329250
329500
329750
4089500
4089250
4089000
4088750
4088500
N
W
E
S
HRM 4 - Settlement (No Effect)
Route Axis
HRM-3- Pastoral Settlement (Risky)
Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
Scale: 1/5.000
0
125
250
500
750
1,000
m
LEGEND
Route Axis
Archaeological Buffer
Archaeological Findings
Survey Corridor
Cultural Heritage Area (High Risk)
Cultural Heritage Area (Risky)
Cultural Heritage Area (Medium)
Cultural Heritage Area (Low)
Cultural Heritage Area (No Effect)
Map Name: Satellite Image-2
Project Name:
Antalya-Alanya Highway Project
Drawing No: 018
Prepared by: Engin Çoşar
Date-Revision: 20.09.2025 - R02
HERMES
ARKEOLOJI & ÇEVRE VE
SOSYAL DANIŞMANLIK HIZMETLERI

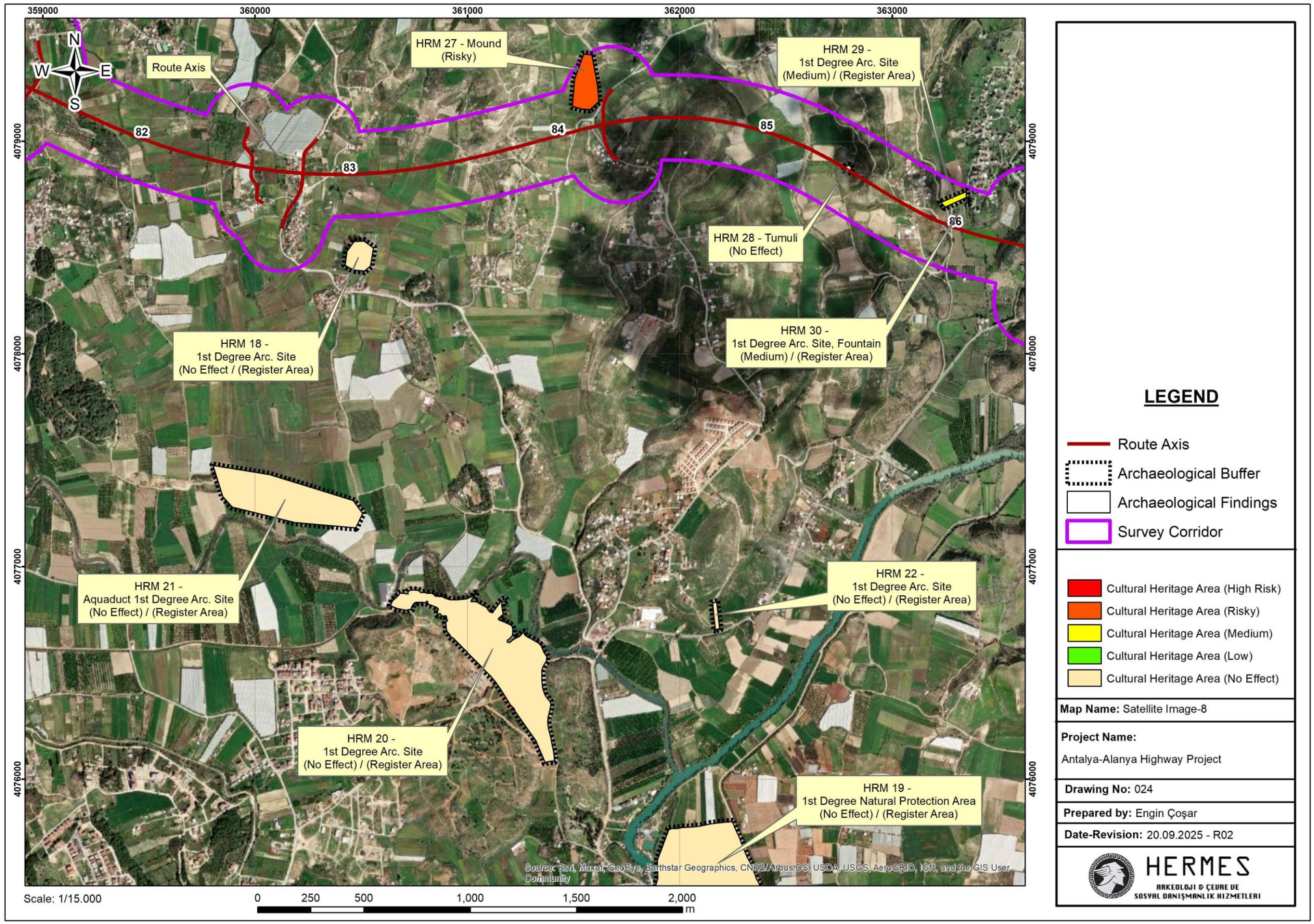

334750
335000
335250
335500
335750
336000
4094250
4094000
4093750
4093500
4093250
N
W
E
S
52
53
HRM 5 - Cemetery
(High Risk) /
(On the Route Axis)
HRM 7 - Tumuli
(Medium)
HRM 6 - Building Remain
(Risky)
Route Axis
Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
Scale: 1/5.000
0
125
250
500
750
1,000
m
LEGEND
Route Axis
Archaeological Buffer
Archaeological Findings
Survey Corridor
Cultural Heritage Area (High Risk)
Cultural Heritage Area (Risky)
Cultural Heritage Area (Medium)
Cultural Heritage Area (Low)
Cultural Heritage Area (No Effect)
Map Name: Satellite Image-3
Project Name:
Antalya-Alanya Highway Project
Drawing No: 019
Prepared by: Engin Çoşar
Date-Revision: 20.09.2025 - R02
HERMES
ARKEOLOJI & ÇEVRE VE
SOSYAL DANIŞMANLIK HIZMETLERI

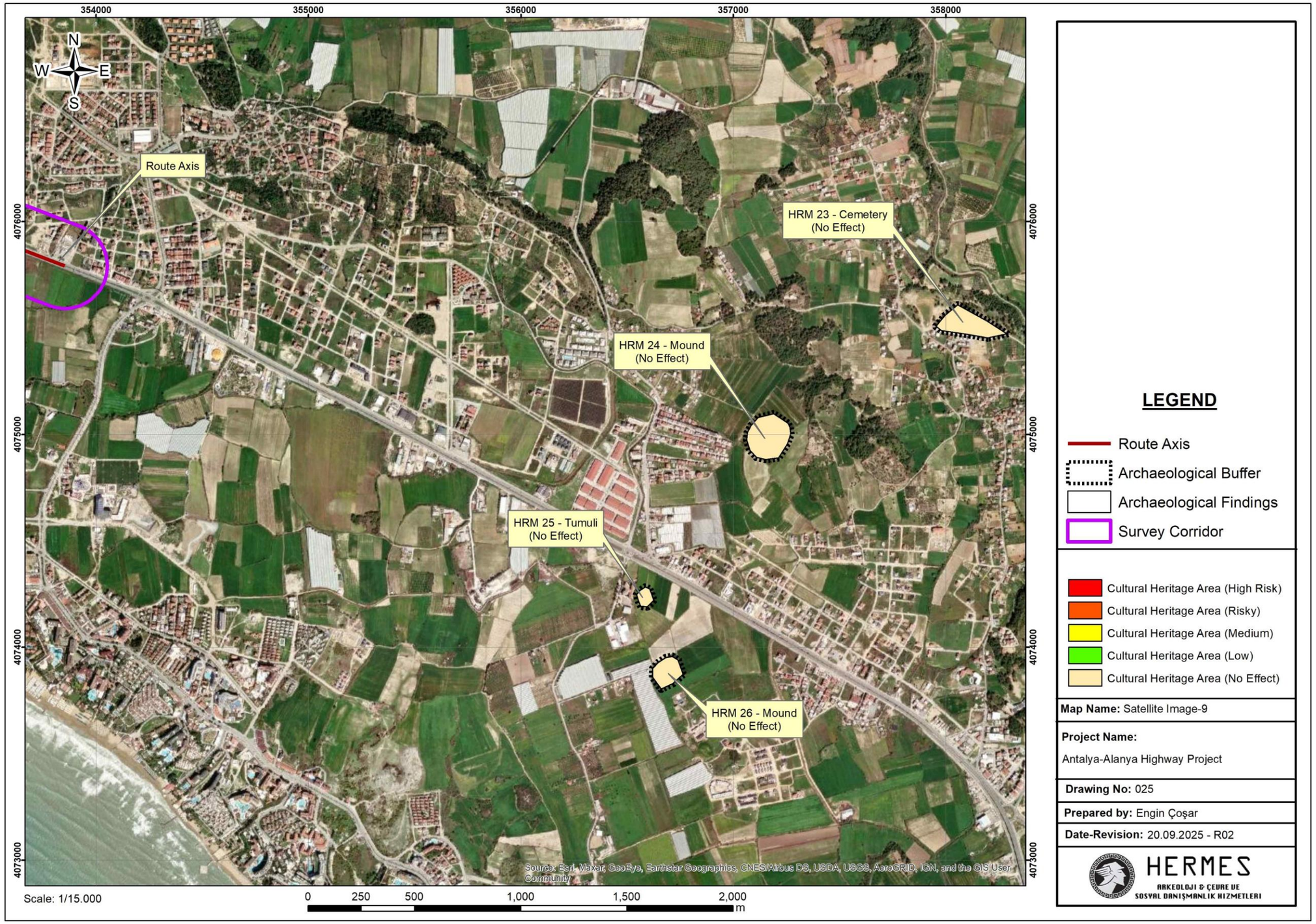

339000
339500
340000
340500
341000
4093500
4093000
4092500
4092000
N
W
E
S
HRM 8 -
Manavgat Arc. Site Border
(No Effect) / (Register Area)
HRM 56 -
1 st Degree Arc. Site
(Medium) / (Register Area)
57
58
59
Route Axis
HRM 9 -
Late Roman Settlement
(Risky)
Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
Scale: 1/7.500
0
125
250
500
750
1,000
m
LEGEND
Route Axis
Archaeological Buffer
Archaeological Findings
Survey Corridor
Cultural Heritage Area (High Risk)
Cultural Heritage Area (Risky)
Cultural Heritage Area (Medium)
Cultural Heritage Area (Low)
Cultural Heritage Area (No Effect)
Map Name: Satellite Image-4
Project Name:
Antalya-Alanya Highway Project
Drawing No: 020
Prepared by: Engin Çoşar
Date-Revision: 20.09.2025 - R02
HERMES
ARKEOLOJI & ÇEVRE VE
SOSYAL DANIŞMANLIK HIZMETLERI

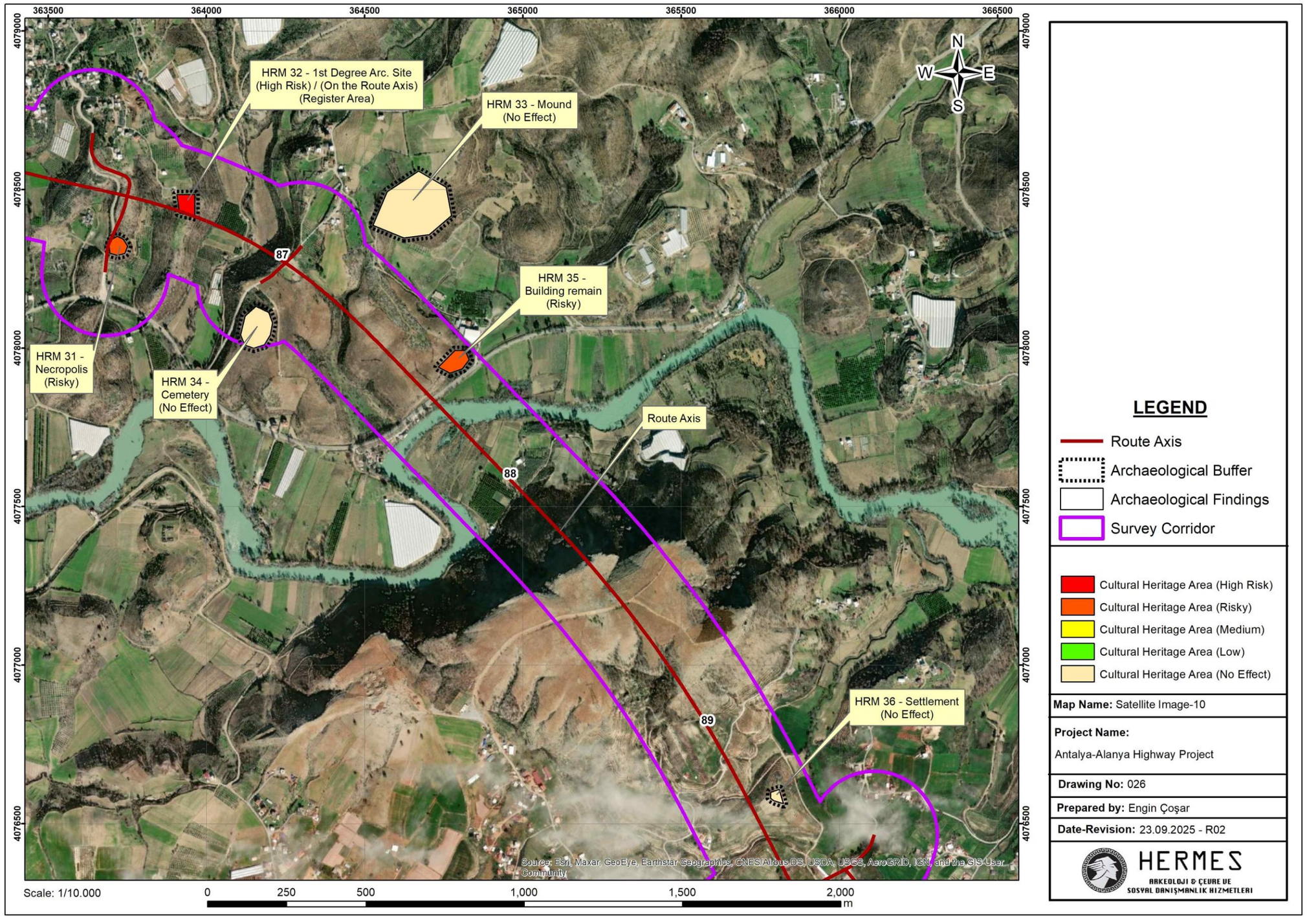

342250
342500
342750
343000
343250
343500
4090000
4089750
4089500
4089250
4089000
4088750
N
W
E
S
HRM 10 -
1st Degree Arc. Site
(Low) / (Register Area)
HRM 11 - Settlement
(Risky)
61
62
Route Axis
Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
Scale: 1/5.000
0
125
250
500
750
1,000
m
LEGEND
Route Axis
Archaeological Buffer
Archaeological Findings
Survey Corridor
Cultural Heritage Area (High Risk)
Cultural Heritage Area (Risky)
Cultural Heritage Area (Medium)
Cultural Heritage Area (Low)
Cultural Heritage Area (No Effect)
Map Name: Satellite Image-5
Project Name:
Antalya-Alanya Highway Project
Drawing No: 021
Prepared by: Engin Çoşar
Date-Revision: 20.09.2025 - R02
HERMES
ARKEOLOJI & ÇEVRE VE
SOSYAL DANIŞMANLIK HIZMETLERI

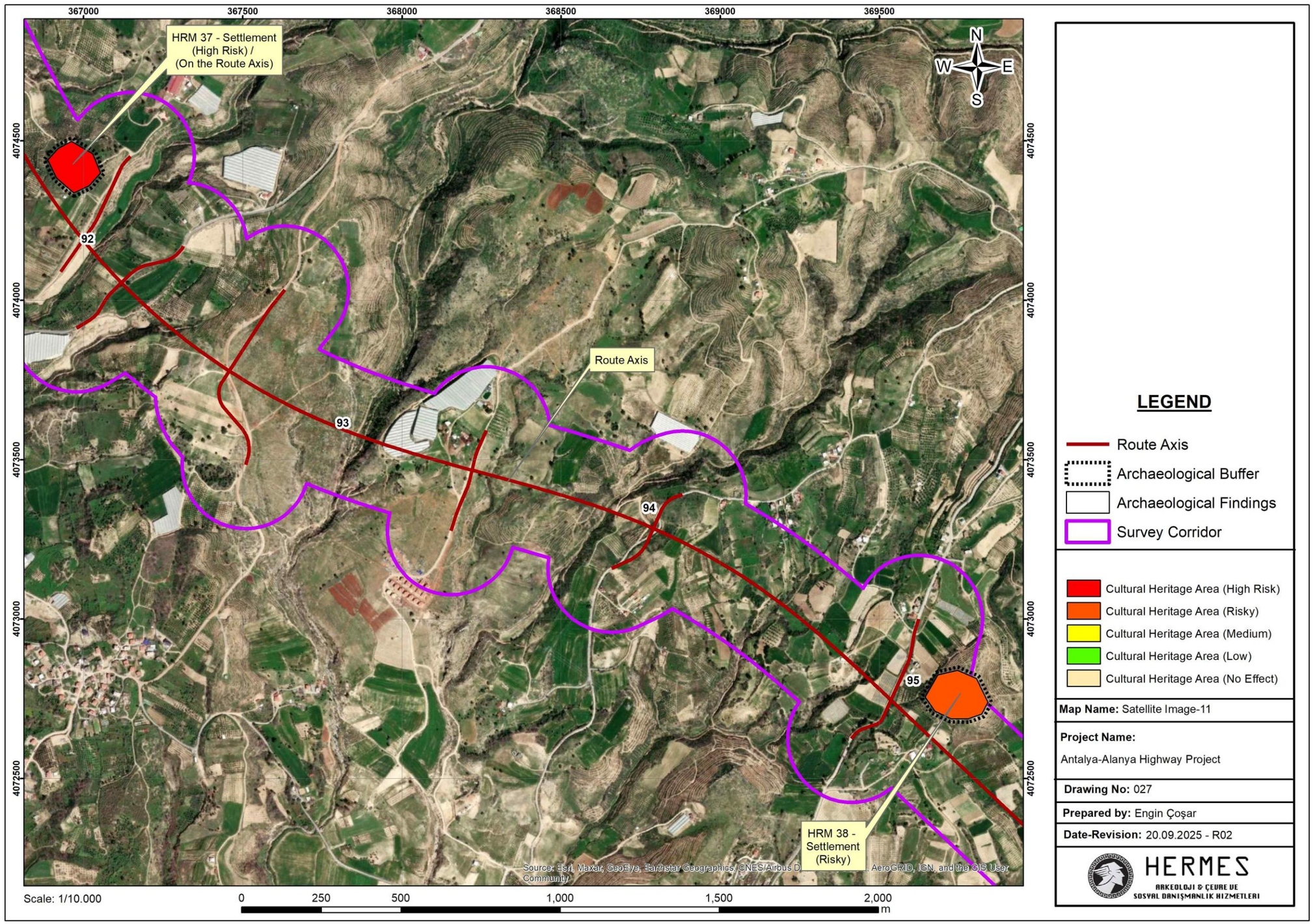

343000
344000
345000
346000
347000
4087000
4086000
4085000
4084000
N
W
E
S
65
66
67
HRM 12 - Necropolis
(No Effect)
Route Axis
HRM 13 - Settlement
(No Effect)
HRM 14 - Cemetery
(No Effect)
HRM 59 -
3 st Degree Arc. Site
(Medium) / (Register Area)
HRM 58 -
1st Degree Arc. Site
(Risky) / (Register Area)
HRM 15 - Cemetery
(High Risk) /
(On the Route Axis)
HRM 60 -
1 st Degree Arc. Site
(Medium) / (Register Area)
Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
Scale: 1/15.000
0 250 500 1,000 1,500 2,000
m
LEGEND
Route Axis
Archaeological Buffer
Archaeological Findings
Survey Corridor
Cultural Heritage Area (High Risk)
Cultural Heritage Area (Risky)
Cultural Heritage Area (Medium)
Cultural Heritage Area (Low)
Cultural Heritage Area (No Effect)
Map Name: Satellite Image-6
Project Name:
Antalya-Alanya Highway Project
Drawing No: 022
Prepared by: Engin Çoşar
Date-Revision: 20.09.2025 - R02
HERMES
ARKEOLOJI & ÇEVRE VE
SOSYAL DANIŞMANLIK HIZMETLERI

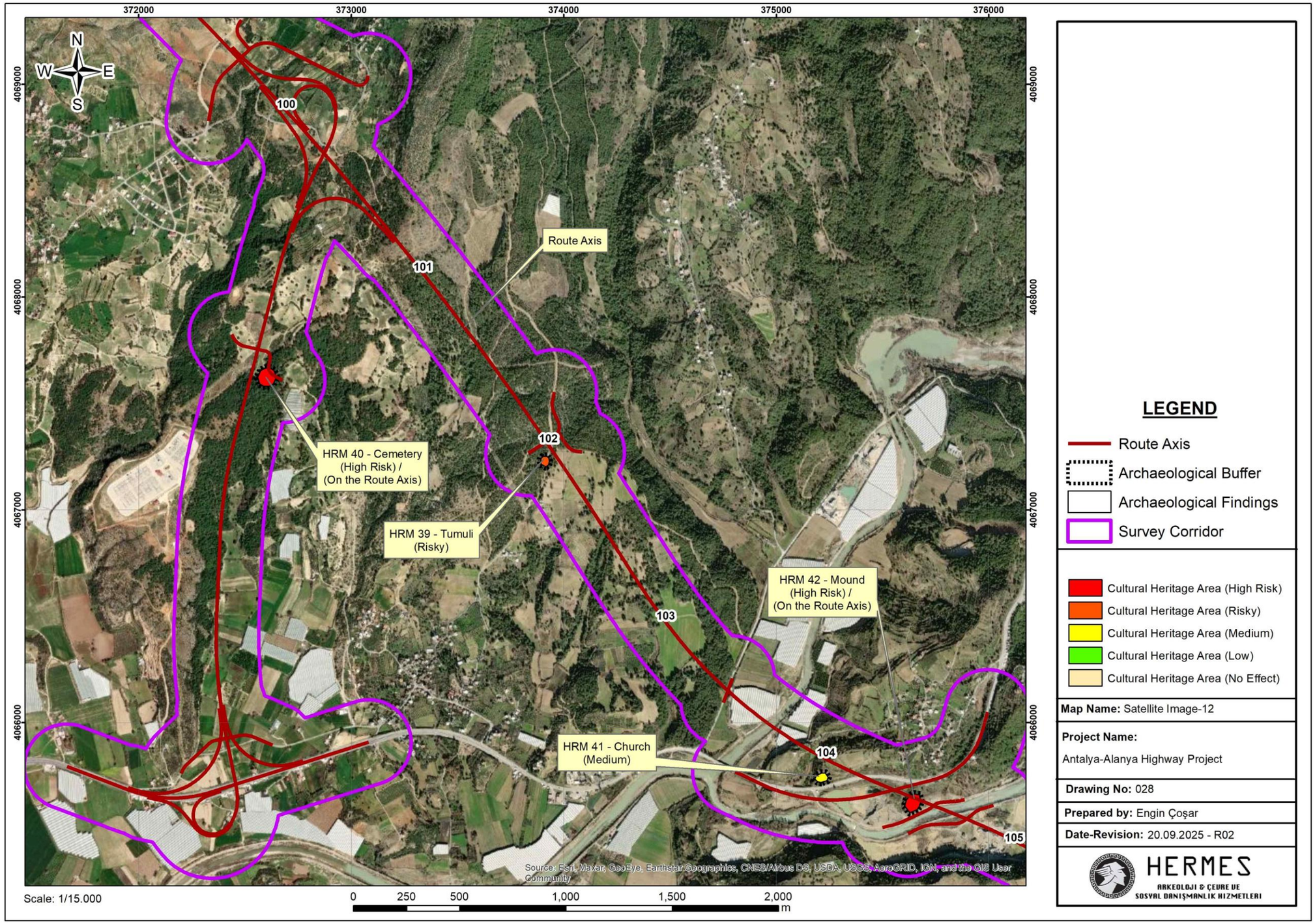

348250
348500
348750
349000
349250
349500
4084750
4084500
4084250
4084000
4083750
N
W
E
S
HRM 17 - Tumuli/Necropolis (Low)
HRM 16 - Tumuli/Necropolis (Risky) / (On the Route Axis)
70
Route Axis
Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
Scale: 1/5.000
0
125
250
500
750
1,000
m
LEGEND
Route Axis
Archaeological Buffer
Archaeological Findings
Survey Corridor
Cultural Heritage Area (High Risk)
Cultural Heritage Area (Risky)
Cultural Heritage Area (Medium)
Cultural Heritage Area (Low)
Cultural Heritage Area (No Effect)
Map Name: Satellite Image-7
Project Name:
Antalya-Alanya Highway Project
Drawing No: 023
Prepared by: Engin Çoşar
Date-Revision: 20.09.2025 - R02
HERMES
ARKEOLOJI & ÇEVRE VE
SOSYAL DANIŞMANLIK HIZMETLERI

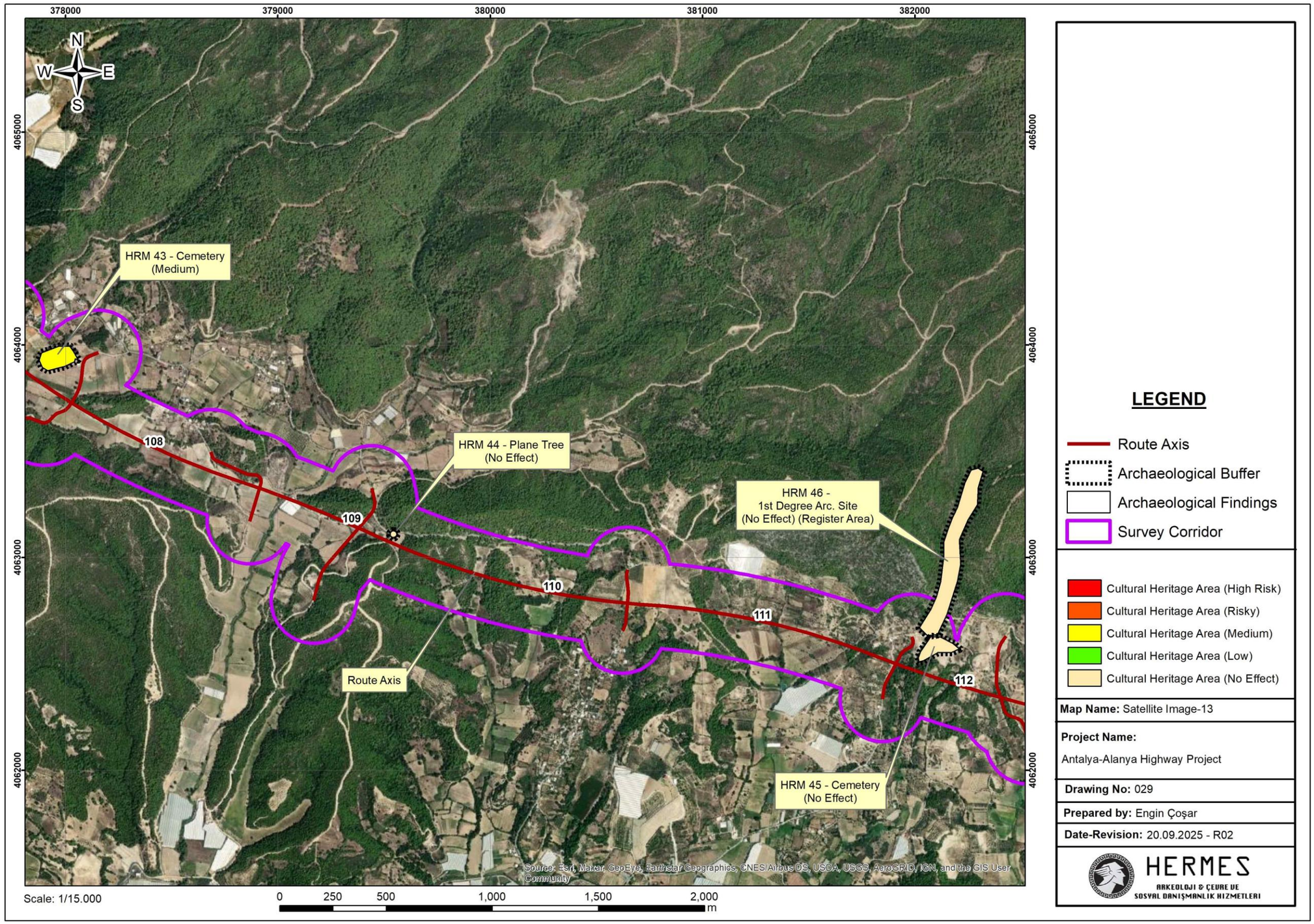

359000
360000
361000
362000
363000
4079000
4078000
4077000
4076000
N
W
E
S
Route Axis
HRM 27 - Mound
(Risky)
HRM 29 -
1st Degree Arc. Site
(Medium) / (Register Area)
82
83
84
85
86
HRM 28 - Tumuli
(No Effect)
HRM 18 -
1st Degree Arc. Site
(No Effect / (Register Area)
HRM 30 -
1st Degree Arc. Site, Fountain
(Medium) / (Register Area)
HRM 21 -
Aquaduct 1st Degree Arc. Site
(No Effect) / (Register Area)
HRM 22 -
1st Degree Arc. Site
(No Effect) / (Register Area)
HRM 20 -
1st Degree Arc. Site
(No Effect) / (Register Area)
HRM 19 -
1st Degree Natural Protection Area
(No Effect) / (Register Area)
Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
Scale: 1/15.000
0
250
500
1,000
1,500
2,000
m
LEGEND
Route Axis
Archaeological Buffer
Archaeological Findings
Survey Corridor
Cultural Heritage Area (High Risk)
Cultural Heritage Area (Risky)
Cultural Heritage Area (Medium)
Cultural Heritage Area (Low)
Cultural Heritage Area (No Effect)
Map Name: Satellite Image-8
Project Name:
Antalya-Alanya Highway Project
Drawing No: 024
Prepared by: Engin Çoşar
Date-Revision: 20.09.2025 - R02
HERMES
ARKEOLOJI & ÇEVRE VE
SOSYAL DANIŞMANLIK HIZMETLERI


354000
355000
356000
357000
358000
4076000
4075000
4074000
4073000
N
W
E
S
Route Axis
HRM 23 - Cemetery
(No Effect)
HRM 24 - Mound
(No Effect)
HRM 25 - Tumuli
(No Effect)
HRM 26 - Mound
(No Effect)
Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
Scale: 1/15.000
0 250 500 1,000 1,500 2,000
m
LEGEND
Route Axis
Archaeological Buffer
Archaeological Findings
Survey Corridor
Cultural Heritage Area (High Risk)
Cultural Heritage Area (Risky)
Cultural Heritage Area (Medium)
Cultural Heritage Area (Low)
Cultural Heritage Area (No Effect)
Map Name: Satellite Image-9
Project Name:
Antalya-Alanya Highway Project
Drawing No: 025
Prepared by: Engin Çoşar
Date-Revision: 20.09.2025 - R02
HERMES
ARKEOLOJI & ÇEVRE VE
SOSYAL DANIŞMANLIK HIZMETLERI


363500
364000
364500
365000
365500
366000
366500
4079000
4078500
4078000
4077500
4077000
4076500
N
W
E
S
HRM 32 - 1st Degree Arc. Site (High Risk) / (On the Route Axis) (Register Area)
HRM 33 - Mound (No Effect)
HRM 35 - Building remain (Risky)
HRM 31 - Necropolis (Risky)
HRM 34 - Cemetery (No Effect)
Route Axis
HRM 36 - Settlement (No Effect)
87
88
89
Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
Scale: 1/10.000
0
250
500
1,000
1,500
2,000
m
LEGEND
Route Axis
Archaeological Buffer
Archaeological Findings
Survey Corridor
Cultural Heritage Area (High Risk)
Cultural Heritage Area (Risky)
Cultural Heritage Area (Medium)
Cultural Heritage Area (Low)
Cultural Heritage Area (No Effect)
Map Name: Satellite Image-10
Project Name:
Antalya-Alanya Highway Project
Drawing No: 026
Prepared by: Engin Çoşar
Date-Revision: 23.09.2025 - R02
HERMES
ARKEOLOJI & ÇEVRE VE
SOSYAL DANIŞMANLIK HIZMETLERI


367000
367500
368000
368500
369000
369500
4074500
4074000
4073500
4073000
4072500
N
W
E
S
HRM 37 - Settlement (High Risk) / (On the Route Axis)
92
93
94
95
Route Axis
HRM 38 - Settlement (Risky)
Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus D... AeroGRID, IGN, and the GIS User Community
Scale: 1/10.000
0
250
500
1,000
1,500
2,000
m
LEGEND
Route Axis
Archaeological Buffer
Archaeological Findings
Survey Corridor
Cultural Heritage Area (High Risk)
Cultural Heritage Area (Risky)
Cultural Heritage Area (Medium)
Cultural Heritage Area (Low)
Cultural Heritage Area (No Effect)
Map Name: Satellite Image-11
Project Name:
Antalya-Alanya Highway Project
Drawing No: 027
Prepared by: Engin Çoşar
Date-Revision: 20.09.2025 - R02
HERMES
ARKEOLOJI & ÇEVRE VE SOSYAL DANIŞMANLIK HIZMETLERI


372000
373000
374000
375000
376000
4069000
4068000
4067000
4066000
N
W
E
S
100
101
102
103
104
105
Route Axis
HRM 40 - Cemetery
(High Risk) /
(On the Route Axis)
HRM 39 - Tumuli
(Risky)
HRM 42 - Mound
(High Risk) /
(On the Route Axis)
HRM 41 - Church
(Medium)
Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
Scale: 1/15.000
0 250 500 1,000 1,500 2,000
m
LEGEND
Route Axis
Archaeological Buffer
Archaeological Findings
Survey Corridor
Cultural Heritage Area (High Risk)
Cultural Heritage Area (Risky)
Cultural Heritage Area (Medium)
Cultural Heritage Area (Low)
Cultural Heritage Area (No Effect)
Map Name: Satellite Image-12
Project Name:
Antalya-Alanya Highway Project
Drawing No: 028
Prepared by: Engin Çoşar
Date-Revision: 20.09.2025 - R02
HERMES
ARKEOLOJI & ÇEVRE VE
SOSYAL DANIŞMANLIK HIZMETLERI


378000
379000
380000
381000
382000
4065000
4064000
4063000
4062000
N
W
E
S
HRM 43 - Cemetery
(Medium)
HRM 44 - Plane Tree
(No Effect)
HRM 46 -
1st Degree Arc. Site
(No Effect) (Register Area)
HRM 45 - Cemetery
(No Effect)
Route Axis
108
109
110
111
112
Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
Scale: 1/15.000
0 250 500 1,000 1,500 2,000
m
LEGEND
Route Axis
Archaeological Buffer
Archaeological Findings
Survey Corridor
Cultural Heritage Area (High Risk)
Cultural Heritage Area (Risky)
Cultural Heritage Area (Medium)
Cultural Heritage Area (Low)
Cultural Heritage Area (No Effect)
Map Name: Satellite Image-13
Project Name:
Antalya-Alanya Highway Project
Drawing No: 029
Prepared by: Engin Çoşar
Date-Revision: 20.09.2025 - R02
HERMES
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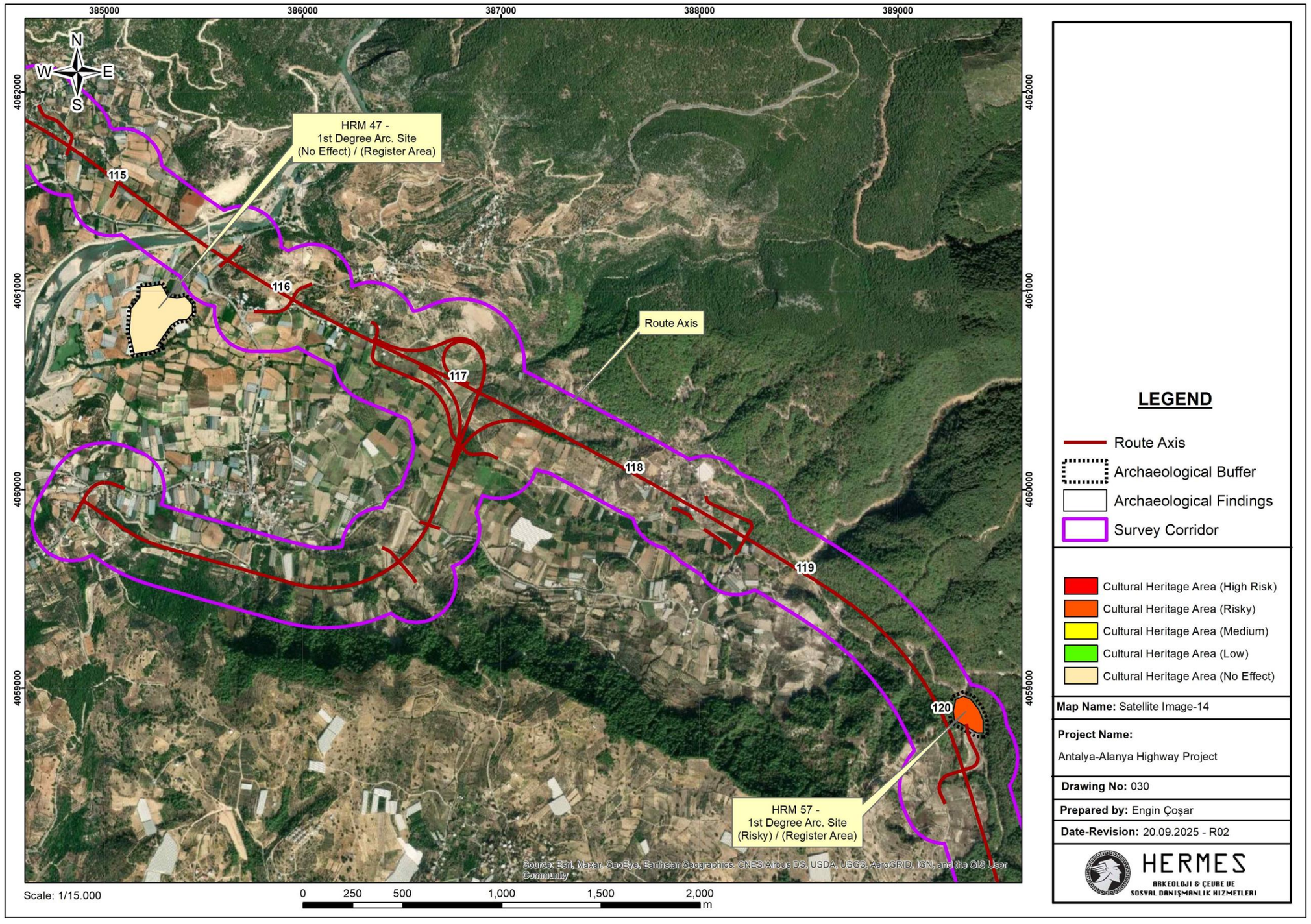
SOSYAL DANIŞMANLIK HIZMETLERI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HRM 47 -
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Route Axis
HRM 57 -
1st Degree Arc. Site
(Risky) / (Register Area)
Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
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LEGEND
Route Axis
Archaeological Buffer
Archaeological Findings
Survey Corridor
Cultural Heritage Area (High Risk)
Cultural Heritage Area (Risky)
Cultural Heritage Area (Medium)
Cultural Heritage Area (Low)
Cultural Heritage Area (No Effect)
Map Name: Satellite Image-14
Project Name:
Antalya-Alanya Highway Project
Drawing No: 030
Prepared by: Engin Çoşar
Date-Revision: 20.09.2025 - R02
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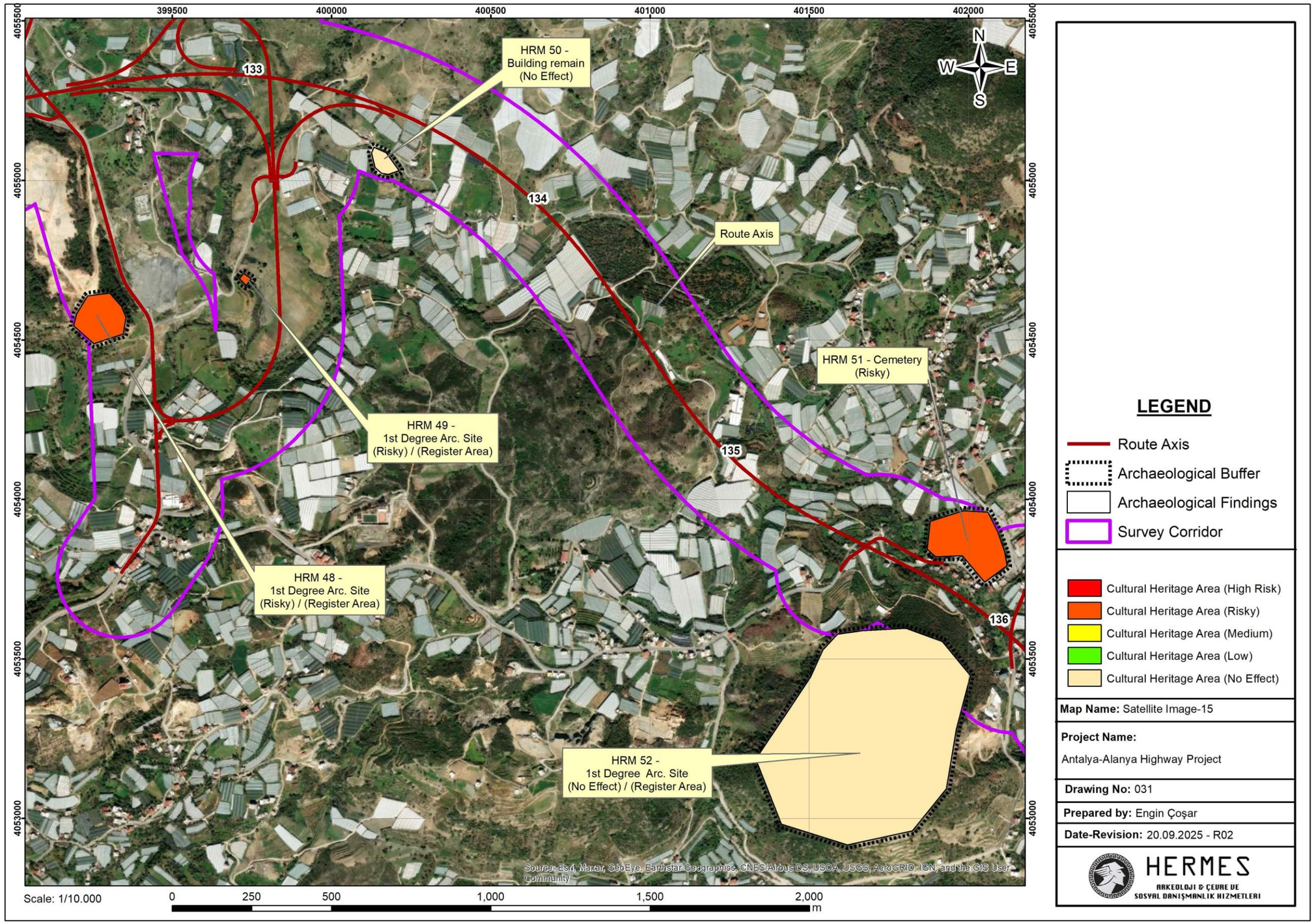
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HRM 50 -
Building remain
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Route Axis
HRM 51 - Cemetery
(Risky)
HRM 49 -
1st Degree Arc. Site
(Risky) / (Register Area)
HRM 48 -
1st Degree Arc. Site
(Risky) / (Register Area)
HRM 52 -
1st Degree Arc. Site
(No Effect) / (Register Area)
Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
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Cultural Heritage Area (High Risk)
Cultural Heritage Area (Risky)
Cultural Heritage Area (Medium)
Cultural Heritage Area (Low)
Cultural Heritage Area (No Effect)
Map Name: Satellite Image-15
Project Name:
Antalya-Alanya Highway Project
Drawing No: 031
Prepared by: Engin Çoşar
Date-Revision: 20.09.2025 - R02
HERMES
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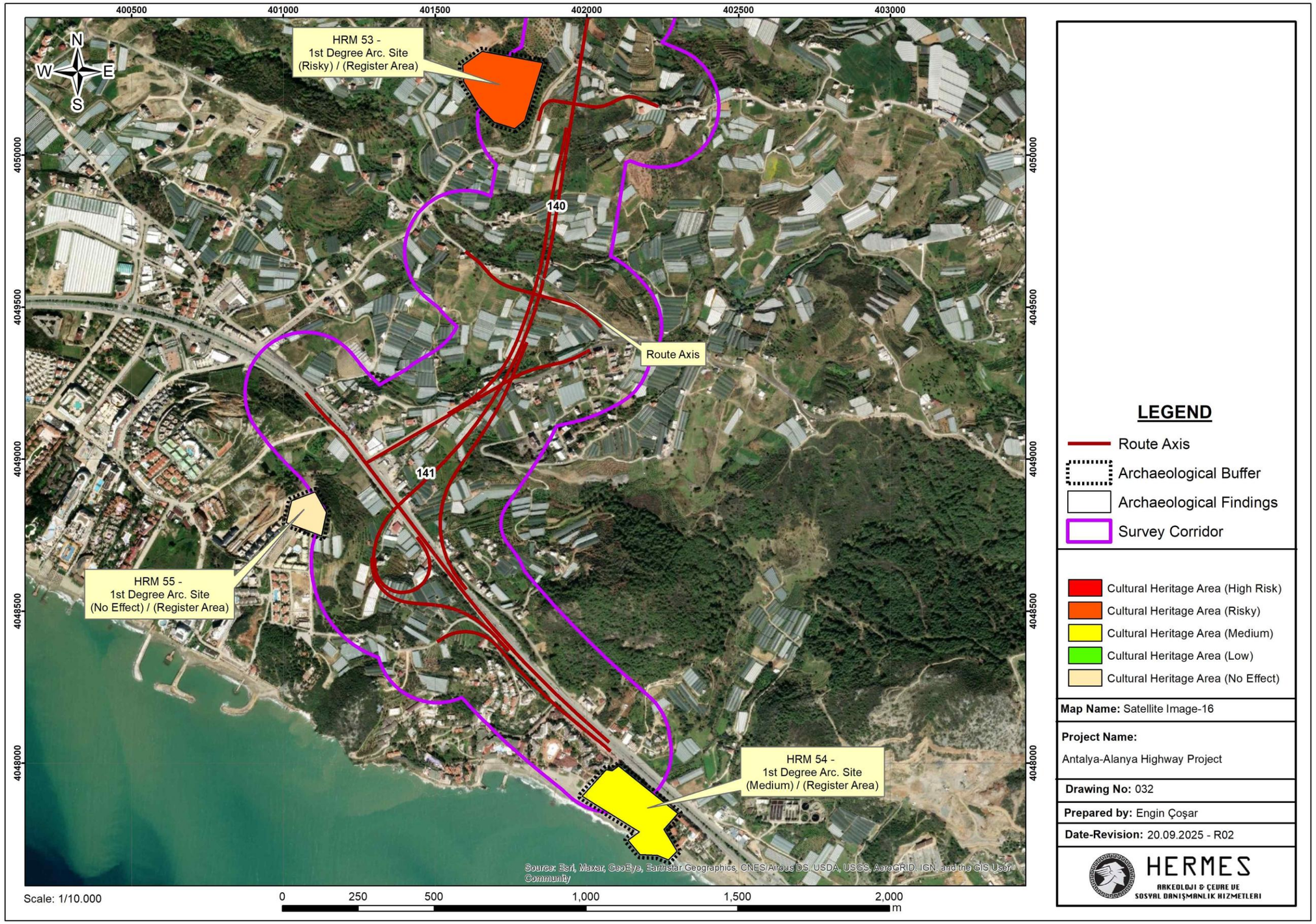
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HRM 53 -
1st Degree Arc. Site
(Risky) / (Register Area)
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Route Axis
141
HRM 55 -
1st Degree Arc. Site
(No Effect) / (Register Area)
HRM 54 -
1st Degree Arc. Site
(Medium) / (Register Area)
Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
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LEGEND
Route Axis
Archaeological Buffer
Archaeological Findings
Survey Corridor
Cultural Heritage Area (High Risk)
Cultural Heritage Area (Risky)
Cultural Heritage Area (Medium)
Cultural Heritage Area (Low)
Cultural Heritage Area (No Effect)
Map Name: Satellite Image-16
Project Name:
Antalya-Alanya Highway Project
Drawing No: 032
Prepared by: Engin Çoşar
Date-Revision: 20.09.2025 - R02
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ANTALYA ALANYA MOTORWAY PROJECT

CHANCE FIND PROCEDURE

REV 3

Revision LOG			
REV. Date	**Prepared by**	**Quality Checked by**	**Reviewed and Approved by**
02.09.2025	**Engin ÇOŞAR Senior Archaeologist**	**Ece ÇOŞAR Environmental Eng.**	**Engin ÇOŞAR Senior Archaeologist**
22.09.2025	**Engin ÇOŞAR Senior Archaeologist**	**Ece ÇOŞAR Environmental Eng.**	**Engin ÇOŞAR Senior Archaeologist**
23.10.2025	**Engin ÇOŞAR Senior Archaeologist**	**Ece ÇOŞAR Environmental Eng.**	**Engin ÇOŞAR Senior Archaeologist**

HERMES
ARKEOLOJI & ÇEVRE VE SOSYAL DANIŞMANLIK HIZMETLERI

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OCTOBER/2025

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ABBREVIATIONS

CHMP	Cultural Heritage Management Plan
ICOMOS	International Council of Monuments and Sites
IFA	Institute of Field Archaeologists
No	Number
PROJECT	Antalya Alanya Motorway Project
UNESCO	United Nations Educational, Scientific and Cultural Organization

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1. PURPOSE and SCOPE

The Archaeological Chance Find Procedure (CFP) has been prepared to provide clear guidance to all parties and employees on the actions to be taken in the event of the discovery of an archaeological asset. As archaeological finds may be encountered during the construction activities of the Project, this procedure sets out the minimum requirements to ensure their protection.

Any activity involving excavation, trenching, or other earthworks has the potential to uncover or inadvertently damage archaeological remains. Therefore, this procedure defines the responsibilities, reporting channels, and step-by-step measures to be implemented immediately upon encountering a chance find.

Within the Project scope, priority must always be given to avoidance of impacts on identified archaeological sites, primarily through route realignment or design modification. Where avoidance is not feasible, national legislation and international standards must be applied, and the relevant management plans and procedures implemented.

The CFP is designed as an emergency response mechanism in areas of predicted low archaeological sensitivity. It is not a substitute for systematic baseline reconnaissance or pre-construction archaeological surveys, which remain mandatory in areas identified as medium or high sensitivity.

2. ROLES AND RESPONSIBILITIES

The Project Owner will be responsible for the preparation and implementation of the environmental and social impact assessment-based management plans, which will be project specific. These plans shall be practical, detailed procedures for use in the field.

The Project Owner will ensure the implementation of the commitments stated in the ESIA and will be responsible for the performance of all sub-contractors with respect to project-specific plans. All contractors shall comply with relevant project standards, statutory requirements, permit and license conditions, and the Project Owner shall secure all applicable permits and licenses.

All project personnel **shall receive archaeological awareness training**. These trainings will be delivered **to all new employees before they commence work** and will constitute **one of the mandatory induction trainings**. The training will be provided **by the Project Archaeologist**.

In relation to archaeological chance finds, the Project Archaeologist is responsible for securing the area, documenting the find, and notifying the Museum Directorate immediately. The Museum Directorate is responsible for inspecting the site and reporting to the Regional Conservation Board for the Protection of Cultural Heritage, which is the sole authority to issue decisions on interventions and to authorize the restart of

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construction works. **No works may recommence until written clearance is received from the relevant authority.**

Table 1 Chance Find Procedure – Roles and Responsibilities Table

Actor / Party	Responsibilities	Authority
Project Archaeologist	- Stop works immediately upon discovery - Secure the area - Document with coordinates, photos, and forms - Notify the Museum Directorate - All site-based contractors have the authority to stop works is they suspect an archaeological chance find, and report to the Project Archaeologist	Has the authority to stop works. No authority to restart works.
Project Owner	- Ensure implementation of CHMP and CFP - Monitor contractor compliance - Coordinate with Museum Directorate and Regional Conservation Board	Responsible for managing legal processes. No authority to restart works.
Contractor	- Comply with procedures - Cease works when instructed - Follow directions from Project Archaeologist and Project Owner.	Cannot authorize restart. Acts only as the implementer. All site-based contractors have the authority to stop works is they suspect an archaeological chance find, and report to the Project Archaeologist.
Museum Directorate	- Receive notification - Conduct site inspection - Report findings to the Regional Conservation Board	Cannot authorize restart. Provides technical assessment and reporting.
Regional Conservation Board	- Decide on interventions regarding the site - Define protective measures for the find - Provide written clearance for the resumption of works	Sole authority to authorize the restart of construction works (in writing).

2.1 Chain of Custody for Archaeological Finds

All archaeological finds shall be managed under a clear and transparent chain of custody to ensure accountability and integrity. The process will be implemented as follows:

1. Initial Discovery and Recording
   - The Project Archaeologist documents the find with photographs, GPS coordinates, and forms.
   - The find shall be secured in situ, not moved, and kept under protection until the Museum representative arrives on site.

2. Handover to the Museum Directorate
   - The Project Archaeologist prepares a handover form including description, coordinates, and condition of the find.

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- The form is signed by both the Project Archaeologist and the Museum representative.
- The artefacts are handed over directly to the Museum representative on site, and an official handover receipt is obtained.

3. Museum Responsibility

- The Museum Directorate is the competent and responsible authority for all excavations and interventions to be conducted on the archaeological site.
- From the moment of handover, the transportation and custody of the artefacts fall under the full responsibility of the Museum Directorate.

4. Record Keeping

- All handover forms and custody records are archived by the Project Owner.
- Copies are entered into the Chance Finds Register and made available for lender review upon request.

No archaeological find may be removed from the site or transported without official documentation and signatures ensuring the chain of custody.

2.2 Requirements Related to Human Remains

In the event that human remains are encountered during Project activities, the following requirements shall apply in addition to the Chance Find Procedure:

1- Immediate Cessation of Works

- All works in the vicinity of the find must stop immediately.
- The area shall be secured by the Project Archaeologist and marked as a restricted zone.

2- Respectful In Situ Protection

- Human remains shall not be moved, disturbed, or removed by Project staff under any circumstances.
- The remains must be left in situ under protection until competent authorities arrive.

3- 3- Notification of Authorities

- The Project Archaeologist shall immediately notify the Museum Directorate, which will dispatch experts to the site.
- If the remains are suspected to be contemporary burials, local law enforcement shall also be informed, in line with national legal requirements.

4- Authority and Oversight

- The Museum Directorate is the competent authority for conducting or overseeing any excavation, exhumation, or handling of archaeological human remains.
- All decisions regarding the treatment, removal, or relocation of remains are subject to the written approval of the Regional Conservation Board.

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- If the remains are dated to the modern period, the case may be treated as a criminal matter. In such cases, a judicial investigation and police follow-up will be required, and all actions will be carried out in accordance with the instructions of the Public Prosecutor's Office.

5- Documentation and Custody

- The Project Archaeologist shall record the location, context, and condition of the remains through photographs, GPS, and official forms.
- A handover form must be completed at the time of transfer to the Museum authorities, ensuring a clear chain of custody.

6- Community Sensitivities

- All works must respect local cultural and religious sensitivities related to burial traditions.
- Engagement with local communities shall be conducted through the Project Archaeologist and Consultant Archaeologist, with sensitivity to intangible heritage values.

No human remains may be disturbed, removed, or transported without the explicit instruction and supervision of the Museum Directorate, and the written approval of the Regional Conservation Board.

2.3 Management of Cultural Heritage

The basic definitions regarding the management of cultural heritage are given in the following bullets:

- Ministry of Culture and Tourism is the responsible authority.
- Museum Directorate is responsible to provide experts for the sites within 24 hours after being informed and to officially define the Chance Find (see Appendix-1). ***Museum directorate is responsible excavation of chance find areas. Museum Directorate will follow the directions and decisions from Regional Board Directorate of Protection of Cultural Heritage***.
- ***Regional Board Directorate of Protection of Cultural Heritage*** is the only decision maker on any intervention, which would be made on the site after the chance find.
- Project Owner is responsible for the management of archaeological issues during the progress of construction of the Project site area and implementation of related management plan and chance find procedure.
- *Project Owner will employ archaeologists at the Project site responsible for the monitoring of ground disturbance activities. They are also responsible with the*

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monitoring of the implementation of the Cultural Heritage Management Plan (CHMP) and chance find procedure.

- *Project Owner will ensure that Chance Finds procedure is adequately enforced during ground disturbance activities. During the implementation of the Chance Finds procedure on site, Project Owner will directly report the issue to Museum archaeologist and relevant Regional Preservation Board.*
- *Salvage excavation (and other Chance find issues) (If necessary) are under the responsibility of Project Owner.*
- Project Owner is also responsible for giving necessary trainings to the field staff about the implementation of the chance find procedure.
- *Project Owner will record all chance finds on the Chance Finds Report Form and in the Chance Finds Register as per the Chance Find Procedure in Appendix-1.*

2.4 Management Structure and Responsibilities

Project Owner will be responsible for the management of the plan and procedure about archaeological issues of Project site. The Archaeologist of Project Owner will train the employees about cultural heritage and chance find procedure (see Section 4.1). Also, the monitoring of the construction works will be the responsibility of Project Owner Archaeologist.

The Project Manager will be in charge of the all-construction work team.

It should be noted that, if a potential archaeological feature or any suspicious find is encountered in the field, the team that discovers the find shall immediately stop work. This requirement applies to all site personnel without exception.

Following the discovery of a potential find and the suspension of works, the site archaeologist shall be informed without delay, and arrangements shall be made for the archaeologist to carry out an on-site inspection promptly.

This responsibility applies to all site personnel.

The Archaeologists will work with the equipment operators and have authority to the stop work. Each will accompany a topsoil stripping crew during ROW clearing. They will direct the operator to stop work or redirect stripping activities in case of a chance find. They will submit scheduled progress reports and special reports of chance finds to Environmental and Social Coordinators.

In addition to the Chance Find Procedure, the Antalya Regional Board Directorates will decide for the requirement of a salvage excavation if needed. The contact information of these board directorate is given in Appendix-2. The excavation permissions will be obtained by the relevant museum directorate from the General Directorate of Cultural

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Heritage and Museums. Following the permission, Project Owner will provide a team of qualified archaeologist to conduct the salvage excavation within the framework of their contract under the guidance of Project Archaeologist / Consultant archaeologist, who will follow the instructions of the related museum directorate). These works may cover non- destructive research methods such as remote sensing and geophysics and test pit excavations. The negotiations and meetings with the related Regional Board Directorate of Protection of Cultural Heritage on technical topics during and after the salvage excavation will be held by Project Archaeologist / Consultant archaeologist.

3. PROCEDURE

Any physical remains of past human activity, including artifacts, plant and animal remains, structural remains and soil features are defined as archaeological entities. All actions to be carried out in case of discovery of an archaeological entity should comply with the Law on Cultural and Natural Assets Conservation Law Numbered 2863 (**Law Number**: 2863, **Date of Approval**: 21.7.1983, **Publication in the Official Gazette**: Date: 23/7/1983 No: 18113).

In the event of discovery of an archaeological entity, the following procedure shall be implemented:

- All construction and other relevant activities in the vicinity of the chance find will be ceased by the Archaeologist of Project Owner or anyone, who encounters a chance find.
- Project archaeologist will contact construction manager as soon as a chance find is encountered.
- Project archaeologist contacts museum directorate archaeologist immediately.
- Archaeologist of Project will properly secure chance find site via flagging, no-entry signs, etc. and prevent/limit the vehicle traffic within the immediate vicinity of chance find and also protect the site by not moving, removing or further disturbing the chance find.
- Boundaries of discovered archaeological site coordinates will be recorded and photograph of the location and the finding shall be taken and also video record should be made.
- The site and its vicinity will be secured against damage or loss until a final decision is made about this site by Board.
- Archaeologist of Project will fill out Part A of Chance Find Form and send a copy to Museum archaeologist within 24 hours keeping a copy for Project as a record,
- If any human remains such as contemporary grave or graveyard are noticed, security forces will be informed. Unless the remains are determined to be

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recent, the local administration (village head: mukhtar, or district governor) has the full authority.

- Further steps to be followed and proper procedures to be implemented for the management of the finding(s) (changes in the layout, conservation, preservation, restoration or salvage) will be decided and reported in writing by the Museum Directorate.
- In case the site is considered to be of no significance by the Museum Directorate, Project archaeologist will inform the Construction Manager and they will inform their managers. Subsequent of filling out Part B of Chance Find Form by Archaeologist of Project within 24 hours while retaining a copy of the Chance Find form as a record, the construction works will proceed since no further actions are required.
- In case the site is considered to be of significance by the Museum Directorate, Project archaeologist will be informed by the Museum Directorate about the decision on the further actions. Project archaeologist will inform the construction manager and their managers. Subsequent of filling out Part B of Chance Find Form by Archaeologist of Project within 24 hours while retaining a copy of the Chance Find form as a record, the instructions of the Museum Directorate will be followed. After some field investigation, Museum Directorate will declare their decision on the significance of the site and the actions to be followed as per their decision are summarized in Table 1.
- Whenever a chance find occurs, first **Appendix-1: Chance Find Report Form** shall be completed to open a record. Then the **Chance Find Register provided in Appendix-2** shall be filled in. After all procedures described in the Procedure have been completed and the official letters regarding the chance find have been received, **the record will be closed**.
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Table 2 Actions to be followed

Site to be of no Significance	Site to be of Minor Significance	Site to be of Major Significance
✓ Project's archaeologists/relevant personnel will inform their managers, ✓ Archaeologist of Project will record the decision in Part C of Chance Find Form within 24 hours, ✓ Archaeologist of Project will retain a copy of Chance Find form as a record, ✓ No further actions will be required, ✓ This step closes out the chance find procedure, ✓ Construction activities may resume.	✓ A salvage excavation is to be completed ✓ Museum Directorate will provide instructions, and/or supervision for salvage archaeological excavation Project archaeologist, ✓ Project's archaeologists will inform their managers, ✓ Under the guidance of Museum archaeologist (following instructions from other authorities, Antalya Regional Board etc.), Project will provide a team of qualified archaeologist to conduct the salvage excavation, ✓ Once the excavation is completed, Archaeologist of Project will provide a report to construction manager, ✓ Project archaeologist will provide a report to the Museum Directorate, ✓ Regional Board Directorate of Protection of Cultural Heritage will officially confirm the completion of recovery and inform Project archaeologist, ✓ Project archaeologist will inform the construction manager that no further actions are required, ✓ Project's archaeologists will inform their managers, ✓ Archaeologist of Project will record the decision in Part C of Chance Find Form within 24 hours, ✓ Archaeologist of Project will retain a copy of Chance Find form as a record, ✓ No further actions will be required, ✓ This step closes out the chance find procedure ✓ Construction activities may resume.	✓ An excavation is to be completed, ✓ Site will be treated according to "Law on the Conservation of Cultural and Natural Property (2863)", ✓ Museum Directorate will provide instructions, and/or supervision for salvage archaeological excavation to Project archaeologist, ✓ Project's archaeologists will inform construction manager and their managers, ✓ Under the guidance of Museum archaeologist (following instructions from other authorities, Antalya Regional Board etc.), Project will provide a team of qualified archaeologist to conduct the salvage excavation, ✓ Once the excavation is completed, Archaeologist of Project will provide a report to construction manager, ✓ Project archaeologist will provide a report to the Museum Directorate, ✓ Regional Board Directorate of Protection of Cultural Heritage will officially confirm the completion of recovery and inform Project archaeologist, ✓ Site will be officially recorded and protected according to Turkish regulations, ✓ Project archaeologist will inform the construction manager that no further actions are required, or that a relocation is required, ✓ Project's archaeologists will inform their managers, ✓ Archaeologist of Project will record the decision in Part C of Chance Find Form within 24 hours, ✓ Archaeologist of Project will retain a copy of Chance Find form as a record, ✓ No further actions will be required, ✓ This step closes out the chance find procedure, ✓ Construction activities may resume, or relocation is implemented.

APPENDIX-1:

CHANCE FIND REPORT FORM
RASLANTISAL BULUNTU RAPOR FORMU

To be filled out in English
Ingilizce doldurunuz

PART A BÖLÜM A		
Location: *Mevkii*	Date: *Tarih*	ID:
Name of person reporting chance find: *Rastlantısal buluntuyu rapor eden kişinin ismi*		
Name of contractor employee contacted: *İletişime geçilen yüklenici çalışanı ismi*		
Was work stopped in the immediate vicinity of chance find? *Rastlantısal buluntunun tam çevresinde iş durduruldu mu?*	☐ Yes *Evet*	☐ No *Hayır*
Was a buffer zone created to protect chance find? *Rastlantısal buluntuyu korumak için tampon bölge oluşturuldu mu?*	☐ Yes *Evet*	☐ No *Hayır*
NOTIFICATION ***BİLDİRİM***		
Contractor construction manager contacted *Yüklenici inşaat müdürü ile irtibata geçildi*	☐ Yes *Evet*	☐ No *Hayır*
PROJECT archaeologist contacted *PROJE arkeoloğu ile iletime geçildi*	☐ Yes *Evet*	☐ No *Hayır*
CHANCE FIND DETAILS ***RASLANTISAL BULUNTU AYRINTILARI***		
GPS coordinates *GPS koordinatları*	Photo record ☐Yes ☐No (HD quality – no cell phone photos) *Fotoğraf kaydı Evet Hayır* *(HD kalitesinde – cep telefonu fotoğrafı değil)* If not, explain why: *Yok ise nedenini açıklayınız* Other records ☐Yes ☐ No Specify (drawings, HD quality videos, etc.): *Diğer kayıtlar* *Evet* *Hayır Belirtin* *(çizimler, HD kalite videolar, vb.)*	

Description of chance find: *Rastlantısal buluntunun tanımı*
Description of site and vegetation: (e.g. surface sediment type, ground surface visibility, distance to closest watercourse, etc.) *Sahanın ve bitki örtüsünün tanımı: (örn. Yüzey sediman türü, yüzey zemin görünürlüğü, en yakın suyoluna olan mesafe, vb.)*
PART B ***BÖLÜM B***
NOTIFICATION OF_____MUSEUM DIRECTORATE ARCHAEOLOGIST **_____*MÜZE MÜDÜRLÜĞÜ ARKEOLOĞUNA BİLDİRİ***
PROJECT archaeologist contacted museum directorate archaeologist ☐Yes ☐No *PROJE arkeoloğu müze müdürlüğü arkeoloğu ile irtibata geçti.* *Evet* *Hayır* Date of notification: *Bildirim tarihi* Name of museum directorate archaeologist : *Müze müdürlüğü arkeoloğunun ismi* Contact number of museum directorate archaeologist: *Müze müdürlüğü arkeoloğunun iletişim numarası*
DECISION OF_____MUSEUM DIRECTORATE ARCHAEOLOGIST **_____*MÜZE MÜDÜRLÜĞÜ ARKEOLOĞUNUN KARARI***
Date of initial investigation: *İlk araştırma tarihi*

☐ Site of no significance - Construction to proceed with no further investigation – End of chance find procedure *Önemsiz saha – İnşaat daha fazla araştırma yapılmadan devam edilebilir – rastlantısal buluntu prosedürün sonu.* Date of notice to resume work : *İşe başlama tarihi bildirisi*	☐ Site of significance - Further investigation required *Önemli saha – Ek araştırma gerekmektedir* Fill out Part C *Bölüm C'yi doldurun.*

Name of museum directorate archaeologist: *Müze müdürlüğü arkeoloğunun ismi* Contact information: *İletişim numarası*		
PROJECT construction manager contacted *PROJE inşaat müdürü ile irtibata geçildi*	☐ Yes *Evet*	☐ No *Hayır*
Contractor archaeologist contacted *Yüklenici arkeoloğu ile irtibata geçildi*	☐ Yes *Evet*	☐ No *Hayır*
PART C ***BÖLÜM C***		
FURTHER FIELD INVESTIGATION *EK SAHA ARAŞTIRMASI*		
☐ Site of no significance *Önemsiz saha*	☐ Site of minor significance *Az önemli saha*	☐ Site of major significance *Çok önemli saha*
Describe additional work to be conducted: *Yapılması gereken ek işlerin tanımları*		
Date started: *Başlangıç tarihi*	Date completed: *Bitiriş tarihi*	
Date of notice to resume work : *İşe başlama tarihi bildirisi*		
Name of museum directorate archaeologist: *Müze müdürlüğü arkeoloğunun ismi:* Contact information: *İletişim numarası*		
Construction manager contacted *İnşaat müdürü ile irtibata geçildi*	☐ Yes *Evet*	☐ No *Hayır*
PROJECT archaeologist contacted *PROJE inşaat müdürü ile irtibata geçildi*	☐Yes *Evet*	☐No *Hayır*

APPENDIX 2: CHANCE FINDS REGISTER

	CHANCE FIND REGISTER
	Reporting Period:

Total of chance find	
To date	**To date**

ID (*)	DATE OF CHANCE FIND	LOCATION	CHANCE FIND SUMMARY	NAME OF AUTHORITY NOTIFIED	DATE PART A COMPLETED	DATE PART B COMPLETED	DATE PART C COMPLETED	ACTION TAKEN	STATUS OPEN OR CLOSED	REMARKS
Project 1										
Project 2										
Project 3										
Project 4										

(*) Keep same ID format

HERMES ARKEOLOJİ & ÇEVRE VE SOSYAL DANIŞMANLIK HİZMETLERİ
ANTALYA ALANYA MOTORWAY PROJECT **CHANCE FIND PROCEDURE REV 2**

APPENDIX 3: CONTACT INFORMATION OF RELATED MUSEUM DIRECTORATES AND REGIONAL BOARD DIRECTORATES

Table 3 Museum Contact Information

Name	Phone	Adress
Antalya Archaeology Museum	Tel: 0242 238 56 88/89	Bahçelievler Mahallesi, Konyaaltı Caddesi, No 88, 07050 ANTALYA E-posta: antalyamuzesi@kultur.gov.tr
Side Archaeology Museum	Tel: (0242) 280 23 00	Side, Liman Cd., 07330 Manavgat/Antalya

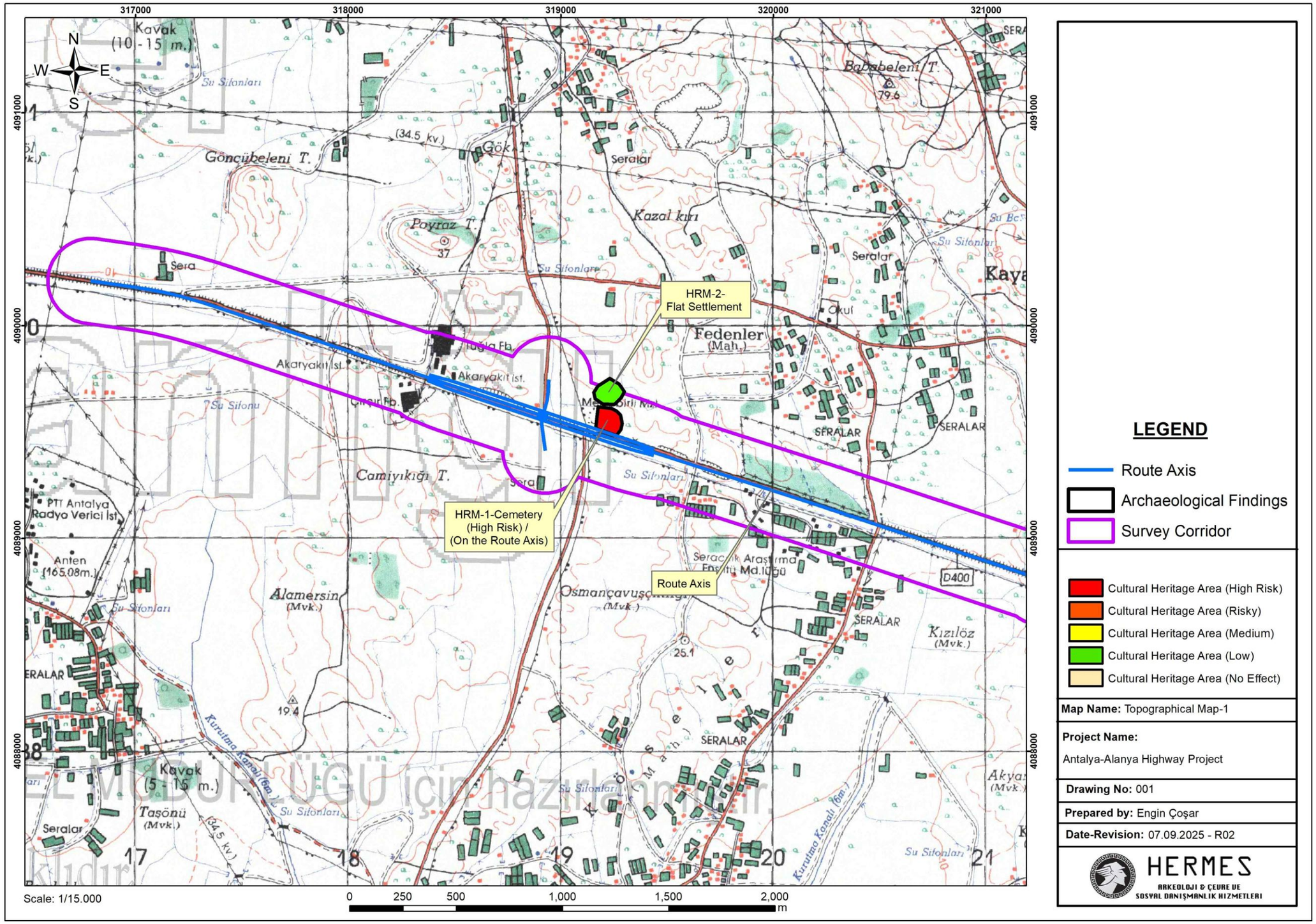
Table 4 Contact Information of Regional Board Directorates

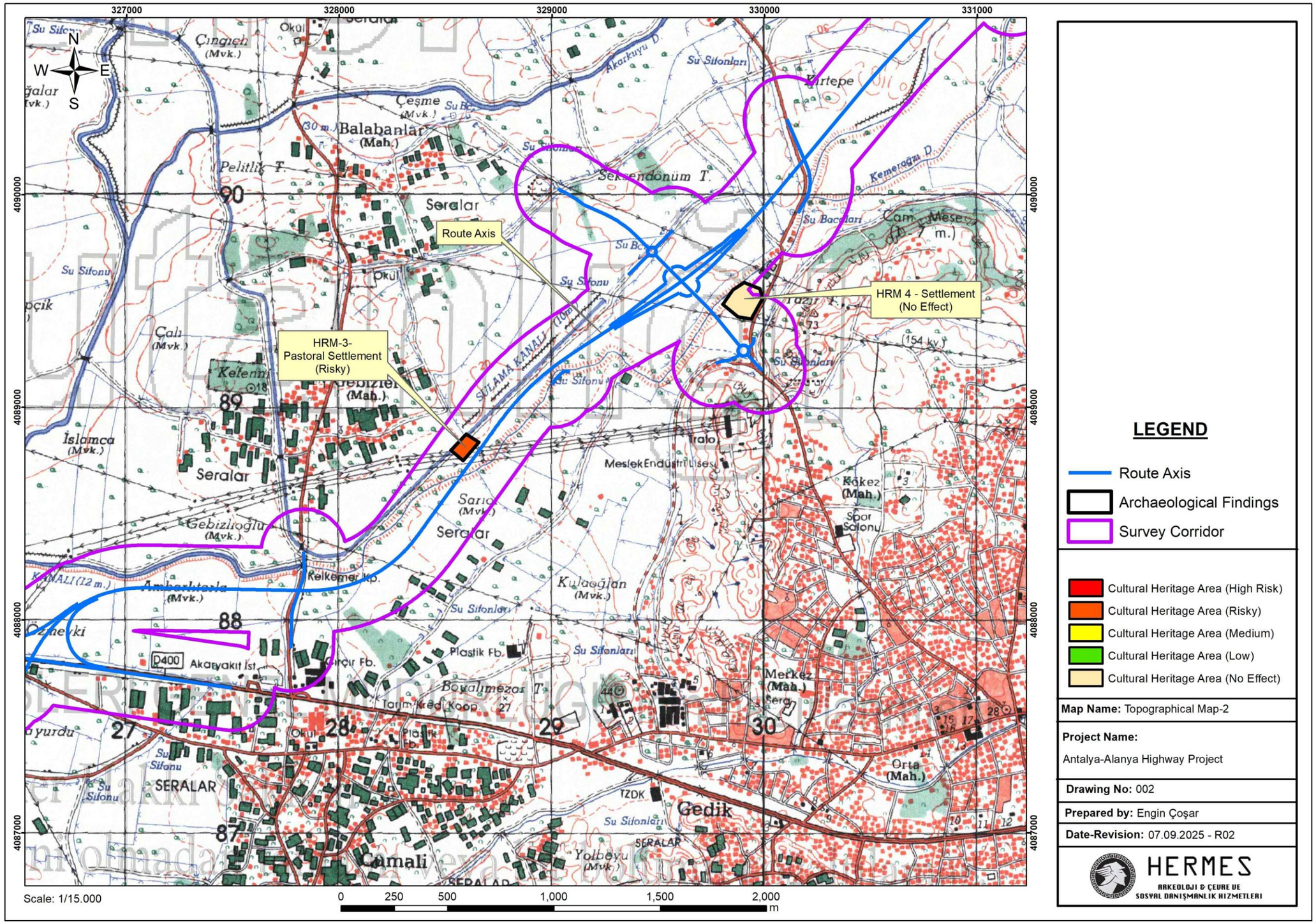
Name	Phone	Adress
Antalya Cultural Assets Regional Board Directorate	0242) 243 21 60 (0242) 247 87 61 (0242) 244 55 74	Kılıçaslan Mahç Zafer Sk. No: 6 07100 KALEİÇİ / ANTALYA

HERMES
ARKEOLOJİ & ÇEVRE VE
SOSYAL DANIŞMANLIK HİZMETLERİ

ANTALYA ALANYA MOTORWAY PROJECT **CHANCE FIND PROCEDURE REV 2**

APPENDIX-4: MAPS OF ARCHAEOLOGICAL SITES FOR ROUTE AND FACİLİTİES AREAS


317000
318000
319000
320000
321000
4091000
4090000
4089000
4088000
N
W
E
S
HRM-2-
Flat Settlement
HRM-1-Cemetery
(High Risk) /
(On the Route Axis)
Route Axis
Kavak
(10 - 15 m.)
Göncübeleni T.
Gök T.
Seralar
Kazal kırı
Payraz T.
Bababeleni T.
79.6
Sera
Fedenler
(Mah.)
Okul
Akaryakıt ist.
Tuğla Fb.
Çimir Fb.
Camiyıkığı T.
PTT Antalya
Radyo Verici İst.
Anten
(165.08m.)
Alamersin
(Mvk.)
Osmançavuş
(Mvk.)
SERALAR
Kızılöz
(Mvk.)
D400
25.1
19.4
Kavak
(5 - 15 m.)
Taşönü
(Mvk.)
Kurutma Kanalı (Sağ.)
Su Sifonları
(34.5 kv.)
Scale: 1/15.000
0
250
500
1,000
1,500
2,000
m
LEGEND
Route Axis
Archaeological Findings
Survey Corridor
Cultural Heritage Area (High Risk)
Cultural Heritage Area (Risky)
Cultural Heritage Area (Medium)
Cultural Heritage Area (Low)
Cultural Heritage Area (No Effect)
Map Name: Topographical Map-1
Project Name:
Antalya-Alanya Highway Project
Drawing No: 001
Prepared by: Engin Çoşar
Date-Revision: 07.09.2025 - R02
HERMES
ARKEOLOJİ & ÇEVRE VE
SOSYAL DANIŞMANLIK HİZMETLERİ



LEGEND

- Route Axis
- Archaeological Findings
- Survey Corridor

- Cultural Heritage Area (High Risk)
- Cultural Heritage Area (Risky)
- Cultural Heritage Area (Medium)
- Cultural Heritage Area (Low)
- Cultural Heritage Area (No Effect)

Map Name: Topographical Map-2

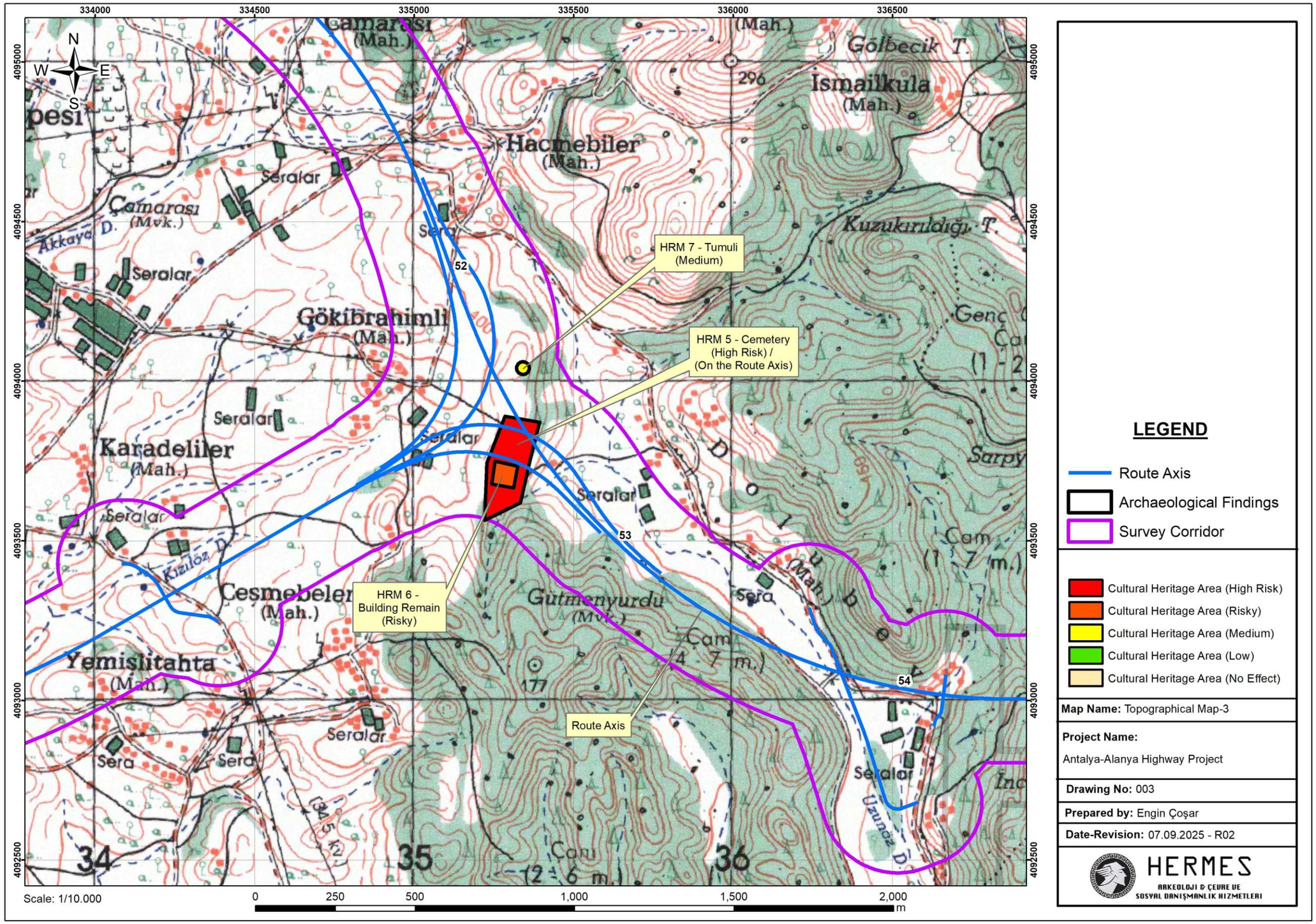
Project Name:
Antalya-Alanya Highway Project

Drawing No: 002

Prepared by: Engin Çoşar

Date-Revision: 07.09.2025 - R02

HERMES
ARKEOLOJİ & ÇEVRE VE
SOSYAL DANIŞMANLIK HİZMETLERİ



LEGEND

- Route Axis
- Archaeological Findings
- Survey Corridor

- Cultural Heritage Area (High Risk)
- Cultural Heritage Area (Risky)
- Cultural Heritage Area (Medium)
- Cultural Heritage Area (Low)
- Cultural Heritage Area (No Effect)

Map Name: Topographical Map-3

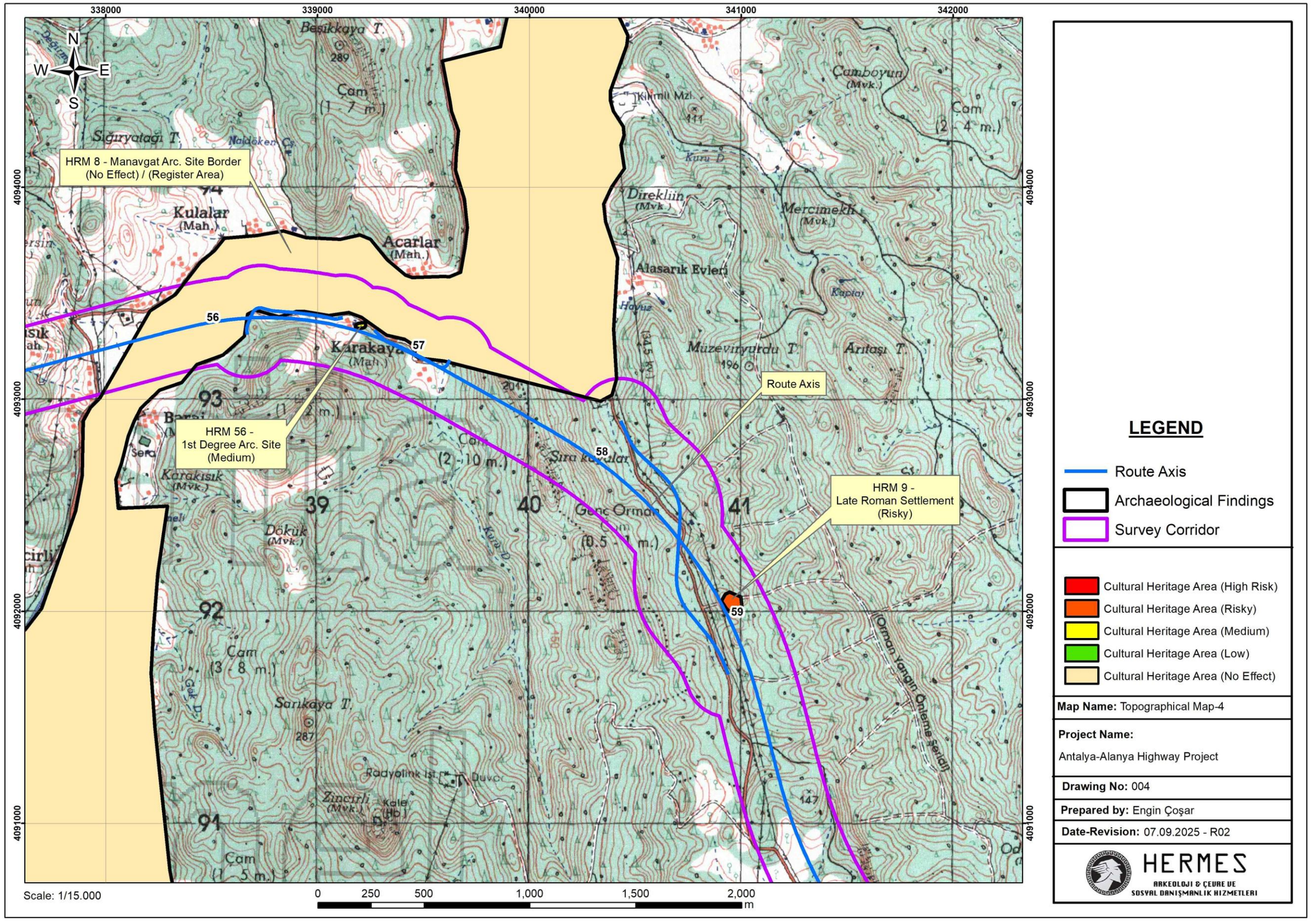
Project Name:
Antalya-Alanya Highway Project

Drawing No: 003

Prepared by: Engin Çoşar

Date-Revision: 07.09.2025 - R02

HERMES
ARKEOLOJİ & ÇEVRE VE
SOSYAL DANIŞMANLIK HİZMETLERİ



LEGEND

- Route Axis
- Archaeological Findings
- Survey Corridor

- Cultural Heritage Area (High Risk)
- Cultural Heritage Area (Risky)
- Cultural Heritage Area (Medium)
- Cultural Heritage Area (Low)
- Cultural Heritage Area (No Effect)

Map Name: Topographical Map-4

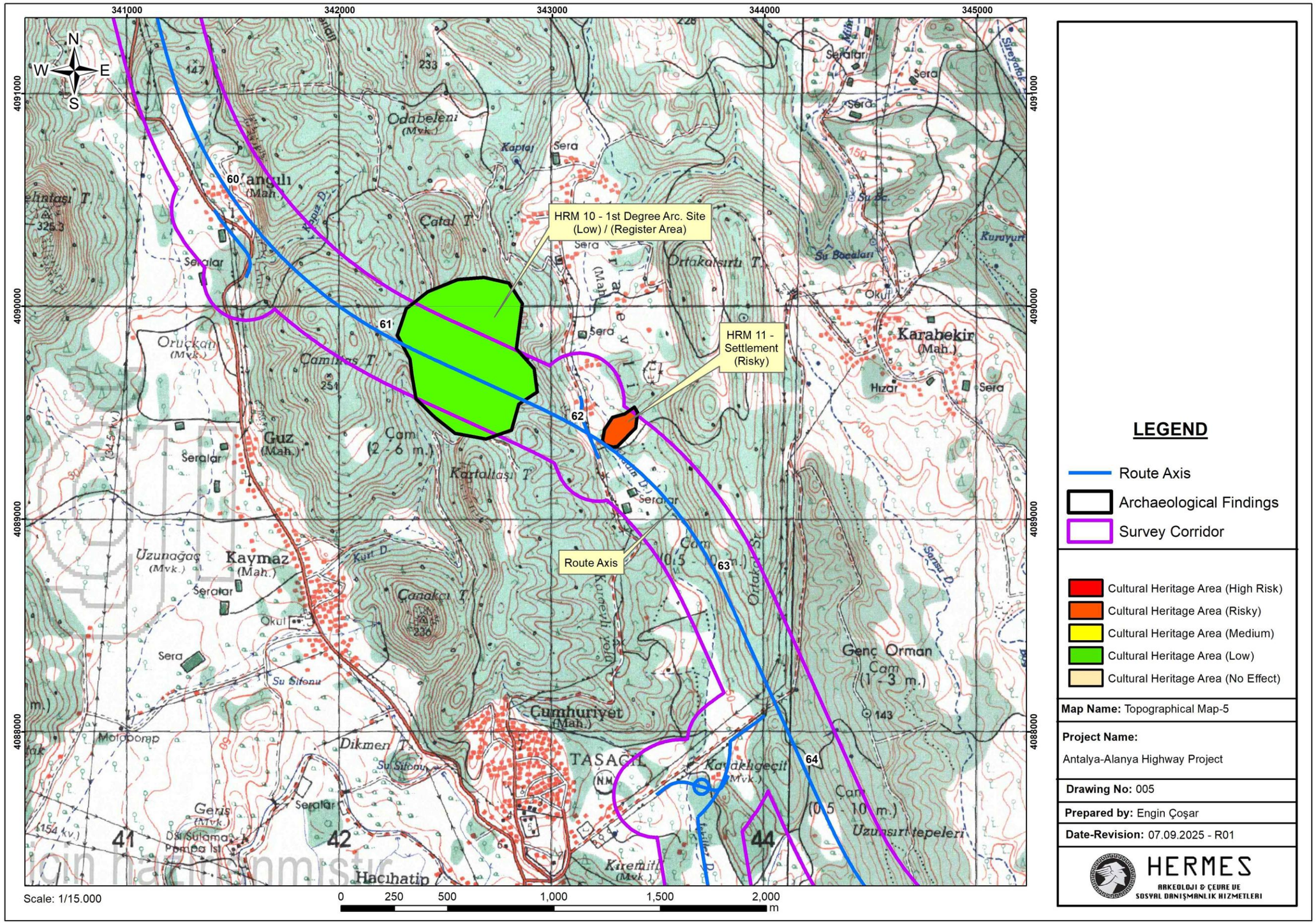
Project Name:
Antalya-Alanya Highway Project

Drawing No: 004

Prepared by: Engin Çoşar

Date-Revision: 07.09.2025 - R02

HERMES
ARKEOLOJİ & ÇEVRE VE
SOSYAL DANIŞMANLIK HİZMETLERİ



LEGEND

- Route Axis
- Archaeological Findings
- Survey Corridor

- Cultural Heritage Area (High Risk)
- Cultural Heritage Area (Risky)
- Cultural Heritage Area (Medium)
- Cultural Heritage Area (Low)
- Cultural Heritage Area (No Effect)

Map Name: Topographical Map-5

Project Name:
Antalya-Alanya Highway Project

Drawing No: 005

Prepared by: Engin Çoşar

Date-Revision: 07.09.2025 - R01

HERMES
ARKEOLOJİ & ÇEVRE VE
SOSYAL DANIŞMANLIK HİZMETLERİ

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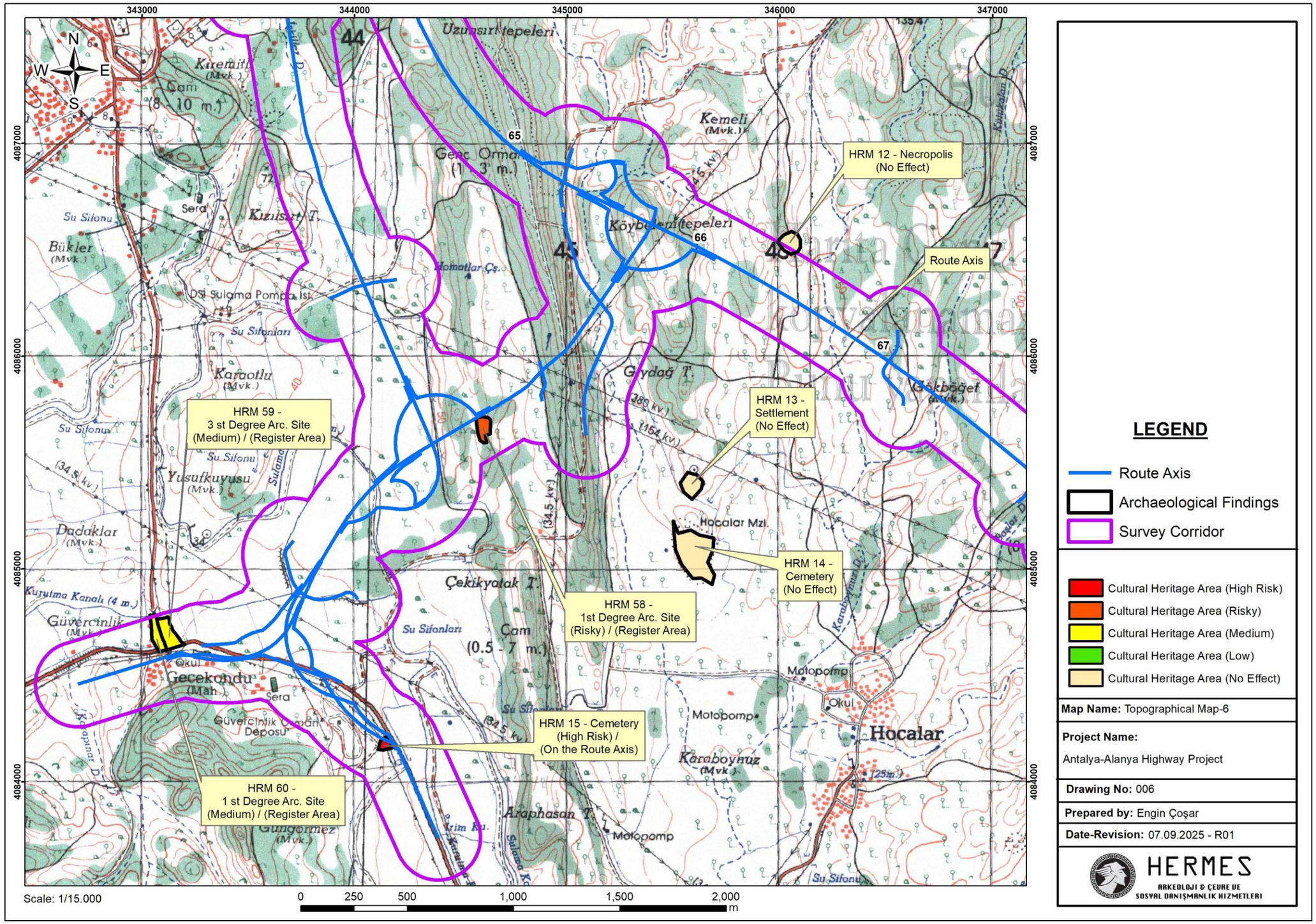


LEGEND

- Route Axis
- Archaeological Findings
- Survey Corridor

- Cultural Heritage Area (High Risk)
- Cultural Heritage Area (Risky)
- Cultural Heritage Area (Medium)
- Cultural Heritage Area (Low)
- Cultural Heritage Area (No Effect)

Map Name: Topographical Map-6

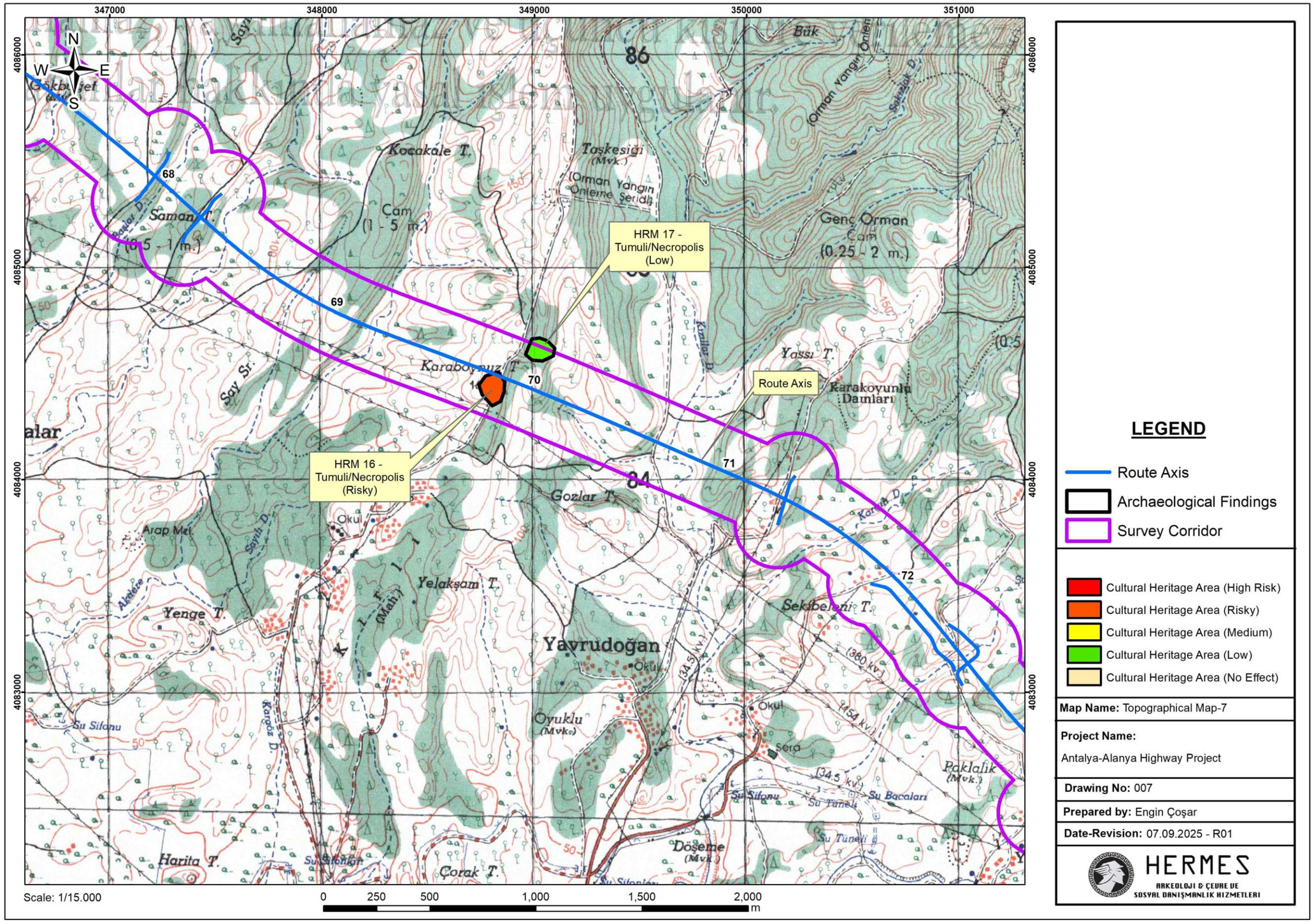
Project Name:
Antalya-Alanya Highway Project

Drawing No: 006

Prepared by: Engin Çoşar

Date-Revision: 07.09.2025 - R01

HERMES
ARKEOLOJİ & ÇEVRE VE
SOSYAL DANIŞMANLIK HİZMETLERİ



LEGEND

- Route Axis
- Archaeological Findings
- Survey Corridor

- Cultural Heritage Area (High Risk)
- Cultural Heritage Area (Risky)
- Cultural Heritage Area (Medium)
- Cultural Heritage Area (Low)
- Cultural Heritage Area (No Effect)

Map Name: Topographical Map-7

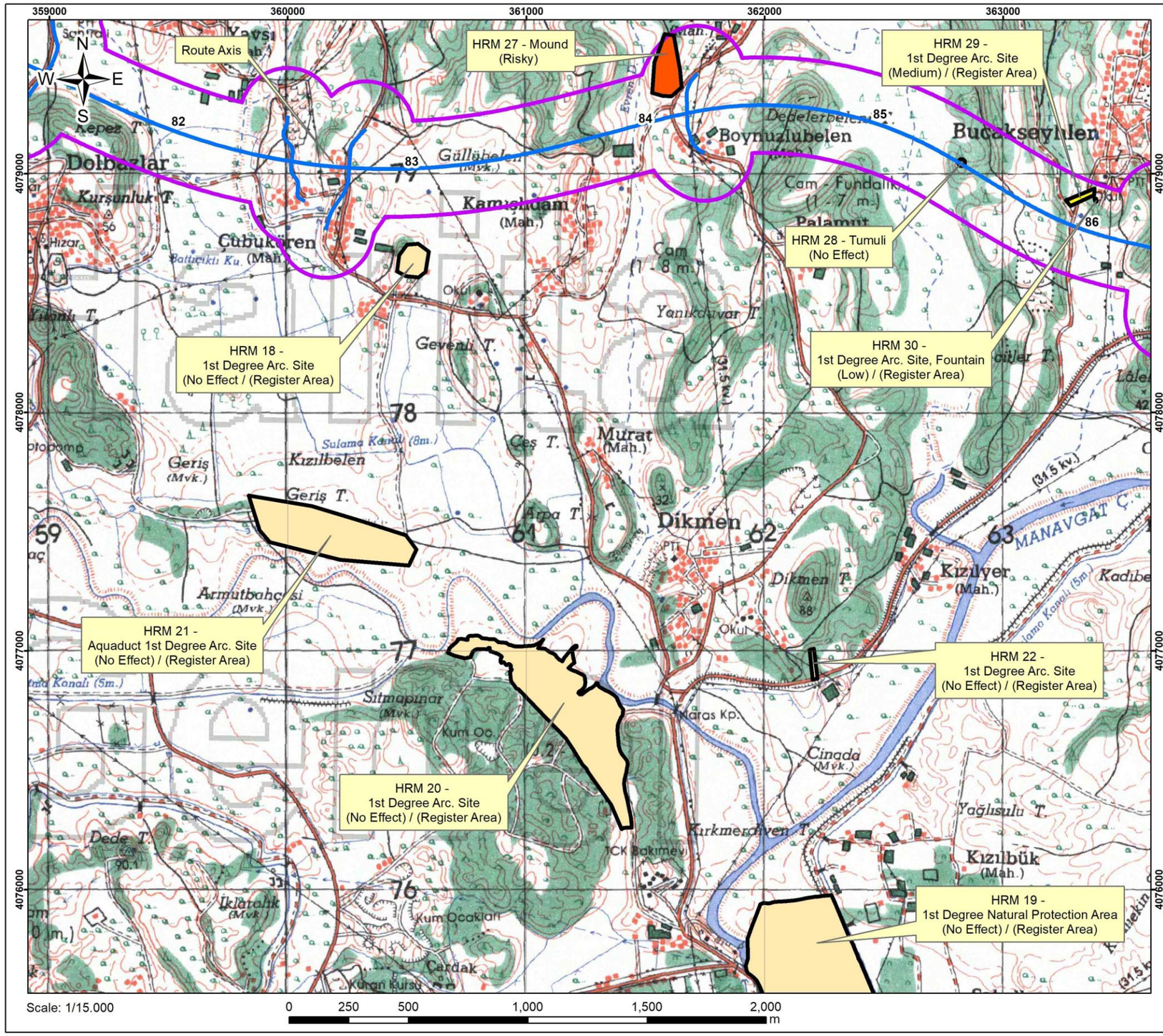
Project Name:
Antalya-Alanya Highway Project

Drawing No: 007

Prepared by: Engin Çoşar

Date-Revision: 07.09.2025 - R01

HERMES
ARKEOLOJİ & ÇEVRE VE
SOSYAL DANIŞMANLIK HİZMETLERİ



LEGEND

- Route Axis
- Archaeological Findings
- Survey Corridor

- Cultural Heritage Area (High Risk)
- Cultural Heritage Area (Risky)
- Cultural Heritage Area (Medium)
- Cultural Heritage Area (Low)
- Cultural Heritage Area (No Effect)

Map Name: Topographical Map-8

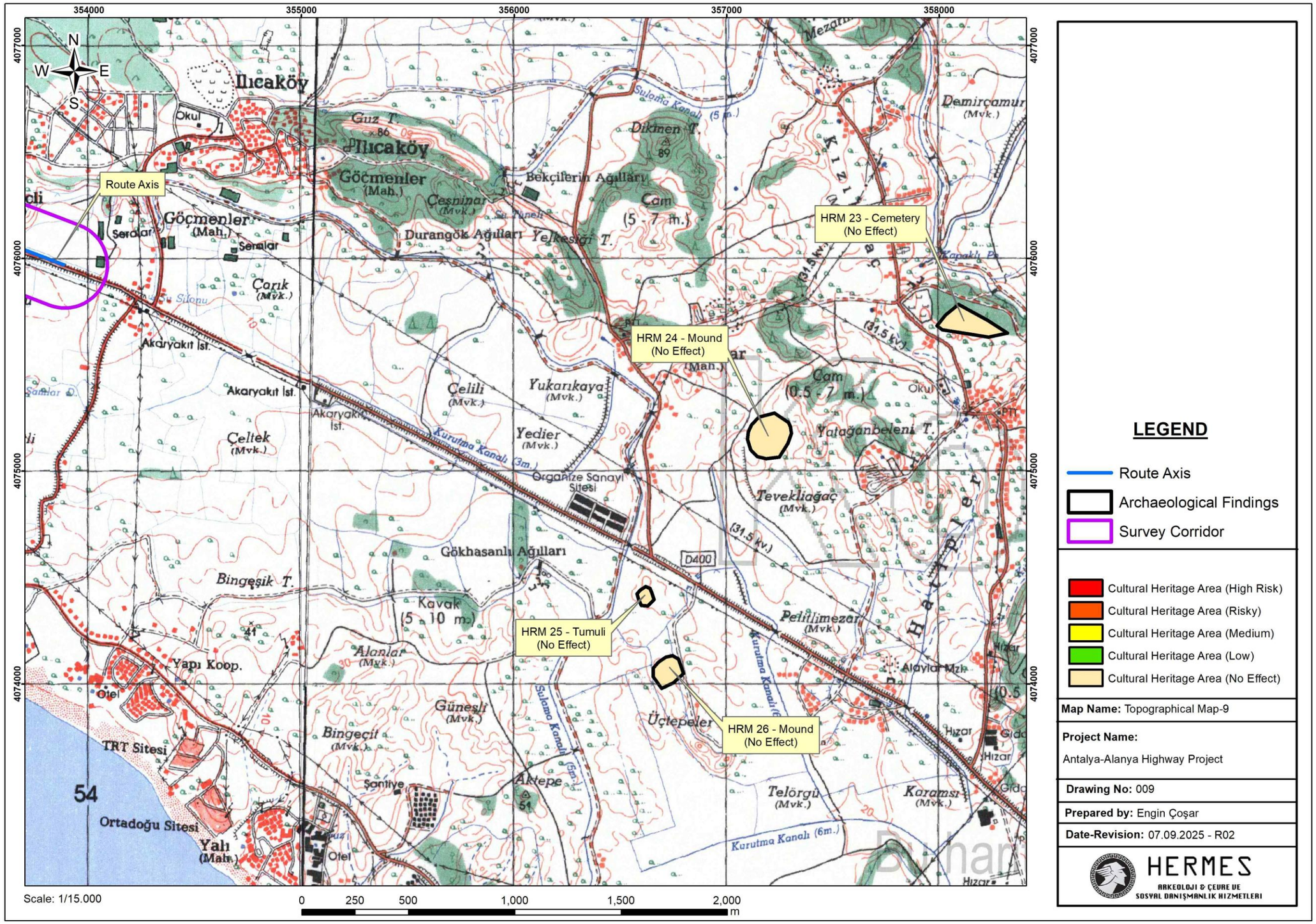
Project Name:
Antalya-Alanya Highway Project

Drawing No: 008

Prepared by: Engin Çoşar

Date-Revision: 07.09.2025 - R02

HERMES
ARKEOLOJİ & ÇEVRE VE
SOSYAL DANIŞMANLIK HİZMETLERİ



LEGEND

- Route Axis
- Archaeological Findings
- Survey Corridor

- Cultural Heritage Area (High Risk)
- Cultural Heritage Area (Risky)
- Cultural Heritage Area (Medium)
- Cultural Heritage Area (Low)
- Cultural Heritage Area (No Effect)

Map Name: Topographical Map-9

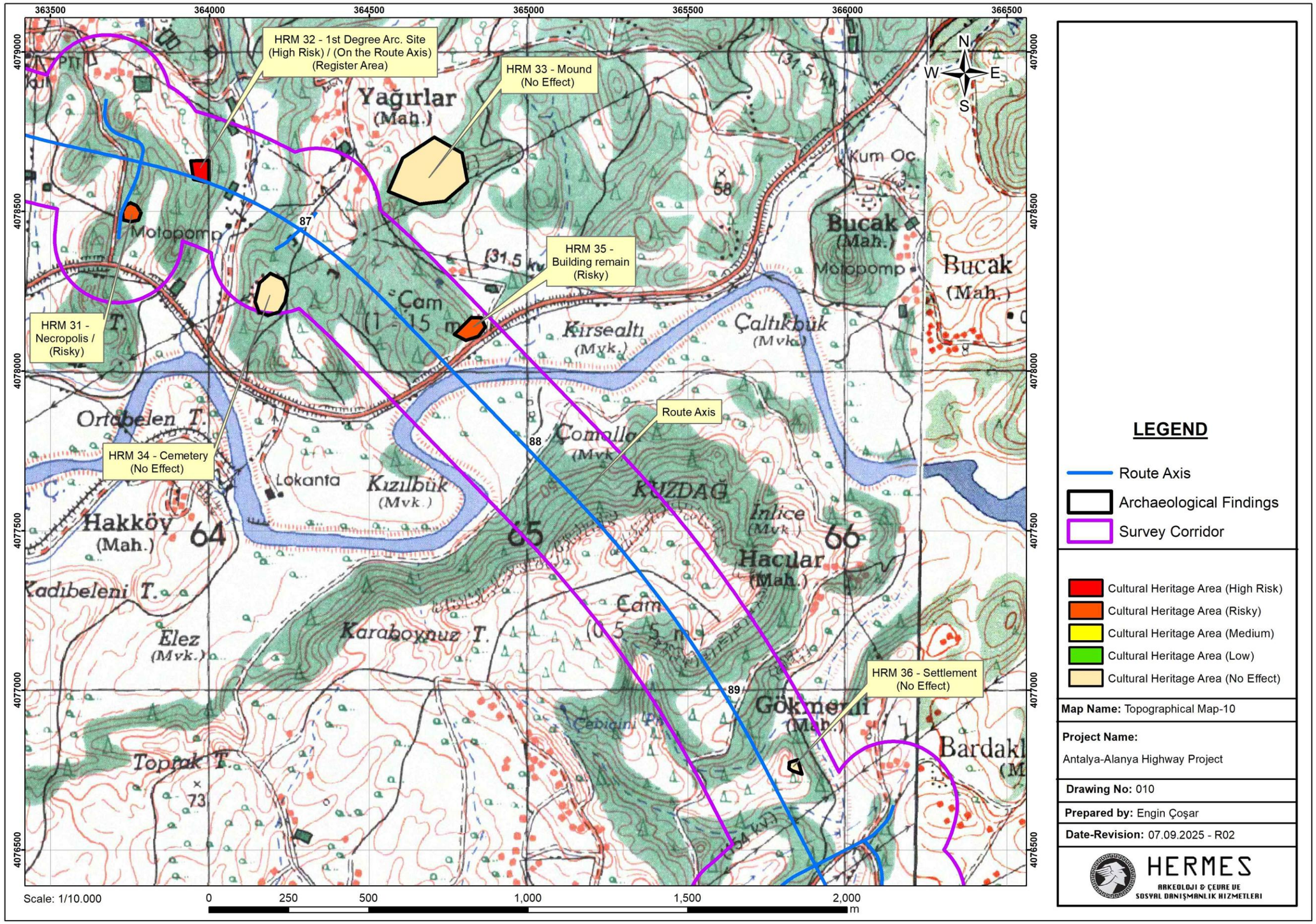
Project Name:
Antalya-Alanya Highway Project

Drawing No: 009

Prepared by: Engin Çoşar

Date-Revision: 07.09.2025 - R02

HERMES
ARKEOLOJİ & ÇEVRE VE
SOSYAL DANIŞMANLIK HİZMETLERİ



LEGEND

- Route Axis
- Archaeological Findings
- Survey Corridor

- Cultural Heritage Area (High Risk)
- Cultural Heritage Area (Risky)
- Cultural Heritage Area (Medium)
- Cultural Heritage Area (Low)
- Cultural Heritage Area (No Effect)

Map Name: Topographical Map-10

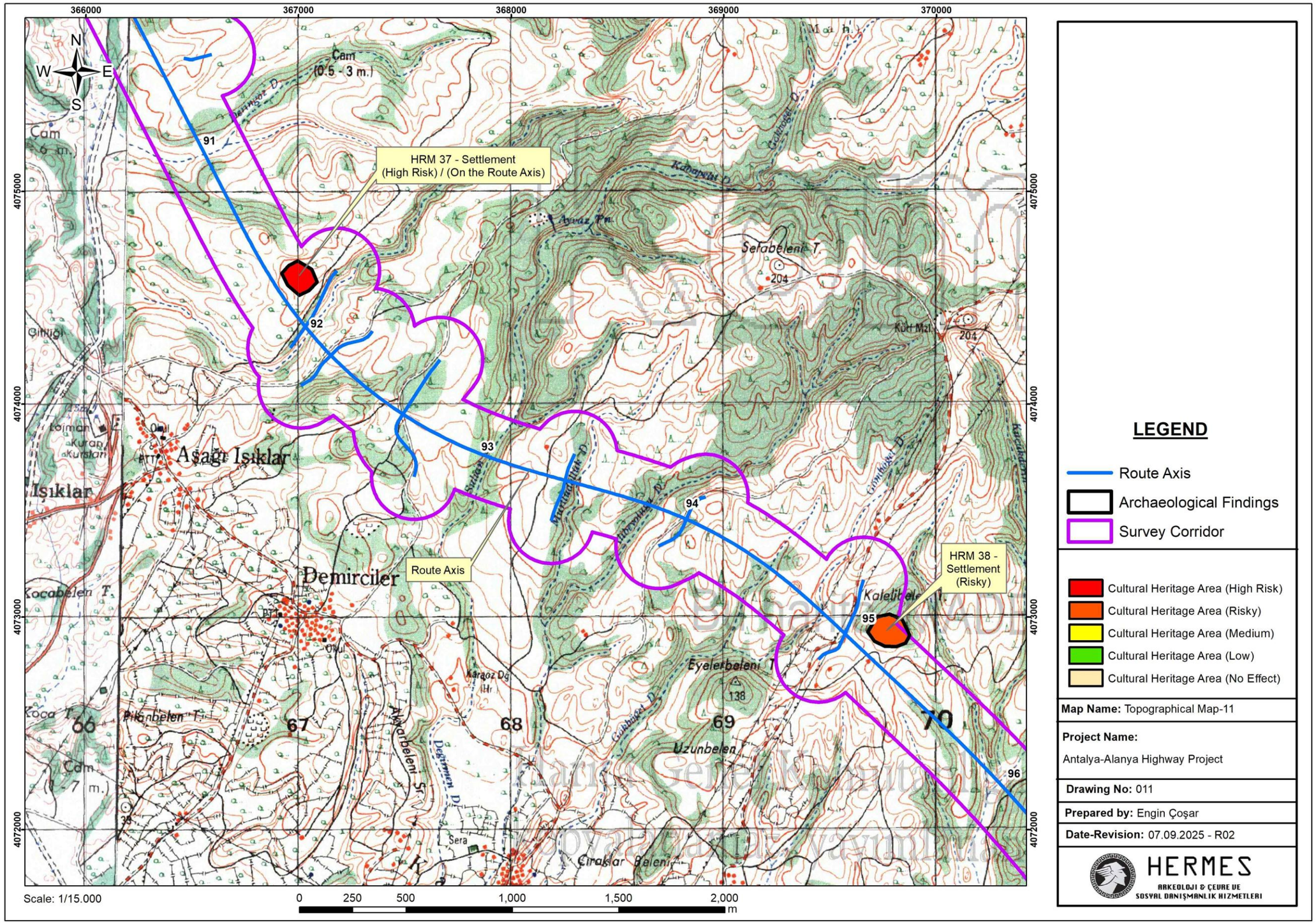
Project Name:
Antalya-Alanya Highway Project

Drawing No: 010

Prepared by: Engin Çoşar

Date-Revision: 07.09.2025 - R02

HERMES
ARKEOLOJİ & ÇEVRE VE
SOSYAL DANIŞMANLIK HİZMETLERİ



LEGEND

- Route Axis
- Archaeological Findings
- Survey Corridor

- Cultural Heritage Area (High Risk)
- Cultural Heritage Area (Risky)
- Cultural Heritage Area (Medium)
- Cultural Heritage Area (Low)
- Cultural Heritage Area (No Effect)

Map Name: Topographical Map-11

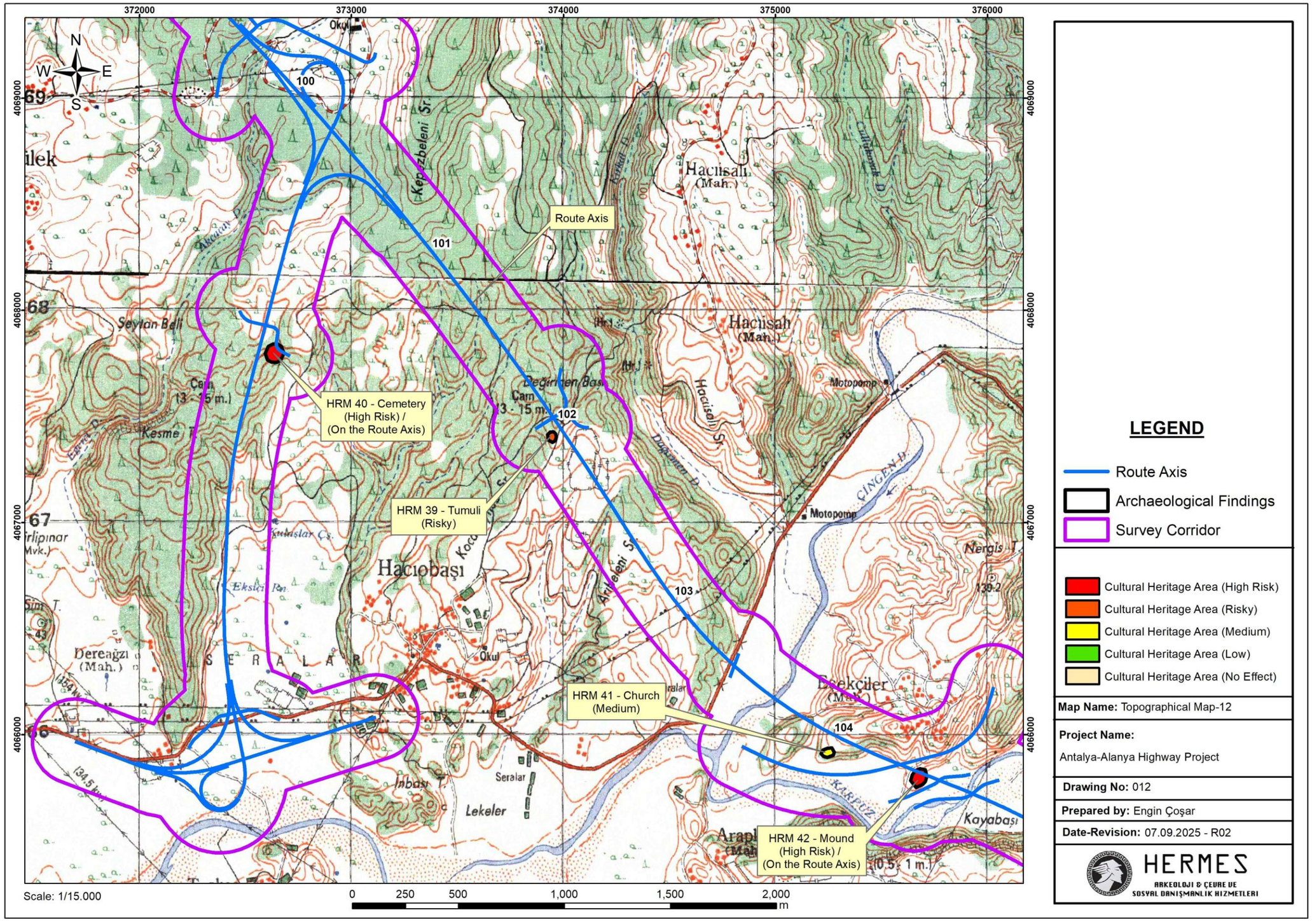
Project Name:
Antalya-Alanya Highway Project

Drawing No: 011

Prepared by: Engin Çoşar

Date-Revision: 07.09.2025 - R02

HERMES
ARKEOLOJİ & ÇEVRE VE
SOSYAL DANIŞMANLIK HİZMETLERİ



LEGEND

- Route Axis
- Archaeological Findings
- Survey Corridor

- Cultural Heritage Area (High Risk)
- Cultural Heritage Area (Risky)
- Cultural Heritage Area (Medium)
- Cultural Heritage Area (Low)
- Cultural Heritage Area (No Effect)

Map Name: Topographical Map-12

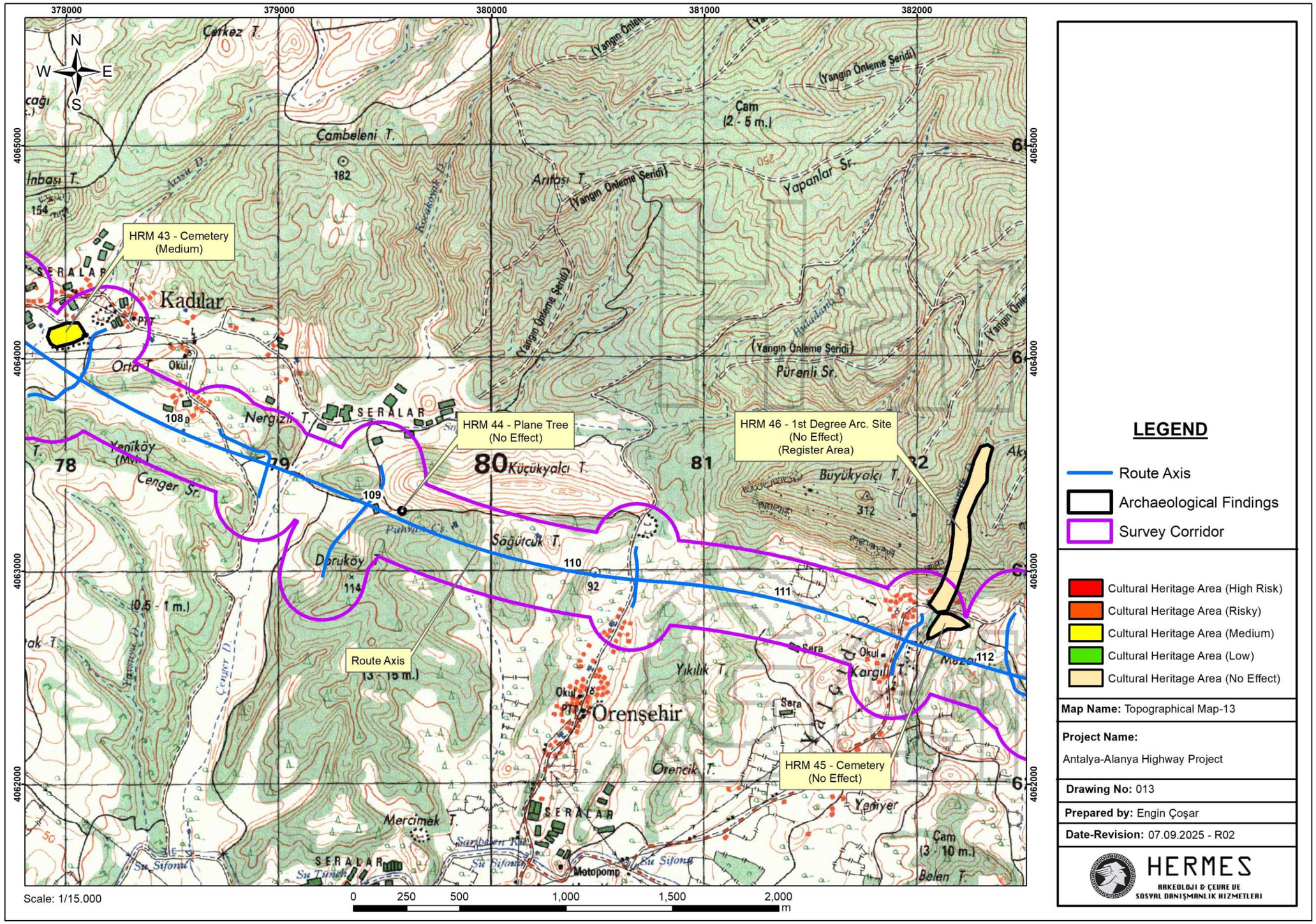
Project Name:
Antalya-Alanya Highway Project

Drawing No: 012

Prepared by: Engin Çoşar

Date-Revision: 07.09.2025 - R02

HERMES
ARKEOLOJİ & ÇEVRE VE
SOSYAL DANIŞMANLIK HİZMETLERİ



LEGEND

- Route Axis
- Archaeological Findings
- Survey Corridor

- Cultural Heritage Area (High Risk)
- Cultural Heritage Area (Risky)
- Cultural Heritage Area (Medium)
- Cultural Heritage Area (Low)
- Cultural Heritage Area (No Effect)

Map Name: Topographical Map-13

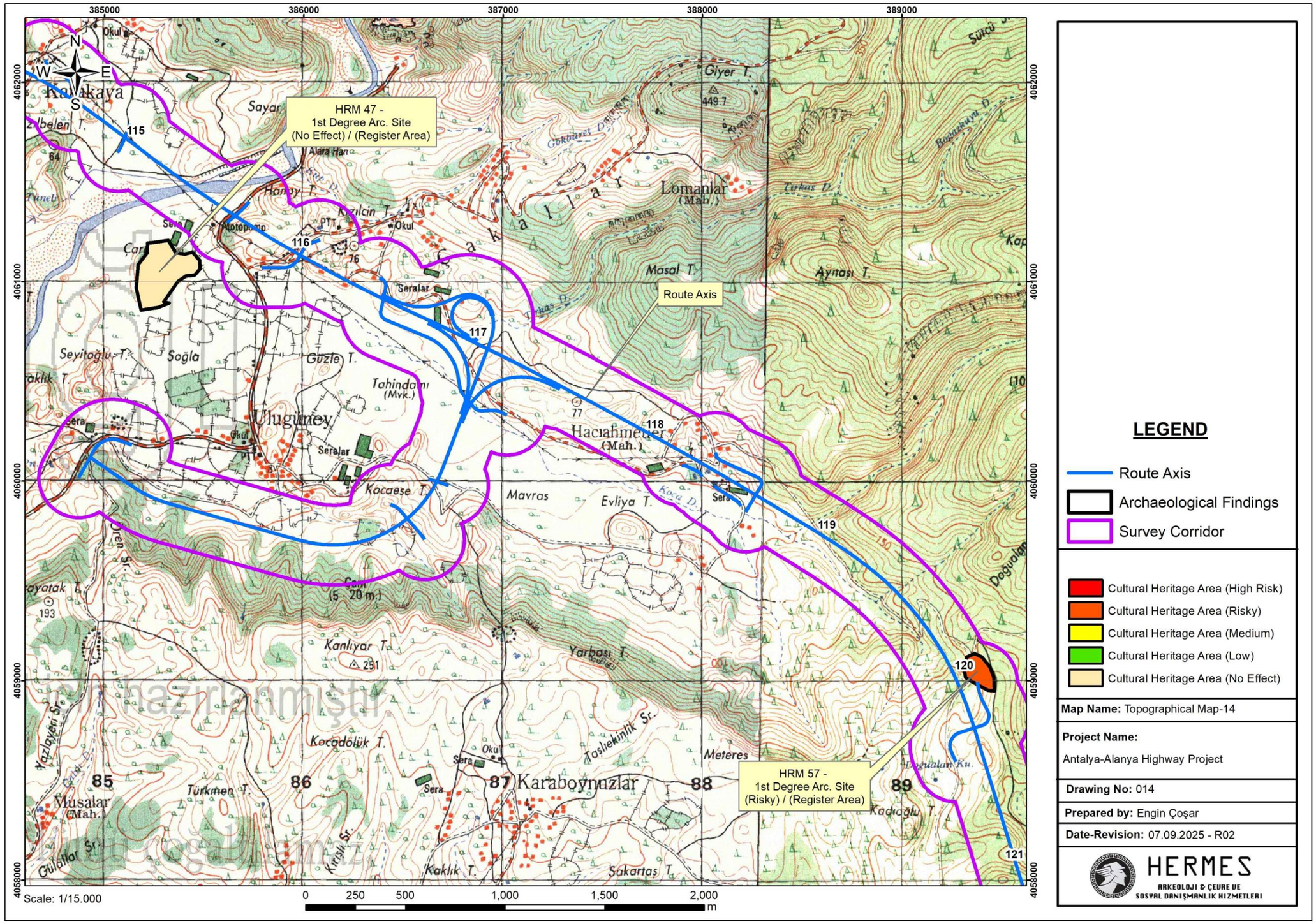
Project Name:
Antalya-Alanya Highway Project

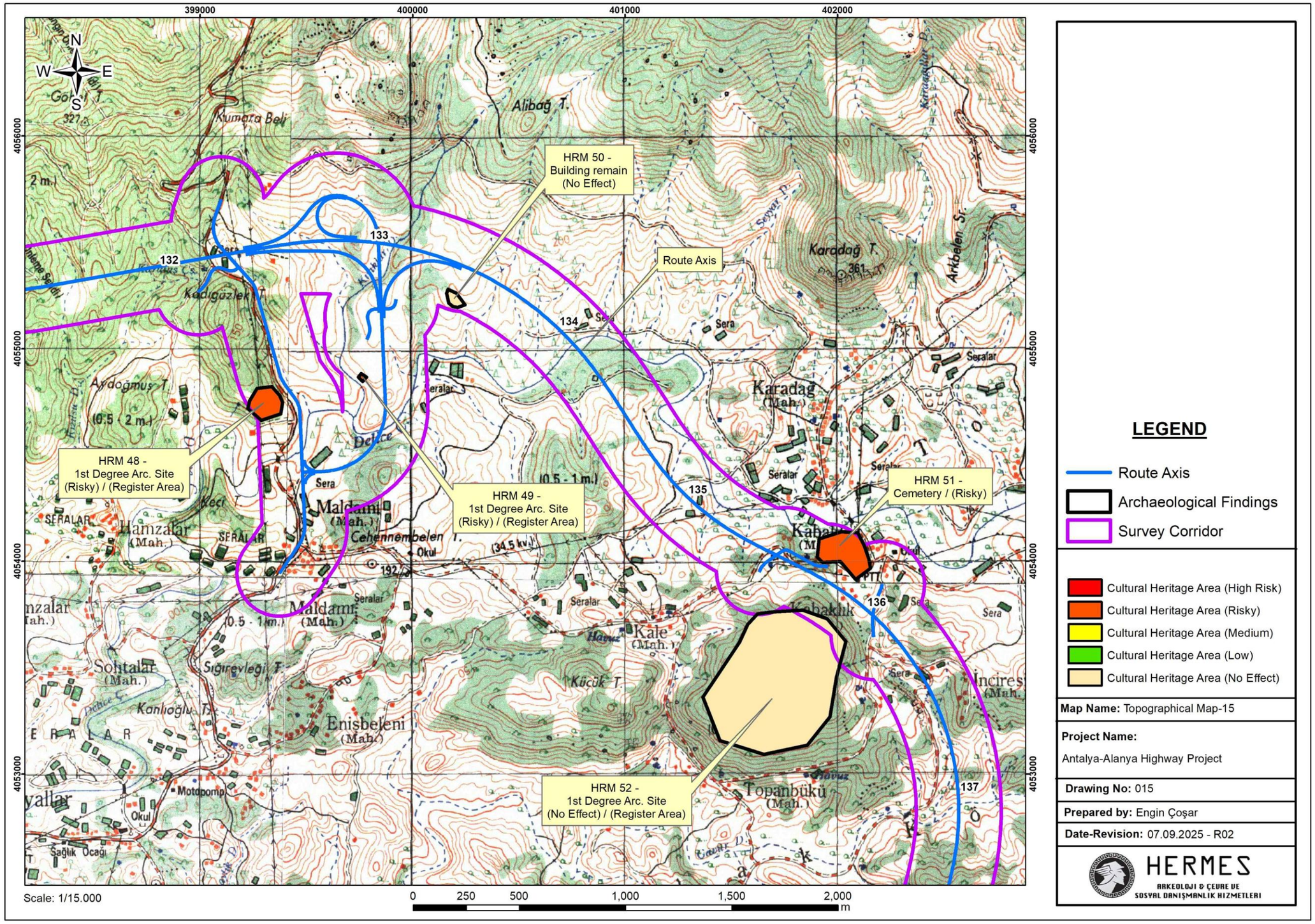
Drawing No: 013

Prepared by: Engin Çoşar

Date-Revision: 07.09.2025 - R02

HERMES
ARKEOLOJİ & ÇEVRE VE
SOSYAL DANIŞMANLIK HİZMETLERİ


HRM 47 -
1st Degree Arc. Site
(No Effect) / (Register Area)
Route Axis
HRM 57 -
1st Degree Arc. Site
(Risky) / (Register Area)
385000
386000
387000
388000
389000
4062000
4061000
4060000
4059000
4058000
Scale: 1/15.000
0 250 500 1,000 1,500 2,000 m
LEGEND
Route Axis
Archaeological Findings
Survey Corridor
Cultural Heritage Area (High Risk)
Cultural Heritage Area (Risky)
Cultural Heritage Area (Medium)
Cultural Heritage Area (Low)
Cultural Heritage Area (No Effect)
Map Name: Topographical Map-14
Project Name:
Antalya-Alanya Highway Project
Drawing No: 014
Prepared by: Engin Çoşar
Date-Revision: 07.09.2025 - R02
HERMES
ARKEOLOJİ & ÇEVRE VE
SOSYAL DANIŞMANLIK HİZMETLERİ



LEGEND

- Route Axis
- Archaeological Findings
- Survey Corridor

- Cultural Heritage Area (High Risk)
- Cultural Heritage Area (Risky)
- Cultural Heritage Area (Medium)
- Cultural Heritage Area (Low)
- Cultural Heritage Area (No Effect)

Map Name: Topographical Map-15

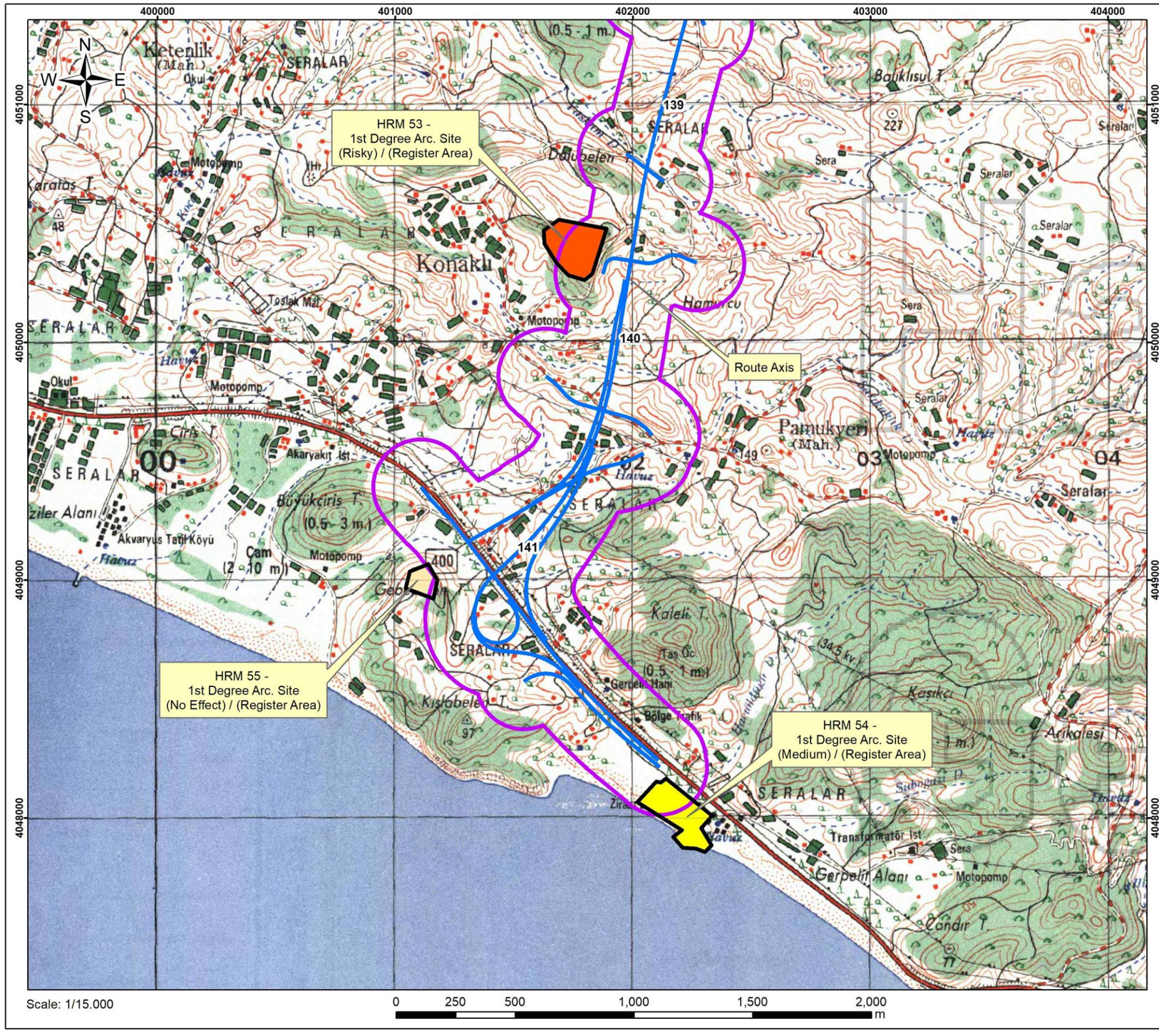
Project Name:
Antalya-Alanya Highway Project

Drawing No: 015

Prepared by: Engin Çoşar

Date-Revision: 07.09.2025 - R02

HERMES
ARKEOLOJİ & ÇEVRE VE
SOSYAL DANIŞMANLIK HİZMETLERİ



LEGEND

- Route Axis
- Archaeological Findings
- Survey Corridor

- Cultural Heritage Area (High Risk)
- Cultural Heritage Area (Risky)
- Cultural Heritage Area (Medium)
- Cultural Heritage Area (Low)
- Cultural Heritage Area (No Effect)

Map Name: Topographical Map-16

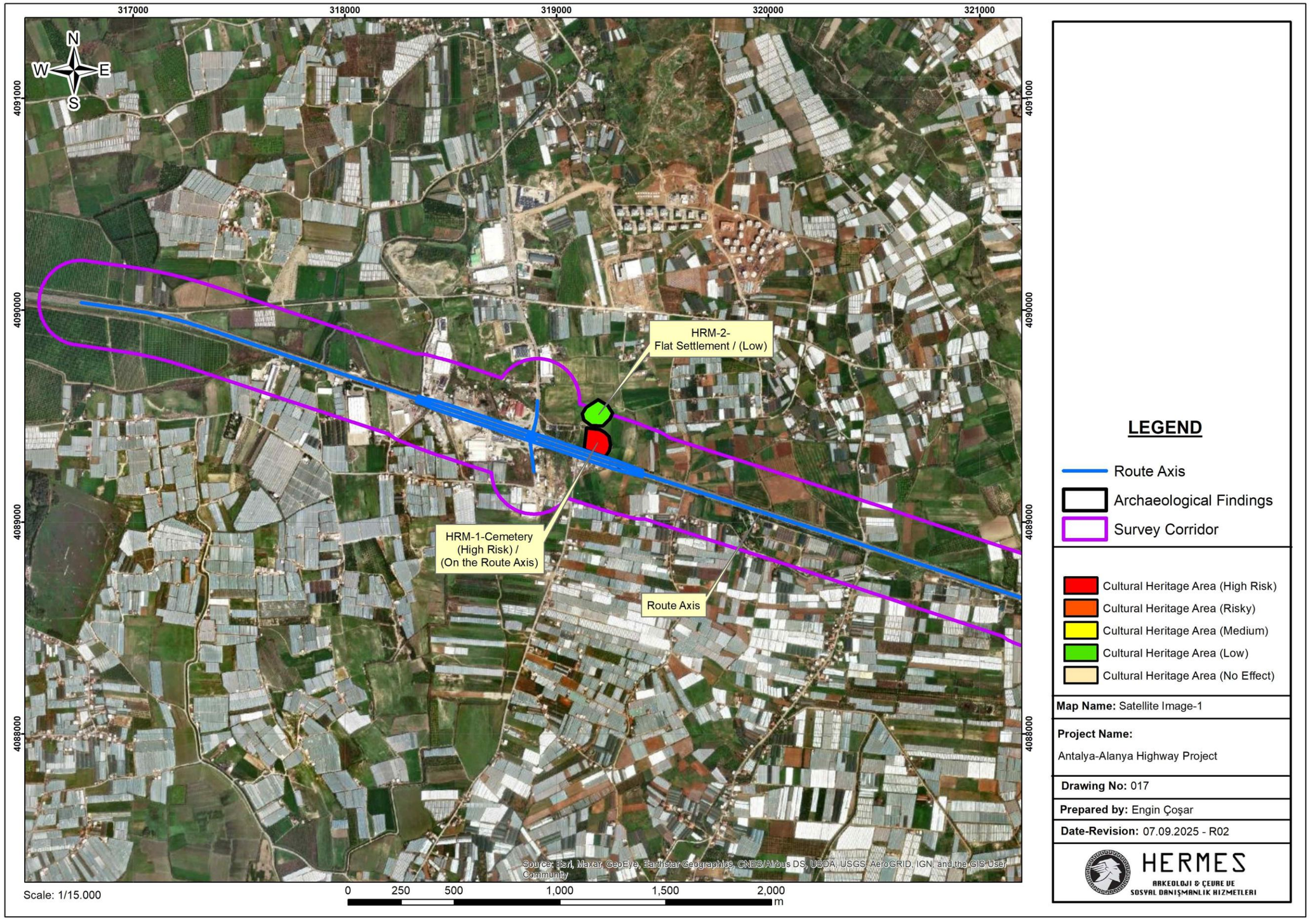
Project Name:
Antalya-Alanya Highway Project

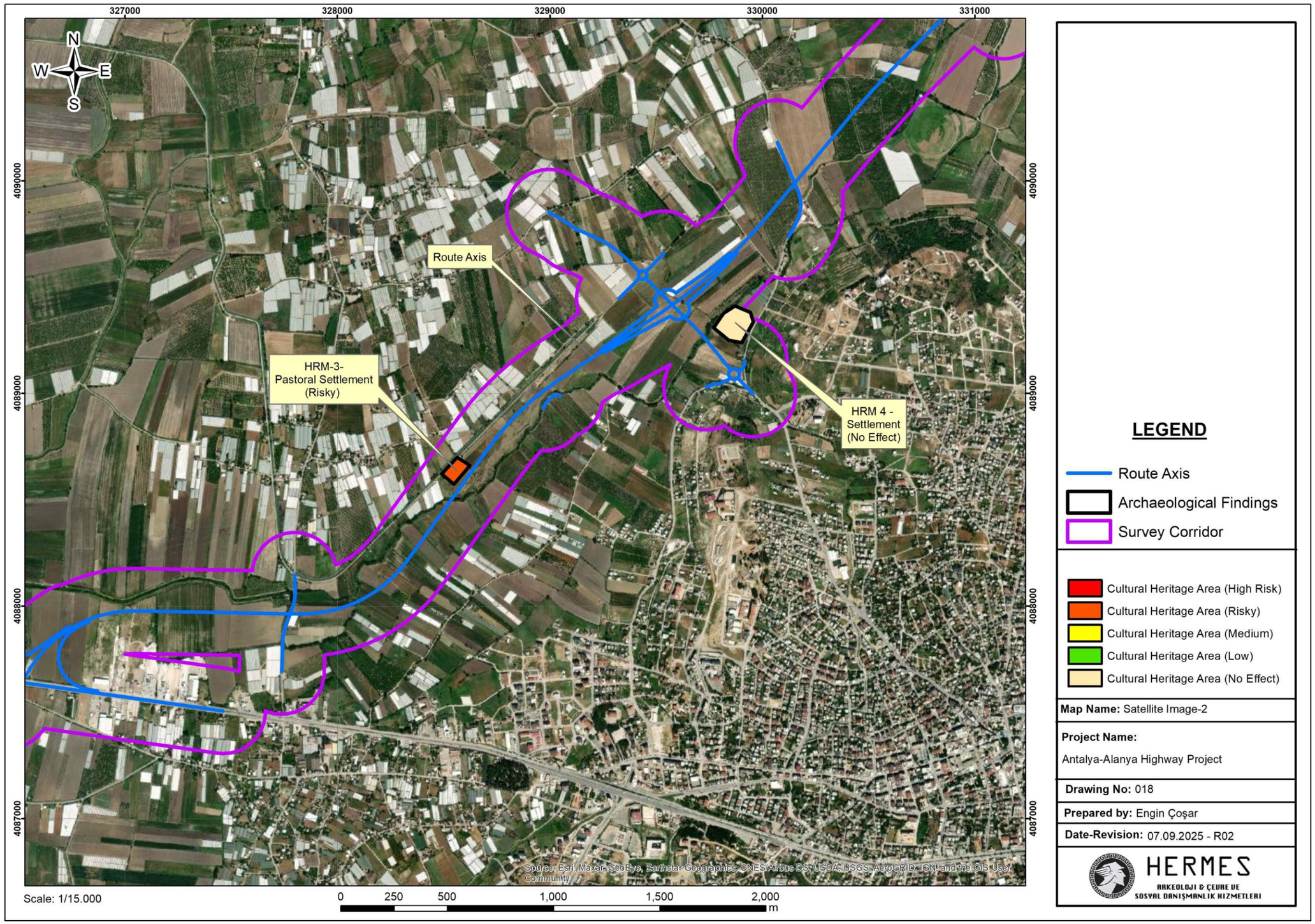
Drawing No: 016

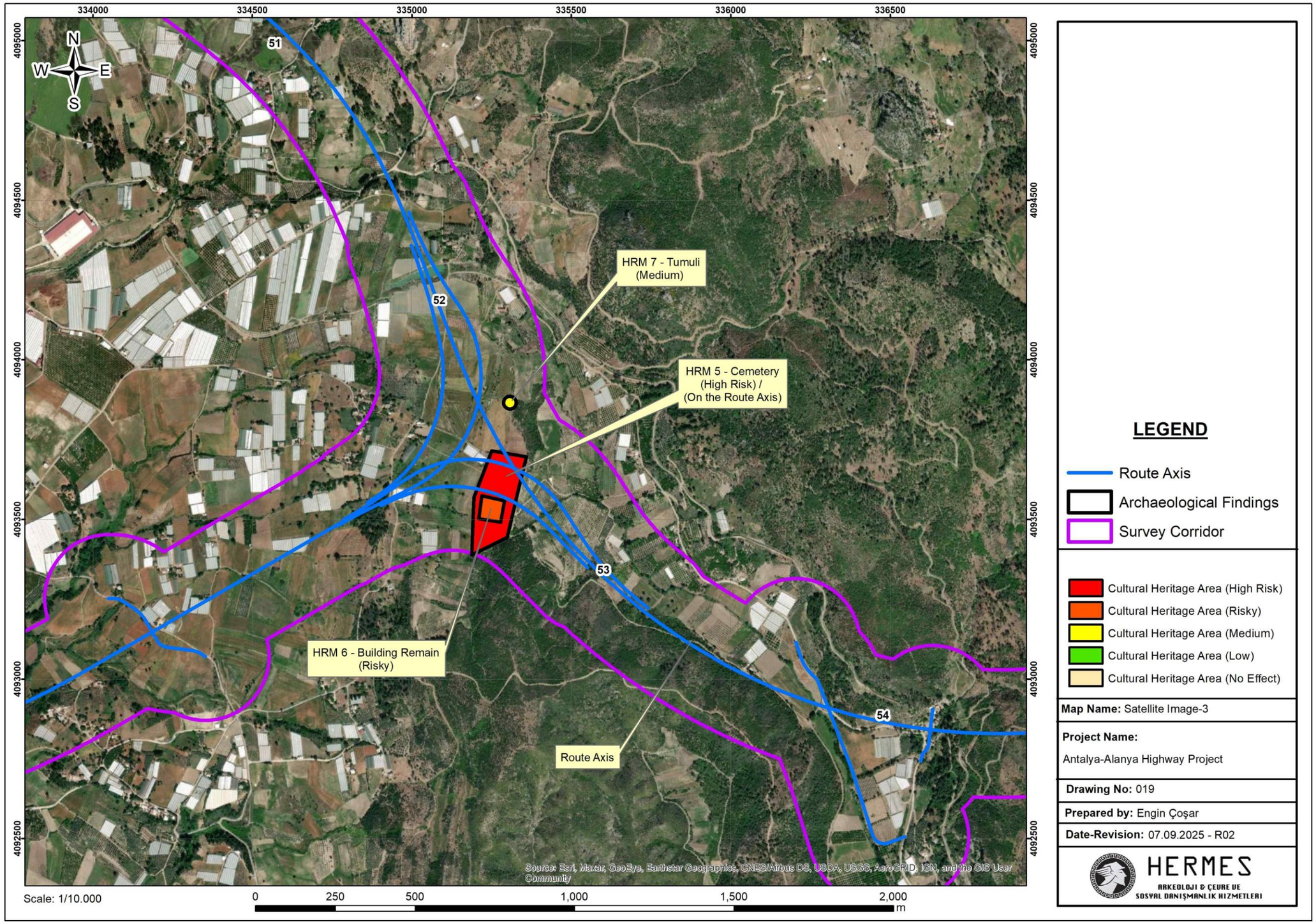
Prepared by: Engin Çoşar

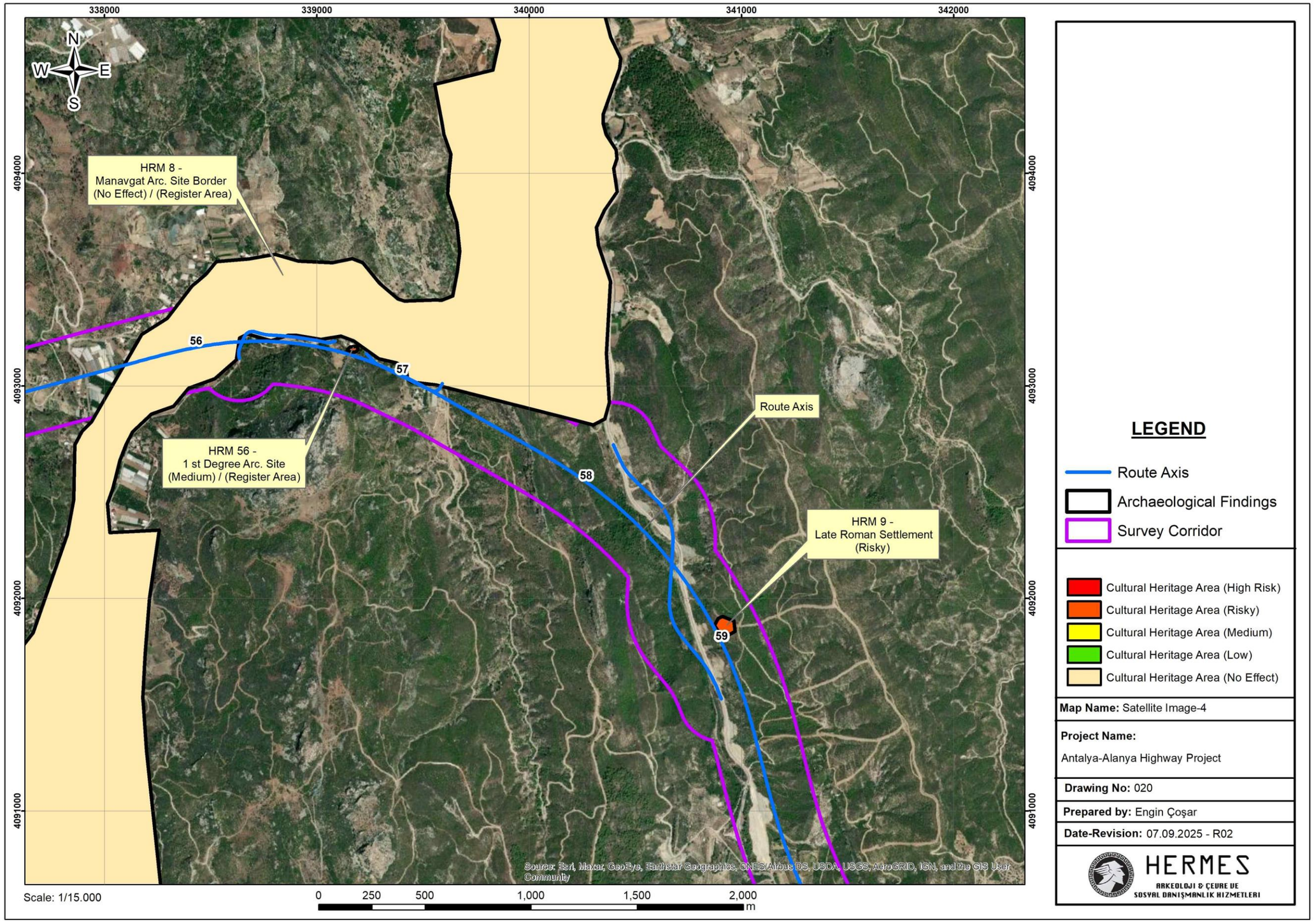
Date-Revision: 07.09.2025 - R02

HERMES
ARKEOLOJİ & ÇEVRE VE
SOSYAL DANIŞMANLIK HİZMETLERİ


317000
318000
319000
320000
321000
4091000
4090000
4089000
4088000
N
W
E
S
HRM-2-
Flat Settlement / (Low)
HRM-1-Cemetery
(High Risk) /
(On the Route Axis)
Route Axis
Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
Scale: 1/15.000
0
250
500
1,000
1,500
2,000
m
LEGEND
Route Axis
Archaeological Findings
Survey Corridor
Cultural Heritage Area (High Risk)
Cultural Heritage Area (Risky)
Cultural Heritage Area (Medium)
Cultural Heritage Area (Low)
Cultural Heritage Area (No Effect)
Map Name: Satellite Image-1
Project Name:
Antalya-Alanya Highway Project
Drawing No: 017
Prepared by: Engin Çoşar
Date-Revision: 07.09.2025 - R02
HERMES
ARKEOLOJİ & ÇEVRE VE
SOSYAL DANIŞMANLIK HİZMETLERİ


327000
328000
329000
330000
331000
4090000
4089000
4088000
4087000
N
W
E
S
Route Axis
HRM-3-
Pastoral Settlement
(Risky)
HRM 4 -
Settlement
(No Effect)
Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
Scale: 1/15.000
0
250
500
1,000
1,500
2,000
m
LEGEND
Route Axis
Archaeological Findings
Survey Corridor
Cultural Heritage Area (High Risk)
Cultural Heritage Area (Risky)
Cultural Heritage Area (Medium)
Cultural Heritage Area (Low)
Cultural Heritage Area (No Effect)
Map Name: Satellite Image-2
Project Name:
Antalya-Alanya Highway Project
Drawing No: 018
Prepared by: Engin Çoşar
Date-Revision: 07.09.2025 - R02
HERMES
ARKEOLOJİ & ÇEVRE VE
SOSYAL DANIŞMANLIK HİZMETLERİ


334000
334500
335000
335500
336000
336500
4095000
4094500
4094000
4093500
4093000
4092500
N
W
E
S
51
52
53
54
HRM 7 - Tumuli
(Medium)
HRM 5 - Cemetery
(High Risk) /
(On the Route Axis)
HRM 6 - Building Remain
(Risky)
Route Axis
Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
Scale: 1/10.000
0
250
500
1,000
1,500
2,000
m
LEGEND
Route Axis
Archaeological Findings
Survey Corridor
Cultural Heritage Area (High Risk)
Cultural Heritage Area (Risky)
Cultural Heritage Area (Medium)
Cultural Heritage Area (Low)
Cultural Heritage Area (No Effect)
Map Name: Satellite Image-3
Project Name:
Antalya-Alanya Highway Project
Drawing No: 019
Prepared by: Engin Çoşar
Date-Revision: 07.09.2025 - R02
HERMES
ARKEOLOJİ & ÇEVRE VE
SOSYAL DANIŞMANLIK HİZMETLERİ



LEGEND

- Route Axis
- Archaeological Findings
- Survey Corridor

- Cultural Heritage Area (High Risk)
- Cultural Heritage Area (Risky)
- Cultural Heritage Area (Medium)
- Cultural Heritage Area (Low)
- Cultural Heritage Area (No Effect)

Map Name: Satellite Image-4

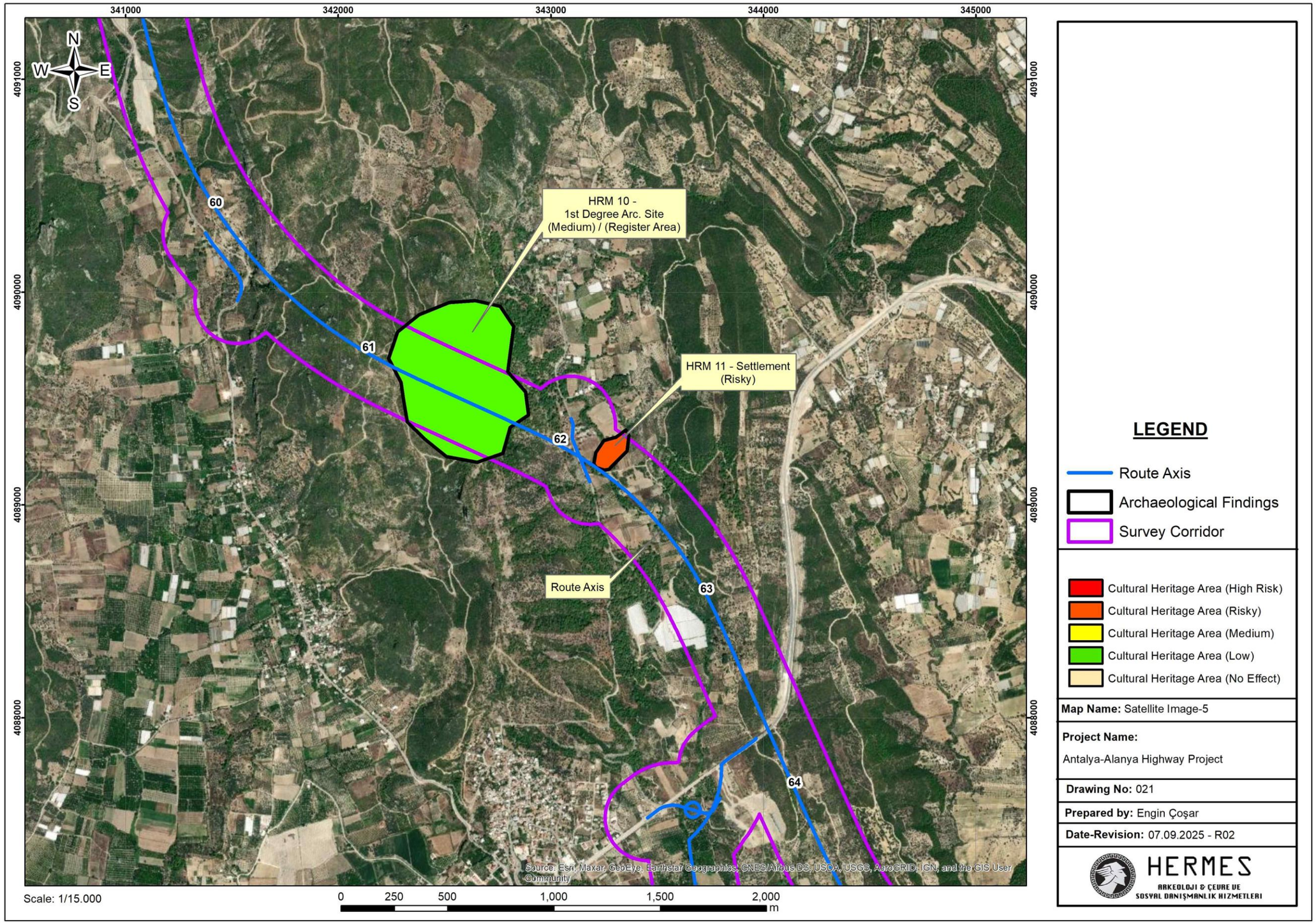
Project Name:
Antalya-Alanya Highway Project

Drawing No: 020

Prepared by: Engin Çoşar

Date-Revision: 07.09.2025 - R02

HERMES
ARKEOLOJİ & ÇEVRE VE
SOSYAL DANIŞMANLIK HİZMETLERİ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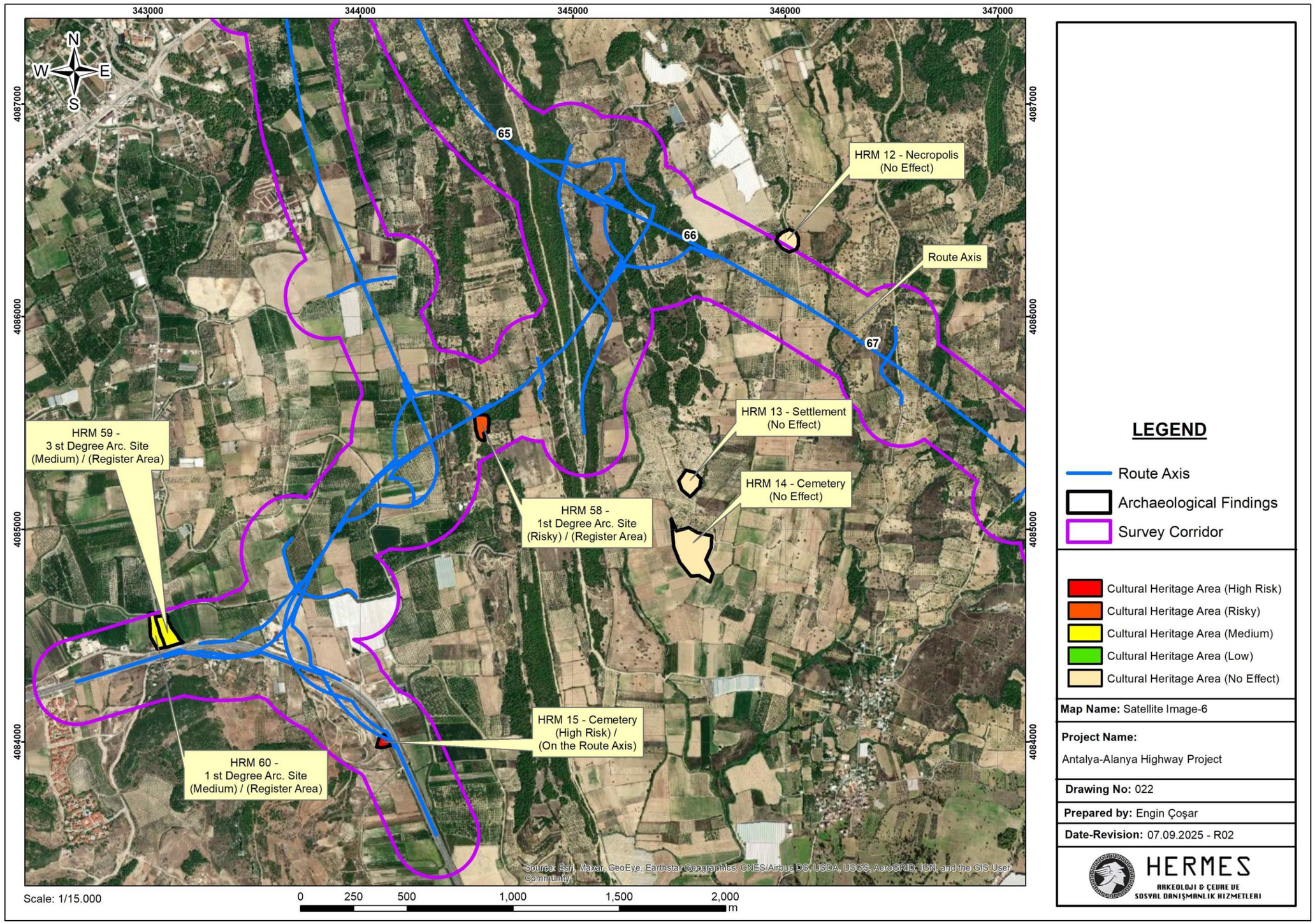
343000
344000
345000
4091000
4090000
4089000
4088000
N
W
E
S
60
61
62
63
64
HRM 10 -
1st Degree Arc. Site
(Medium) / (Register Area)
HRM 11 - Settlement
(Risky)
Route Axis
Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
Scale: 1/15.000
0 250 500 1,000 1,500 2,000
m
LEGEND
Route Axis
Archaeological Findings
Survey Corridor
Cultural Heritage Area (High Risk)
Cultural Heritage Area (Risky)
Cultural Heritage Area (Medium)
Cultural Heritage Area (Low)
Cultural Heritage Area (No Effect)
Map Name: Satellite Image-5
Project Name:
Antalya-Alanya Highway Project
Drawing No: 021
Prepared by: Engin Çoşar
Date-Revision: 07.09.2025 - R02
HERMES
ARKEOLOJİ & ÇEVRE VE
SOSYAL DANIŞMANLIK HİZMETLERİ


343000
344000
345000
346000
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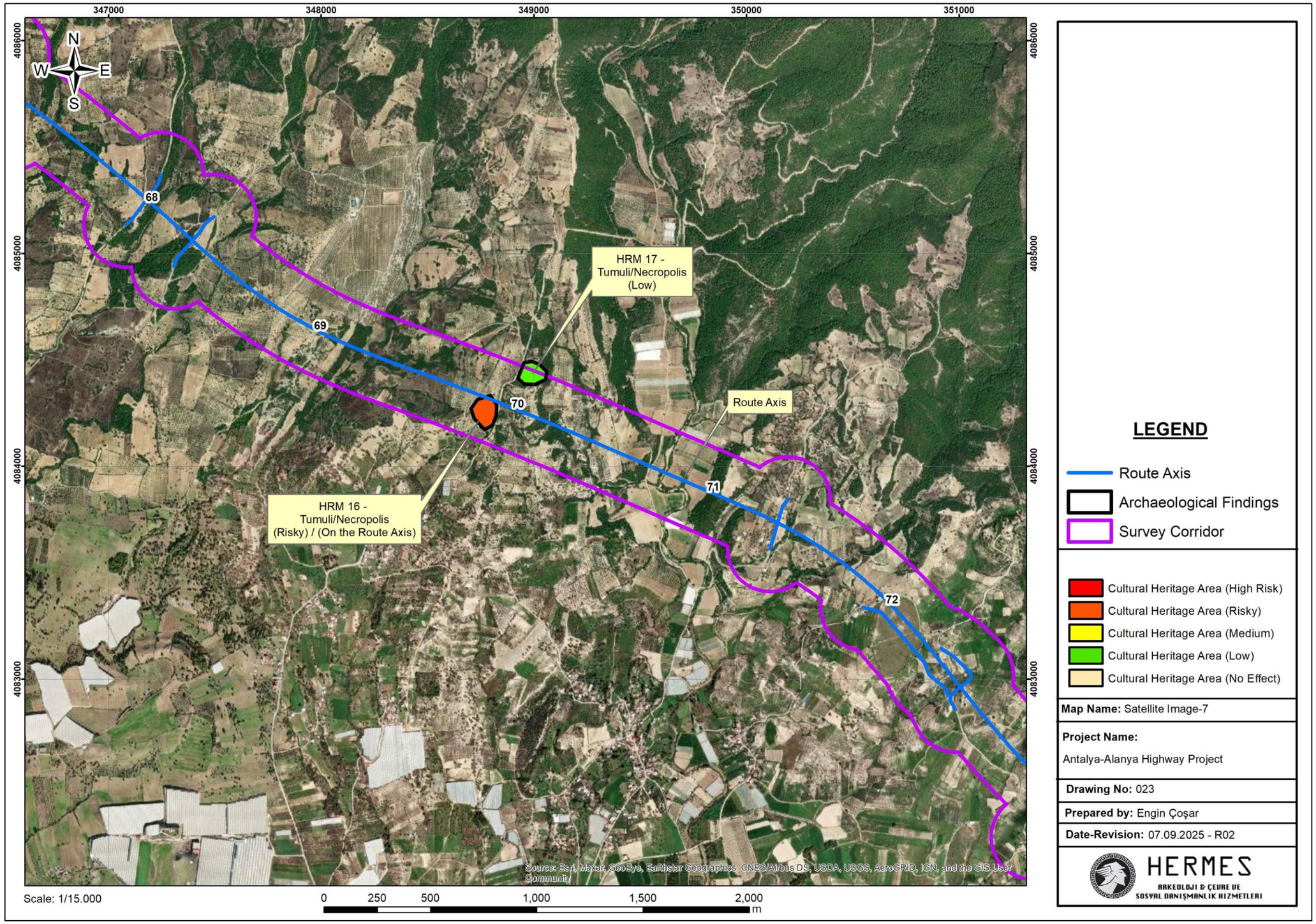
4087000
4086000
4085000
4084000
N
W
E
S
65
66
67
HRM 12 - Necropolis
(No Effect)
Route Axis
HRM 13 - Settlement
(No Effect)
HRM 14 - Cemetery
(No Effect)
HRM 59 -
3 st Degree Arc. Site
(Medium) / (Register Area)
HRM 58 -
1st Degree Arc. Site
(Risky) / (Register Area)
HRM 15 - Cemetery
(High Risk) /
(On the Route Axis)
HRM 60 -
1 st Degree Arc. Site
(Medium) / (Register Area)
Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
Scale: 1/15.000
0 250 500 1,000 1,500 2,000
m
LEGEND
Route Axis
Archaeological Findings
Survey Corridor
Cultural Heritage Area (High Risk)
Cultural Heritage Area (Risky)
Cultural Heritage Area (Medium)
Cultural Heritage Area (Low)
Cultural Heritage Area (No Effect)
Map Name: Satellite Image-6
Project Name:
Antalya-Alanya Highway Project
Drawing No: 022
Prepared by: Engin Çoşar
Date-Revision: 07.09.2025 - R02
HERMES
ARKEOLOJİ & ÇEVRE VE
SOSYAL DANIŞMANLIK HİZMETLERİ


347000
348000
349000
350000
351000
4086000
4085000
4084000
4083000
N
W
E
S
68
69
70
71
72
HRM 17 -
Tumuli/Necropolis
(Low)
Route Axis
HRM 16 -
Tumuli/Necropolis
(Risky) / (On the Route Axis)
Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
Scale: 1/15.000
0 250 500 1,000 1,500 2,000
m
LEGEND
Route Axis
Archaeological Findings
Survey Corridor
Cultural Heritage Area (High Risk)
Cultural Heritage Area (Risky)
Cultural Heritage Area (Medium)
Cultural Heritage Area (Low)
Cultural Heritage Area (No Effect)
Map Name: Satellite Image-7
Project Name:
Antalya-Alanya Highway Project
Drawing No: 023
Prepared by: Engin Çoşar
Date-Revision: 07.09.2025 - R02
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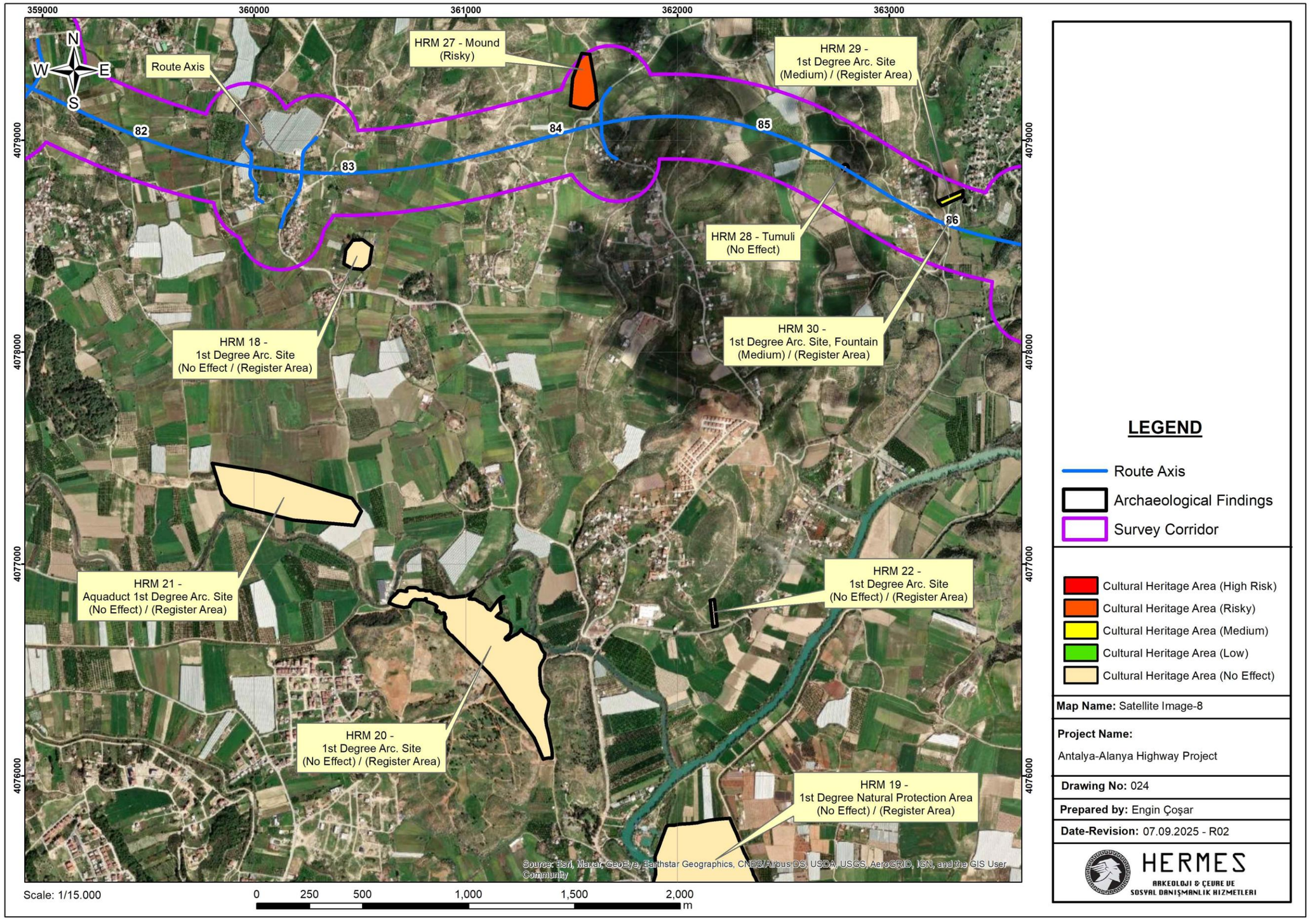
SOSYAL DANIŞMANLIK HİZMETLERİ



LEGEND

- Route Axis
- Archaeological Findings
- Survey Corridor

- Cultural Heritage Area (High Risk)
- Cultural Heritage Area (Risky)
- Cultural Heritage Area (Medium)
- Cultural Heritage Area (Low)
- Cultural Heritage Area (No Effect)

Map Name: Satellite Image-8

Project Name:
Antalya-Alanya Highway Project

Drawing No: 024

Prepared by: Engin Çoşar

Date-Revision: 07.09.2025 - R02

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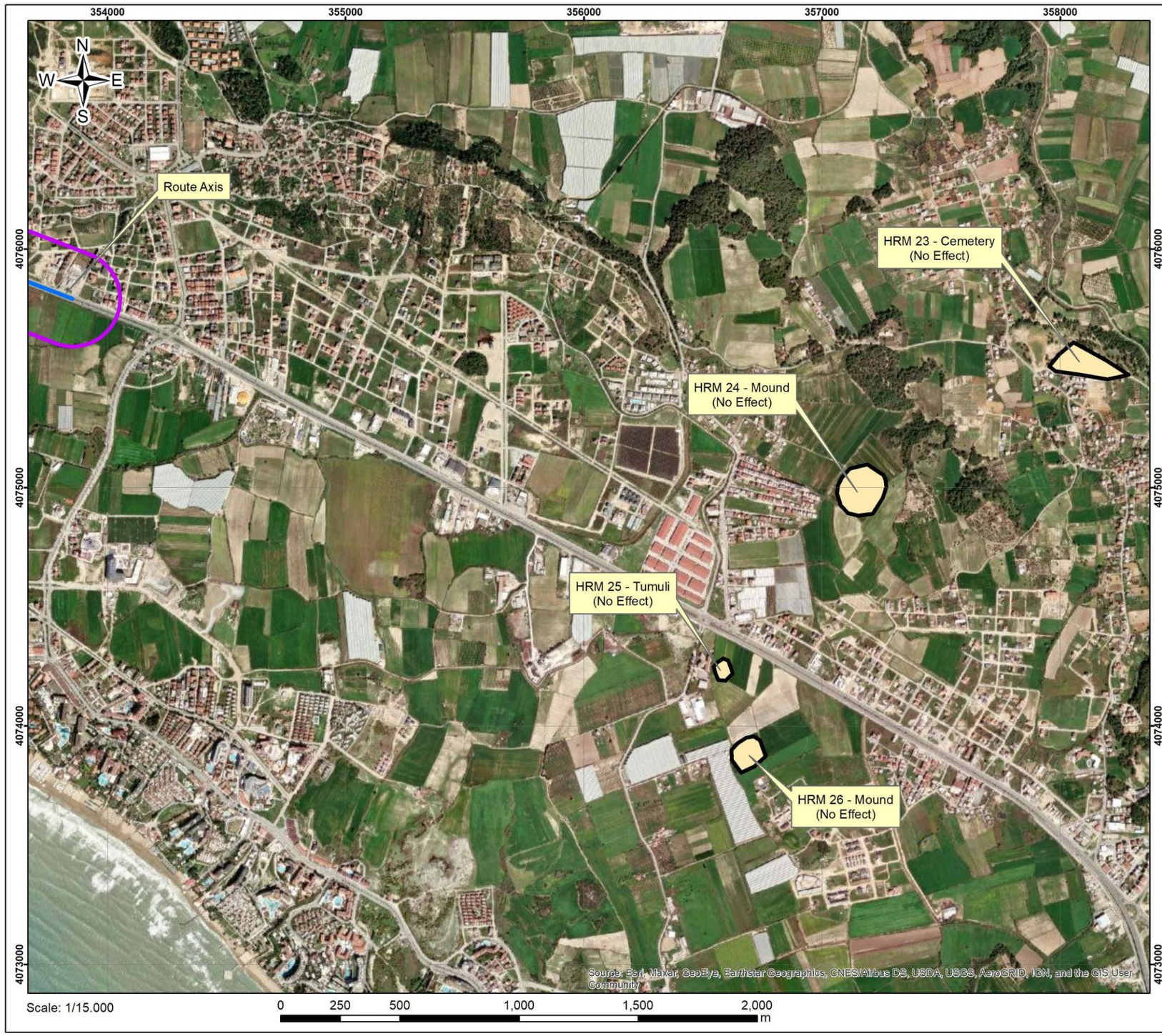


LEGEND

- Route Axis
- Archaeological Findings
- Survey Corridor

- Cultural Heritage Area (High Risk)
- Cultural Heritage Area (Risky)
- Cultural Heritage Area (Medium)
- Cultural Heritage Area (Low)
- Cultural Heritage Area (No Effect)

Map Name: Satellite Image-9

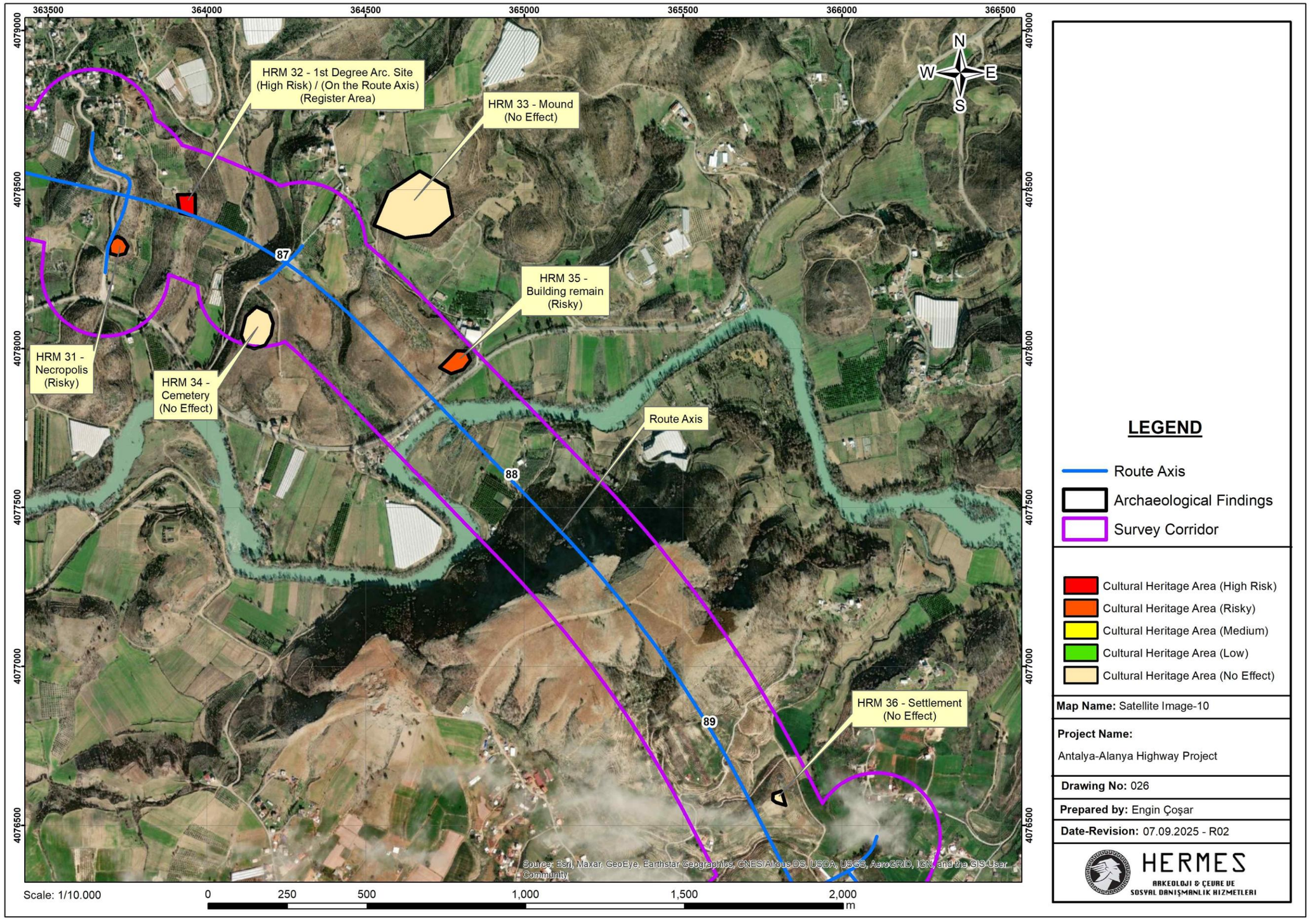
Project Name:
Antalya-Alanya Highway Project

Drawing No: 025

Prepared by: Engin Çoşar

Date-Revision: 07.09.2025 - R02

HERMES
ARKEOLOJİ & ÇEVRE VE
SOSYAL DANIŞMANLIK HİZMETLERİ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364000
364500
365000
365500
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366500
4079000
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4078000
4077500
4077000
4076500
N
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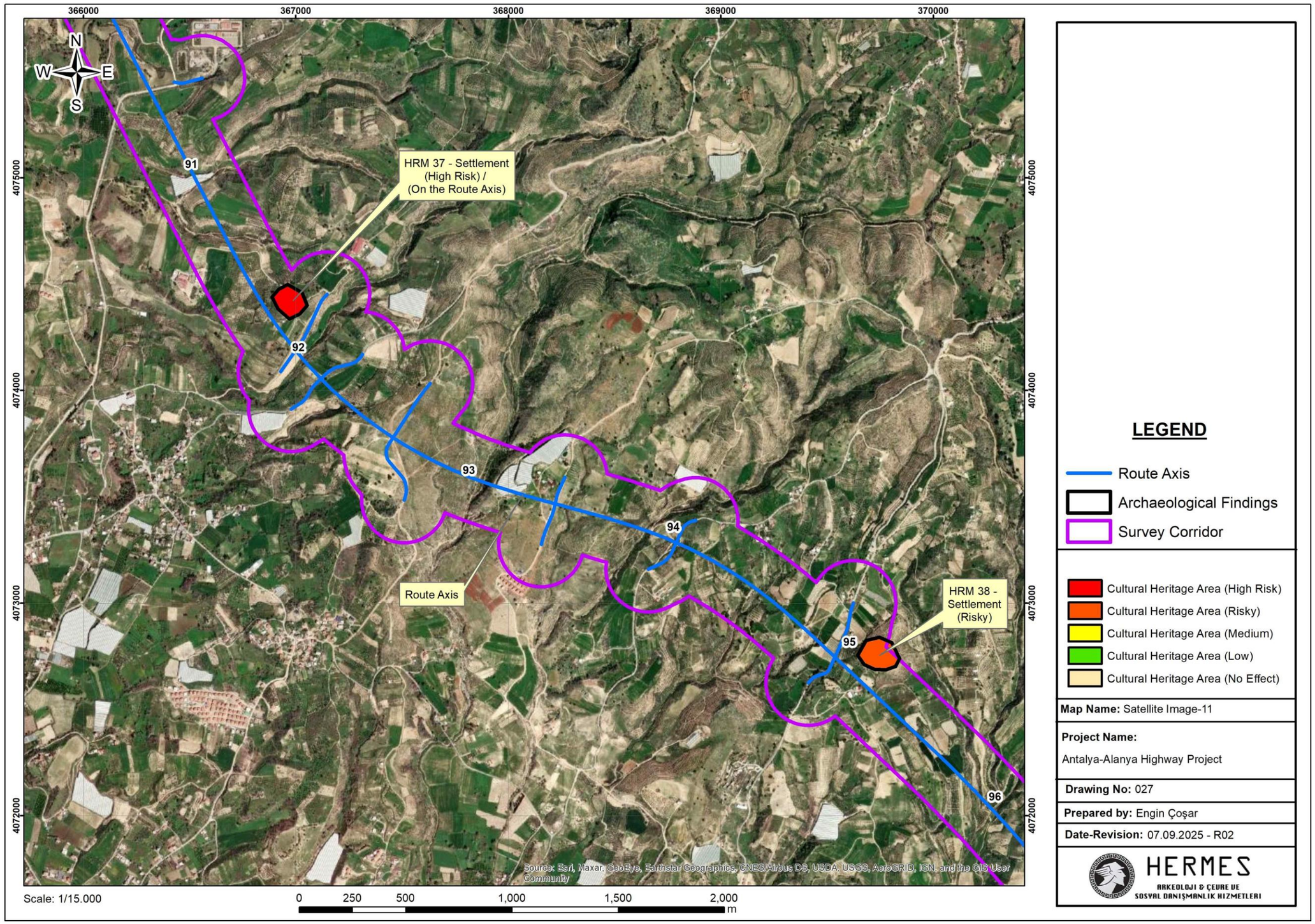
S
HRM 32 - 1st Degree Arc. Site (High Risk) / (On the Route Axis) (Register Area)
HRM 33 - Mound (No Effect)
HRM 35 - Building remain (Risky)
HRM 31 - Necropolis (Risky)
HRM 34 - Cemetery (No Effect)
Route Axis
HRM 36 - Settlement (No Effect)
87
88
89
Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
Scale: 1/10.000
0
250
500
1,000
1,500
2,000
m
LEGEND
Route Axis
Archaeological Findings
Survey Corridor
Cultural Heritage Area (High Risk)
Cultural Heritage Area (Risky)
Cultural Heritage Area (Medium)
Cultural Heritage Area (Low)
Cultural Heritage Area (No Effect)
Map Name: Satellite Image-10
Project Name:
Antalya-Alanya Highway Project
Drawing No: 026
Prepared by: Engin Çoşar
Date-Revision: 07.09.2025 - R02
HERMES
ARKEOLOJİ & ÇEVRE VE
SOSYAL DANIŞMANLIK HİZMETLERİ


366000
367000
368000
369000
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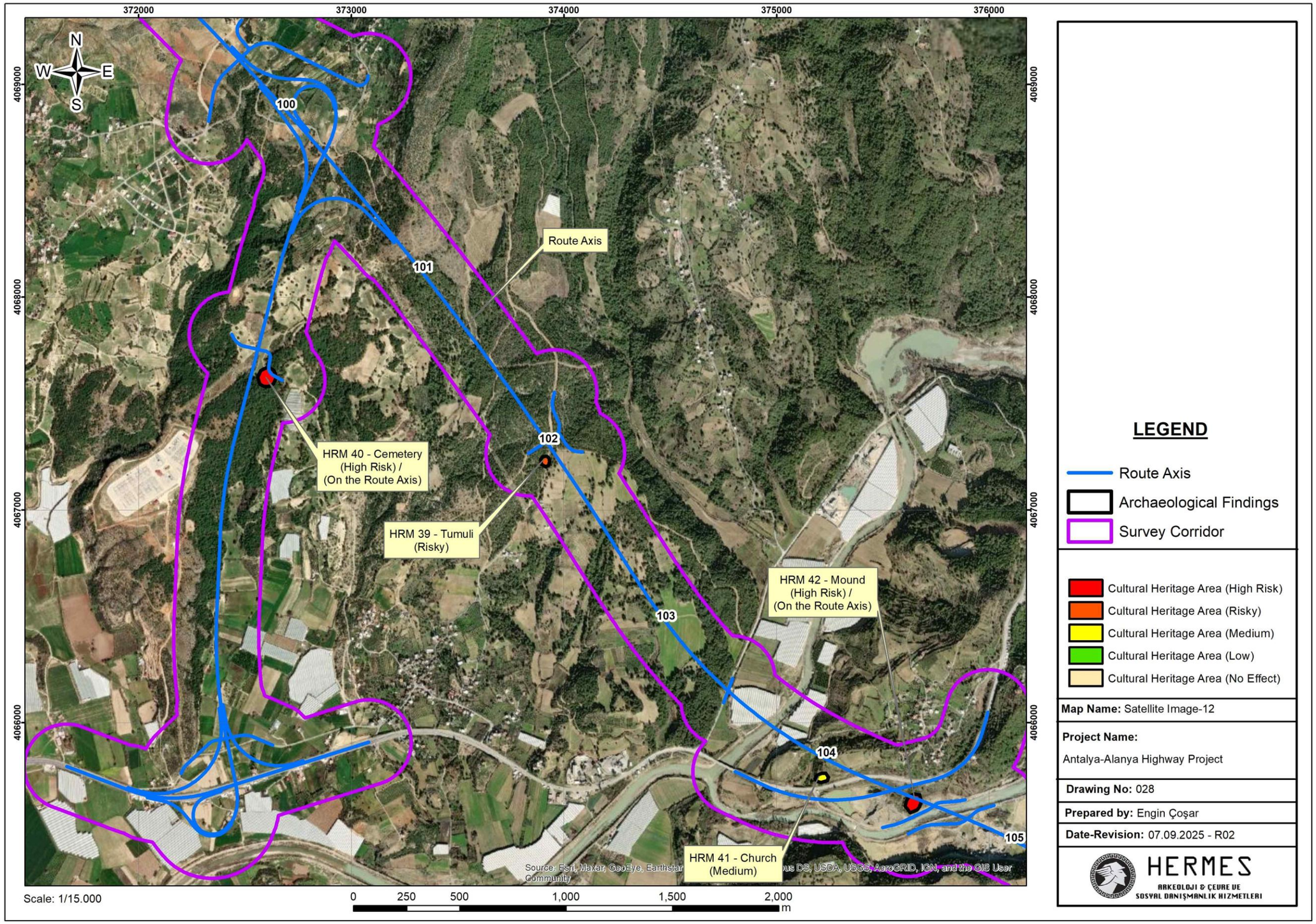
4075000
4074000
4073000
4072000
N
W
E
S
91
92
93
94
95
96
HRM 37 - Settlement (High Risk) / (On the Route Axis)
Route Axis
HRM 38 - Settlement (Risky)
Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
Scale: 1/15.000
0 250 500 1,000 1,500 2,000
m
LEGEND
Route Axis
Archaeological Findings
Survey Corridor
Cultural Heritage Area (High Risk)
Cultural Heritage Area (Risky)
Cultural Heritage Area (Medium)
Cultural Heritage Area (Low)
Cultural Heritage Area (No Effect)
Map Name: Satellite Image-11
Project Name:
Antalya-Alanya Highway Project
Drawing No: 027
Prepared by: Engin Çoşar
Date-Revision: 07.09.2025 - R02
HERMES
ARKEOLOJİ & ÇEVRE VE
SOSYAL DANIŞMANLIK HİZMETLERİ


372000
373000
374000
375000
376000
4069000
4068000
4067000
4066000
N
W
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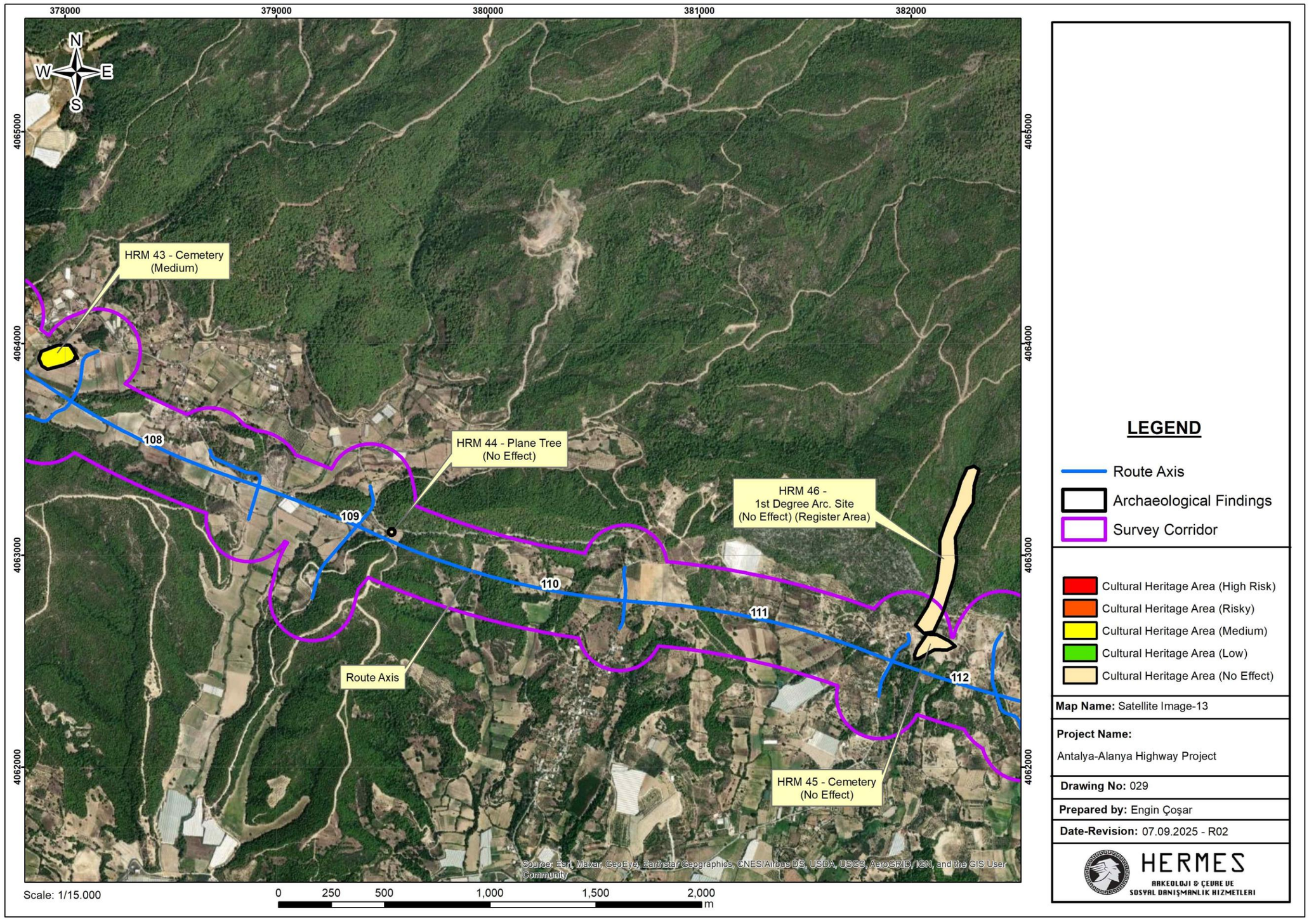
100
101
102
103
104
105
Route Axis
HRM 40 - Cemetery
(High Risk) /
(On the Route Axis)
HRM 39 - Tumuli
(Risky)
HRM 42 - Mound
(High Risk) /
(On the Route Axis)
HRM 41 - Church
(Medium)
Source: Esri, Maxar, GeoEye, Earthstar
DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
Scale: 1/15.000
0
250
500
1,000
1,500
2,000
m
LEGEND
Route Axis
Archaeological Findings
Survey Corridor
Cultural Heritage Area (High Risk)
Cultural Heritage Area (Risky)
Cultural Heritage Area (Medium)
Cultural Heritage Area (Low)
Cultural Heritage Area (No Effect)
Map Name: Satellite Image-12
Project Name:
Antalya-Alanya Highway Project
Drawing No: 028
Prepared by: Engin Çoşar
Date-Revision: 07.09.2025 - R02
HERMES
ARKEOLOJİ & ÇEVRE VE
SOSYAL DANIŞMANLIK HİZMETLERİ


378000
379000
380000
381000
382000
4065000
4064000
4063000
4062000
N
W
E
S
HRM 43 - Cemetery
(Medium)
HRM 44 - Plane Tree
(No Effect)
HRM 46 -
1st Degree Arc. Site
(No Effect) (Register Area)
HRM 45 - Cemetery
(No Effect)
Route Axis
108
109
110
111
112
Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
Scale: 1/15.000
0
250
500
1,000
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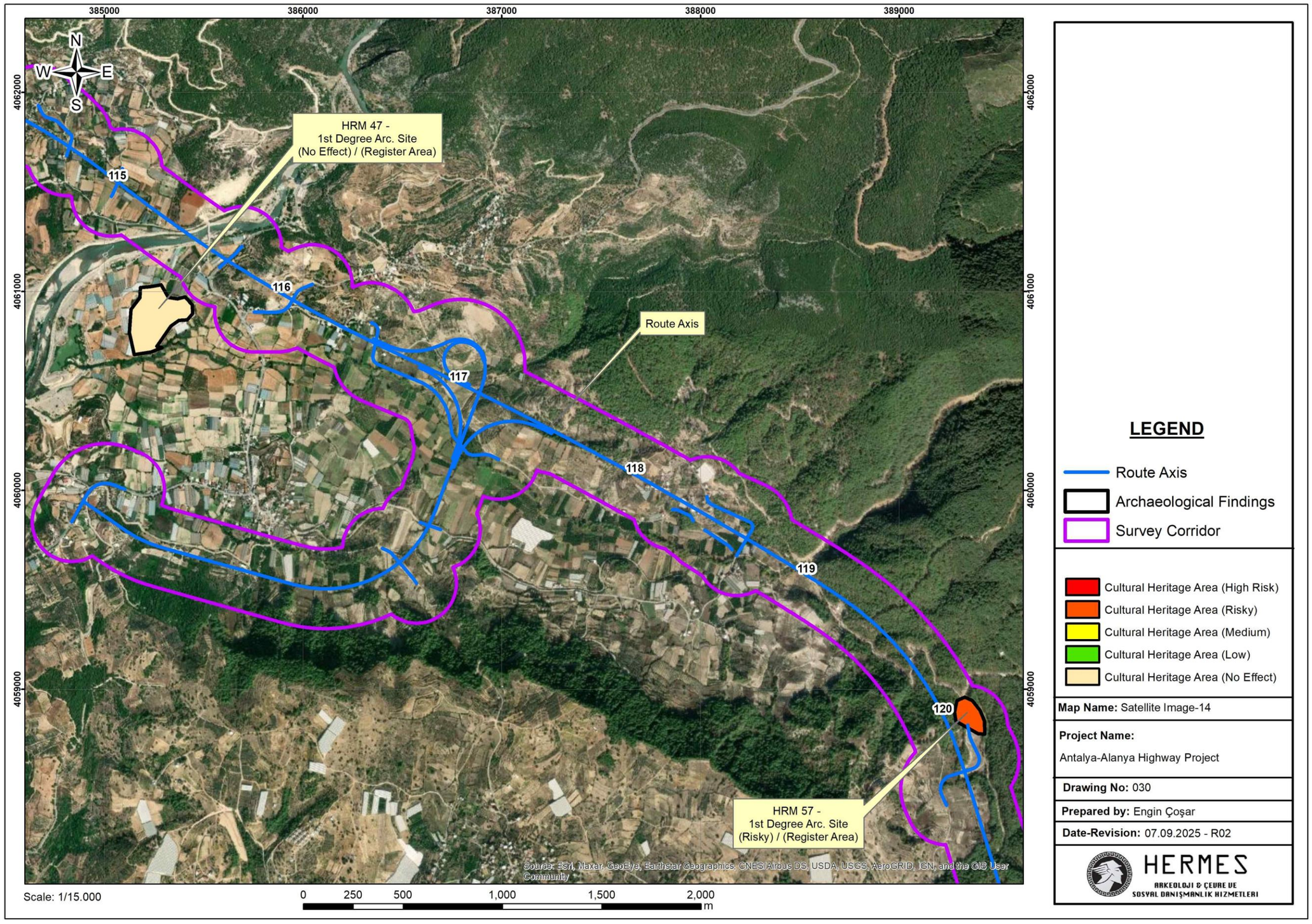
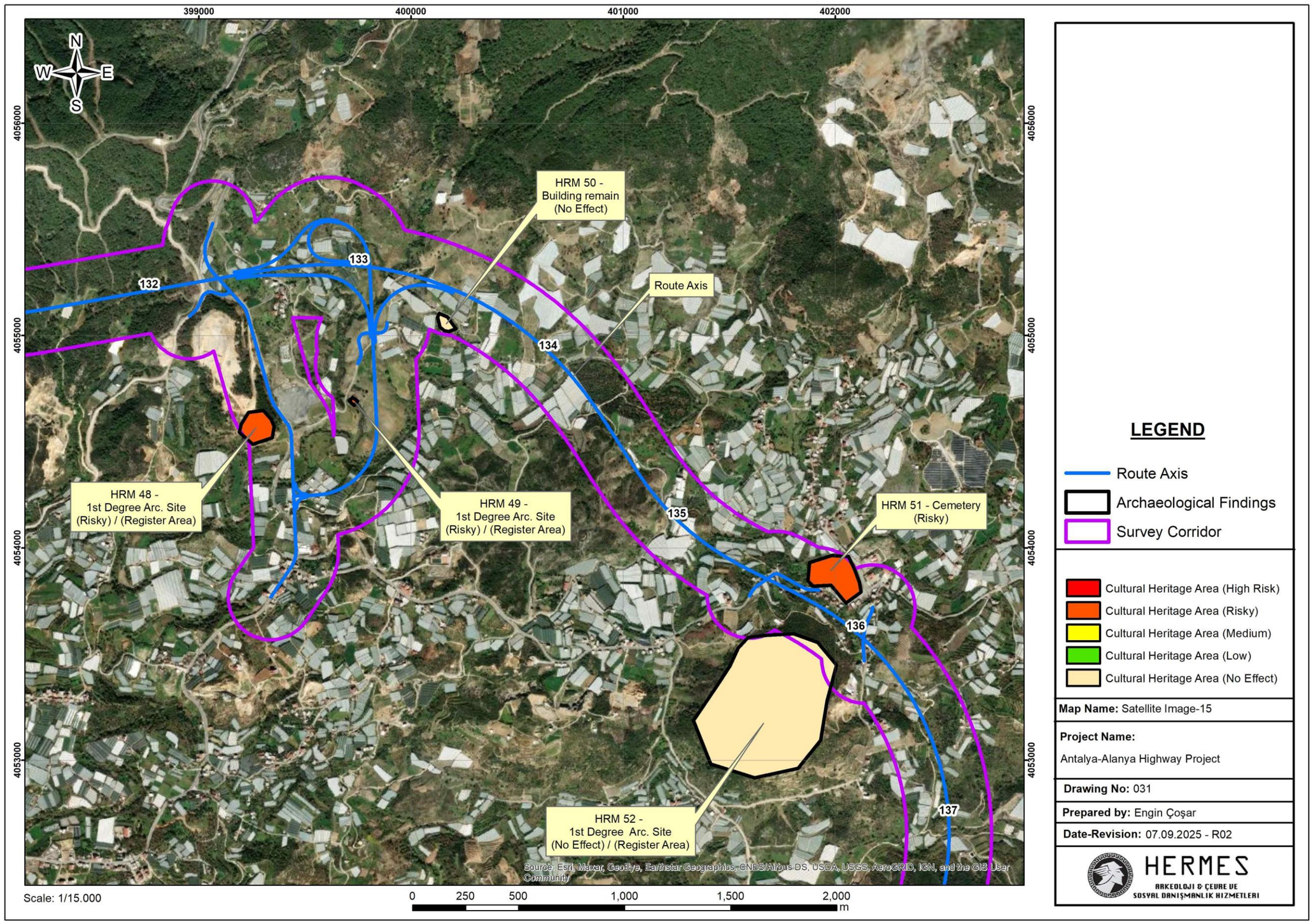
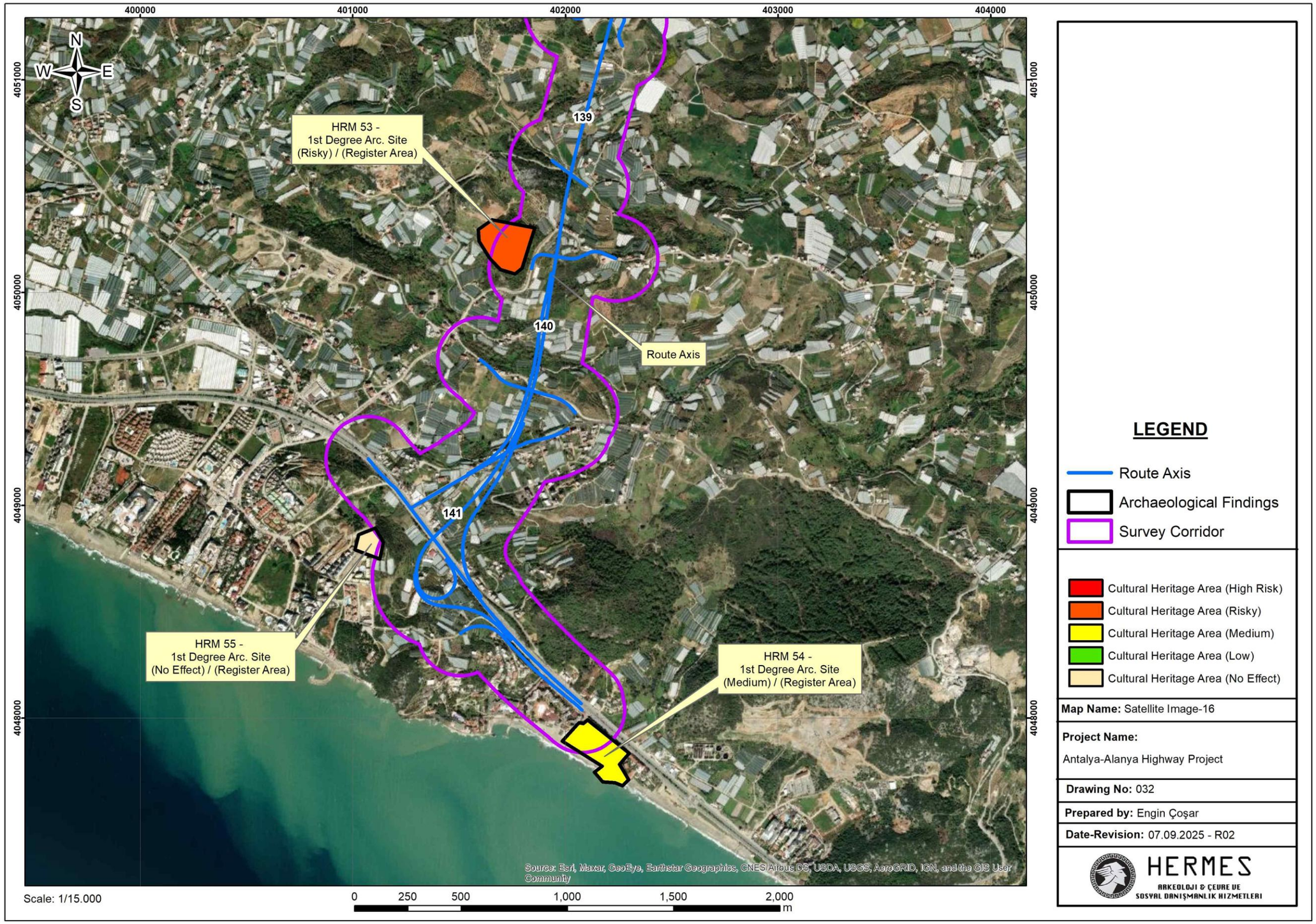
2,000
m
LEGEND
Route Axis
Archaeological Findings
Survey Corridor
Cultural Heritage Area (High Risk)
Cultural Heritage Area (Risky)
Cultural Heritage Area (Medium)
Cultural Heritage Area (Low)
Cultural Heritage Area (No Effect)
Map Name: Satellite Image-13
Project Name:
Antalya-Alanya Highway Project
Drawing No: 029
Prepared by: Engin Çoşar
Date-Revision: 07.09.2025 - R02
HERMES
ARKEOLOJİ & ÇEVRE VE
SOSYAL DANIŞMANLIK HİZMETLERİ


385000
386000
387000
388000
389000
4062000
4061000
4060000
4059000
N
W
E
S
HRM 47 -
1st Degree Arc. Site
(No Effect) / (Register Area)
Route Axis
115
116
117
118
119
120
HRM 57 -
1st Degree Arc. Site
(Risky) / (Register Area)
Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
Scale: 1/15.000
0 250 500 1,000 1,500 2,000
m
LEGEND
Route Axis
Archaeological Findings
Survey Corridor
Cultural Heritage Area (High Risk)
Cultural Heritage Area (Risky)
Cultural Heritage Area (Medium)
Cultural Heritage Area (Low)
Cultural Heritage Area (No Effect)
Map Name: Satellite Image-14
Project Name:
Antalya-Alanya Highway Project
Drawing No: 030
Prepared by: Engin Çoşar
Date-Revision: 07.09.2025 - R02
HERMES
ARKEOLOJİ & ÇEVRE VE
SOSYAL DANIŞMANLIK HİZMETLERİ


399000
400000
401000
402000
4056000
4055000
4054000
4053000
N
W
E
S
HRM 50 - Building remain (No Effect)
Route Axis
132
133
134
135
136
137
HRM 48 - 1st Degree Arc. Site (Risky) / (Register Area)
HRM 49 - 1st Degree Arc. Site (Risky) / (Register Area)
HRM 51 - Cemetery (Risky)
HRM 52 - 1st Degree Arc. Site (No Effect) / (Register Area)
Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
Scale: 1/15.000
0 250 500 1,000 1,500 2,000
m
LEGEND
Route Axis
Archaeological Findings
Survey Corridor
Cultural Heritage Area (High Risk)
Cultural Heritage Area (Risky)
Cultural Heritage Area (Medium)
Cultural Heritage Area (Low)
Cultural Heritage Area (No Effect)
Map Name: Satellite Image-15
Project Name:
Antalya-Alanya Highway Project
Drawing No: 031
Prepared by: Engin Çoşar
Date-Revision: 07.09.2025 - R02
HERMES
ARKEOLOJİ & ÇEVRE VE
SOSYAL DANIŞMANLIK HİZMETLERİ


400000
401000
402000
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4051000
4050000
4049000
4048000
N
W
E
S
HRM 53 -
1st Degree Arc. Site
(Risky) / (Register Area)
139
140
141
Route Axis
HRM 55 -
1st Degree Arc. Site
(No Effect) / (Register Area)
HRM 54 -
1st Degree Arc. Site
(Medium) / (Register Area)
Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
Scale: 1/15.000
0 250 500 1,000 1,500 2,000
m
LEGEND
Route Axis
Archaeological Findings
Survey Corridor
Cultural Heritage Area (High Risk)
Cultural Heritage Area (Risky)
Cultural Heritage Area (Medium)
Cultural Heritage Area (Low)
Cultural Heritage Area (No Effect)
Map Name: Satellite Image-16
Project Name:
Antalya-Alanya Highway Project
Drawing No: 032
Prepared by: Engin Çoşar
Date-Revision: 07.09.2025 - R02
HERMES
ARKEOLOJİ & ÇEVRE VE
SOSYAL DANIŞMANLIK HİZMETLERİ

ANTALYA ALANYA MOTORWAY PROJECT

GRAVE RELOCATION PROCEDURE

Revision LOG			
REV. Date	**Prepared by**	**Quality Checked by**	**Reviewed and Approved by**
02.09.2025	**Engin ÇOŞAR Senior Archaeologist**	**Ece ÇOŞAR Environmental Eng.**	**Engin ÇOŞAR Senior Archaeologist**
26.09.2025	**Engin ÇOŞAR Senior Archaeologist**	**Ece ÇOŞAR Environmental Eng.**	**Engin ÇOŞAR Senior Archaeologist**
23.10.2025	**Engin ÇOŞAR Senior Archaeologist**	**Ece ÇOŞAR Environmental Eng.**	**Engin ÇOŞAR Senior Archaeologist**

HERMES
ARKEOLOJI & ÇEVRE VE SOSYAL DANIŞMANLIK HIZMETLERI

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SEPTEMBER/2025

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ABBREVIATIONS

CHMP	Cultural Heritage Management Plan
ICOMOS	International Council of Monuments and Sites
IFA	Institute of Field Archaeologists
No	Number
PROJECT	Antalya Alanya Motorway Project
UNESCO	United Nations Educational, Scientific and Cultural Organization

1. PURPOSE and SCOPE

This procedure defines the legal framework, responsibilities, and step-by-step actions to be followed in the event of grave relocation within the scope of the Project. It applies to all Project activities that may require relocation of graves and is designed to ensure full compliance with Law No. 3998 on the Protection of Cemeteries (1994), Law No. 2863 on the Protection of Cultural and Natural Assets (1983), and other applicable Turkish legislation.

The scope includes:

- Protection of cemeteries as tangible and intangible cultural heritage,
- Engagement with relevant authorities and affected communities,
- Implementation of a transparent and respectful relocation process,
- Monitoring and documentation of all activities.

2. ROLES AND RESPONSIBILITIES

Metropolitan Municipality / Local Municipalities (Cemeteries Directorate):	Primary authority for implementation of grave relocation. In metropolitan municipalities in Türkiye, the management and administration of cemeteries are primarily the responsibility of the Metropolitan Municipality Cemeteries Directorate, which oversees cemetery planning, maintenance, and grave relocation. The District Municipality supports on-site operations and daily management
Provincial Directorate of Environment, Urbanization and Climate Change – Department of Local Administrations:	Oversight authority ensuring compliance with Law No. 3998.
Museum Directorate:	Advisory and supervisory role where cultural heritage values are concerned.
Project Archaeologist:	• Ensures procedures are followed in line with cultural heritage requirements and supervises on-site works. • Leads systematic field investigations for the identification and documentation of both tangible and intangible cultural heritage assets, ensuring inventories and records comply with national legislation and international best practice. • Implements and trains site personnel on the Chance Find Procedure (CFP) and Cultural Heritage Management Plan (CHMP), and coordinates immediate protective measures when unexpected finds occur. • Engages regularly with local communities and relevant authorities (museums, heritage boards, local administrations) to accurately identify and record intangible heritage elements such as rituals, traditional practices and oral histories. • Prepares and submits all archaeological and cultural heritage findings in line with lender requirements and international standards, ensuring that both movable/immovable and intangible assets are

	properly reported and archived.
Community Liaison Officer (CLO):	• Facilitates communication with affected families and ensures cultural sensitivities are respected. • Maintains detailed records of all stakeholder engagement activities (meeting minutes, attendance sheets, feedback logs) in accordance with international lender requirements. • Monitors and reports all complaints related to cultural heritage or community concerns, ensuring that the Project's Grievance Mechanism, the steps of which are detailed in the Stakeholder Engagement Plan, is implemented and accessible to all stakeholders (see ESIA Annex-9 SEP). • Ensures that Free, Prior and Informed Consultation (FPIC) principles are respected when engaging with local communities, especially where Indigenous Peoples or vulnerable groups are involved.
Project Owner:	• Provides logistical and technical support (e.g., machinery, resources) when requested. • Ensures adequate budget allocation and timely provision of resources for cultural heritage management and mitigation activities in line with IFC PS8 and World Bank ESS8. • Oversees compliance with international and national cultural heritage legislation, including the integration of cultural heritage risk management into the overall Environmental & Social Management System (ESMS). • Approves and supports implementation of a Chance Find Procedure and Cultural Heritage Management Plan, ensuring these are reviewed and updated periodically and that contractors are trained in their application.

In metropolitan municipalities in Türkiye, the management and administration of cemeteries are primarily the responsibility of the Metropolitan Municipality Cemeteries Directorate, which oversees cemetery planning, maintenance, and grave relocation. The District Municipality supports on-site operations and daily management, while the District Mufti's Office ensures that all religious rituals and ceremonial procedures are properly observed during grave relocation. The District Governorship coordinates the administrative approvals and ensures that all activities comply with national legislation. Together, these institutions provide a structured framework to manage grave relocation in a manner that respects both tangible and intangible cultural heritage and addresses social sensitivities.

3. LEGAL FRAMEWORK

Law No. 3998 on the Protection of Cemeteries (1994) Ownership (Article 1): Except for the State Cemetery, historical cemeteries under the Directorate General of Foundations, martyrdom cemeteries, and cemeteries with special religious status, ownership of public cemeteries rests with municipalities (in municipal areas) or village legal entities (in villages). Such lands cannot be sold, acquired through prescription, or transferred by possession.

- Protection (Article 2): Cemeteries, martyrdom cemeteries, and graves cannot be altered, damaged, or polluted, nor converted to other uses (parks, gardens, car parks, green areas, etc.). An exception applies only for road construction deemed necessary and approved by the Ministry of Environment, Urbanization and Climate Change.
- Law No. 2863 on the Protection of Cultural and Natural Assets (1983): Provides the overarching framework for protection of cultural heritage, including registered cemeteries and burial areas.

4. PROCEDURE STEPS

The relocation of graves is a highly sensitive process and will be implemented in line with national legal requirements and local practices.

If graves identified during the archaeological baseline study are determined to be of historical significance, the Regional Conservation Board will first be notified.

Through the Board's process, if the graves are confirmed to have historical value, the registration procedure must be completed.

In all cemetery areas where the alignment cannot be modified or where cemeteries are encountered incidentally, and in cases where modern-era cemeteries are affected by construction, the following procedures will be followed.

Whenever work is required in any such area, the identified graves will be first reported by the SPV to General Directorate of Highways (KGM), and KGM will them notify the relevant public authorities, as detailed below.

1- Identification of Need – Determining that a grave must be relocated due to project alignment or other compelling reasons.
2- Submission of Application – Submission of a formal request by the responsible parties (e.g., SPV, General Directorate of Highways, Municipality) to the relevant Metropolitan Municipality Cemetery Directorate.
3- Stakeholder Coordination – Engagement with relevant authorities including health institutions, religious representatives (e.g., imam), and families of the deceased.
4- Notification Stage – Written notifications will be delivered to the families of the deceased whose graves will be relocated.
5- Public Announcement (Mukhtars) – Public notices will be posted for 15 days in the offices of relevant mukhtars, ensuring coverage for all affected communities.
6- Local Newspaper Announcement – A notice will also be published in a local newspaper to ensure wider public awareness.
7- Selection of New Grave Site – The Metropolitan Municipality Cemeteries Directorate, in consultation with relevant authorities and affected families, will identify and approve a suitable new grave location within an officially designated cemetery area.
8- Start of Relocation – Within one week after the posting period, relocation works will commence under municipal supervision, with participation of a medical doctor, imam, and administrative staff.
9- Completion of Relocation – Due to the sensitive nature of the matter, all relocations will be completed **as quickly as possible**. The Metropolitan Municipality will coordinate the process and provide the necessary resources.
10- Support Services – If required, heavy machinery or other technical support may be requested from the Project Owner, and such requests will be met promptly.
11- Documentation and Reporting – All steps will be officially documented, including photographic evidence, grave identification, and new burial location, and reported to the competent authorities.

4.1 Requirements Related to Human Remains

In the event that human remains are encountered during Project activities, the following requirements shall apply in addition to the Chance Find Procedure:

1- Immediate Cessation of Works
- All works in the vicinity of the find will stop immediately.
- The area shall be secured by the Project Archaeologist and marked as a restricted zone.

2- Respectful In Situ Protection
- Human remains shall not be moved, damaged, or removed by Project staff under any circumstances.
- The remains will be left in situ under protection until competent authorities arrive.

3- 3- Notification of Authorities
- The Project Archaeologist shall immediately notify the Museum Directorate, which will dispatch experts to the site.
- If the remains are suspected to be contemporary burials, local law enforcement shall also be informed, in line with national legal requirements.

4- Authority and Oversight
- The Museum Directorate is the competent authority for conducting or overseeing any excavation, exhumation, or handling of archaeological human remains.
- All decisions regarding the treatment, removal, or relocation of remains are subject to the written approval of the Regional Conservation Board.
- If the remains are dated to the modern period, the case may be treated as a criminal matter. In such cases, a judicial investigation and police follow-up will be required, and all actions will be carried out in accordance with the instructions of the Public Prosecutor’s Office.

5- Documentation and Custody
- The Project Archaeologist shall record the location, context, and condition of the remains through photographs, GPS, and official forms.
- A handover form will be completed at the time of transfer to the Museum authorities, ensuring a clear chain of custody.

6- Community Sensitivities
- All works will respect local cultural and religious sensitivities related to burial traditions.
- Engagement with local communities shall be conducted through the Project Archaeologist and Consultant Archaeologist, with sensitivity to intangible heritage values.

No human remains may be disturbed, removed, or transported without the explicit instruction and supervision of the Museum Directorate, and the written approval of the Regional Conservation Board.

4.2 Community Engagement and Cultural Considerations

Cemeteries in Türkiye are both tangible cultural assets and intangible cultural heritage spaces where remembrance, mourning, rituals, and collective identity are preserved. Therefore:

- Engagement with families and communities will be respectful and continuous.
- Cultural and religious sensitivities will be observed at all times.
- All actions will be supervised by the Project Archaeologist and CLO to ensure integration of cultural heritage considerations into the process.

4.3 Monitoring and Documentation

- All notifications, announcements, and relocation activities will be documented.
- A relocation register, including dates, family acknowledgements, and handover forms, will be kept by the Municipality and shared with the Project Owner upon request.
- The Project Archaeologist will record the process through site notes, photographs, and official forms.

4.4 References

Law No. 3998 on the Protection of Cemeteries (1994)

Law No. 2863 on the Protection of Cultural and Natural Assets (1983)

Relevant by-laws and decisions of the Regional Conservation Board.

APPENDIX 1: CONTACT INFORMATION OF RELATED MUSEUM DIRECTORATES AND REGIONAL BOARD DIRECTORATES

Table 1 Museum Contact Information

Name	Phone	Adress
Antalya Archaeology Museum	Tel: 0242 238 56 88/89	Bahçelievler Mahallesi, Konyaaltı Caddesi, No 88, 07050 ANTALYA E-posta: antalyamuzesi@kultur.gov.tr
Side Archaeology Museum	Tel: (0242) 280 23 00	Side, Liman Cd., 07330 Manavgat/Antalya

Table 2 Contact Information of Regional Board Directorates

Name	Phone	Adress
Antalya Cultural Assets Regional Board Directorate	0242) 243 21 60 (0242) 247 87 61 (0242) 244 55 74	Kılıçaslan Mahç Zafer Sk. No: 6 07100 KALEİÇİ / ANTALYA

ANTALYA-ALANYA MOTORWAY PROJECT

Revision No: 0 **Date:** 08.09.2025

BLASTING MANAGEMENT PLAN

REVISION STATUS		
Revision Date	**Rev. No**	**Explanation**
08.09.2025	00	This plan is prepared according to TS EN ISO/IEC 9001:2015, TS EN ISO/IEC ISO 14001:2015, TS EN ISO/IEC 45001:2018 and IFC Performance Standards

BLASTING MANAGEMENT PLAN

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LIST OF ABBREVIATIONS

AAOİAŞ	Antalya-Alanya Otoyolu İnşaat Yatırım ve İşletme A.Ş.
CLO	Community Liaison Officer
CO	Carbon Monoxide
E&S	Environmental and Social
EHS	Environmental, Health, and Safety
ENCON	ENCON Environmental Consultancy Co.
EPC	Engineering, Procurement and Construction (Limak İnşaat Şanayi ve Tic. A.Ş.)
ESIA	Environmental and Social Impact Assessment
ESMMP	Environmental and Social Management and Monitoring Plan
ESMS	Environmental and Social Management System
EU	European Union
GIIP	Good International Industry Practice
HC	Hydrocarbons
HSE	Health, Safety and Environment
H&S	Health and Safety
IFC	International Finance Corporation
IFI	International Financial Institution
KPI	Key Performance Indicator
Limak	Limak İnşaat Şanayi ve Tic. A.Ş.
MSDS	Material Safety Data Sheet
NO_x	Nitrogen Oxides (NO_2 and NO)
PM	Particulate Matter
PPE	Personal Protective Equipment
RAMAQ	Regulation on Assessment and Management of Air Quality
RCA	Root Cause Analysis
RENC	Regulation on Environmental Noise Control
SPV	Special Purpose Vehicle (Antalya-Alanya Otoyolu İnşaat Yatırım ve İşletme A.Ş.)
SO_2	Sulfur Dioxide
VOCs	Volatile Organic Compounds
WHO	World Health Organization

BLASTING MANAGEMENT PLAN

I. INTRODUCTION

Ministry of Transport, and Infrastructure (former Ministry of Transport, Maritime Affairs and Communications), General Directorate of Highways ("KGM" or "the Administration"), as the owner of the Antalya-Alanya Motorway Project, has tendered for a contract in accordance with the Law on Implementation of Some of the Investments and Services in the Framework of Build, Operate and Transfer Model (Law No: 3996). Following the tendering process, KGM has awarded Antalya-Alanya Otoyolu İnşaat Yatırım ve İşletme A.Ş. (AAOİAŞ or the Project Sponsor) with a Build, Operate and Transfer (BOT) contract for the implementation of the Project. Accordingly, AAOİAŞ will be referred as Project Sponsor[1] in the scope of this report. The main contractor for the Project has been designated as Limak and will henceforth be referred to as the Contractor (or EPC).

The project is designed to connect the districts of Serik and Alanya via the Manavgat district of Antalya province. The Project will enhance the existing transportation network services with its surrounding provinces: Burdur, Muğla, Konya, Isparta, Karaman and Mersin. Various environmental, social, and technical studies have been conducted along the initial route of the Project tendered by the KGM. Based on these studies, the route was optimized, incorporating engineering practices and addressing environmental and social considerations, particularly issues of involuntary and economic resettlement, before being finalized. According to the most current design, the total length of the Motorway, which will be a dual carriageway of mostly 3 and partially 2 lanes (3x2 and 2x2) in each direction, is 117.8 kilometers including the main carriageway and the access roads[2].

This Blasting Management Plan ("Plan") has been prepared by Antalya-Alanya Highway Construction Investment and Operation Inc. ("AAOİAŞ" or "SPV") for the Antalya-Alanya Highway Project ("Project") in accordance with national legislation, the Equator Principles ("EP"), the International Finance Corporation ("IFC") Performance Standards ("PSs"), and the international standards that reference the relevant legislative sections. The Plan covers the construction phase of the Project.

I.1 Project Description

The Project starts at Serik Interchange (Km: 52+000) and then proceeds eastward, following the corridor at the foothills of the Taurus Mountains within the boundaries of Serik and Manavgat districts, ending at north of Konaklı neighborhood of Alanya District (Km: 136+000). From this point onwards, the route turns southward with a 2x2 lane connection road and connects to the D400 state road at the Alanya West Interchange. As of April 2025, the current Project design includes a total of 117.8 kilometers of road, comprising 84 kilometers of main road (motorway) and 33.8 kilometers of access roads.

The map showing the construction components and road route within the scope of the Project's construction activities is provided in Figure I-I.

[1] The BOT Contract uses the term "Appointed Company" to refer Project Sponsor

[2] It should be noted that the environmental and social baseline characterization, maps and scoping assessments provided in this report are based on the most current design

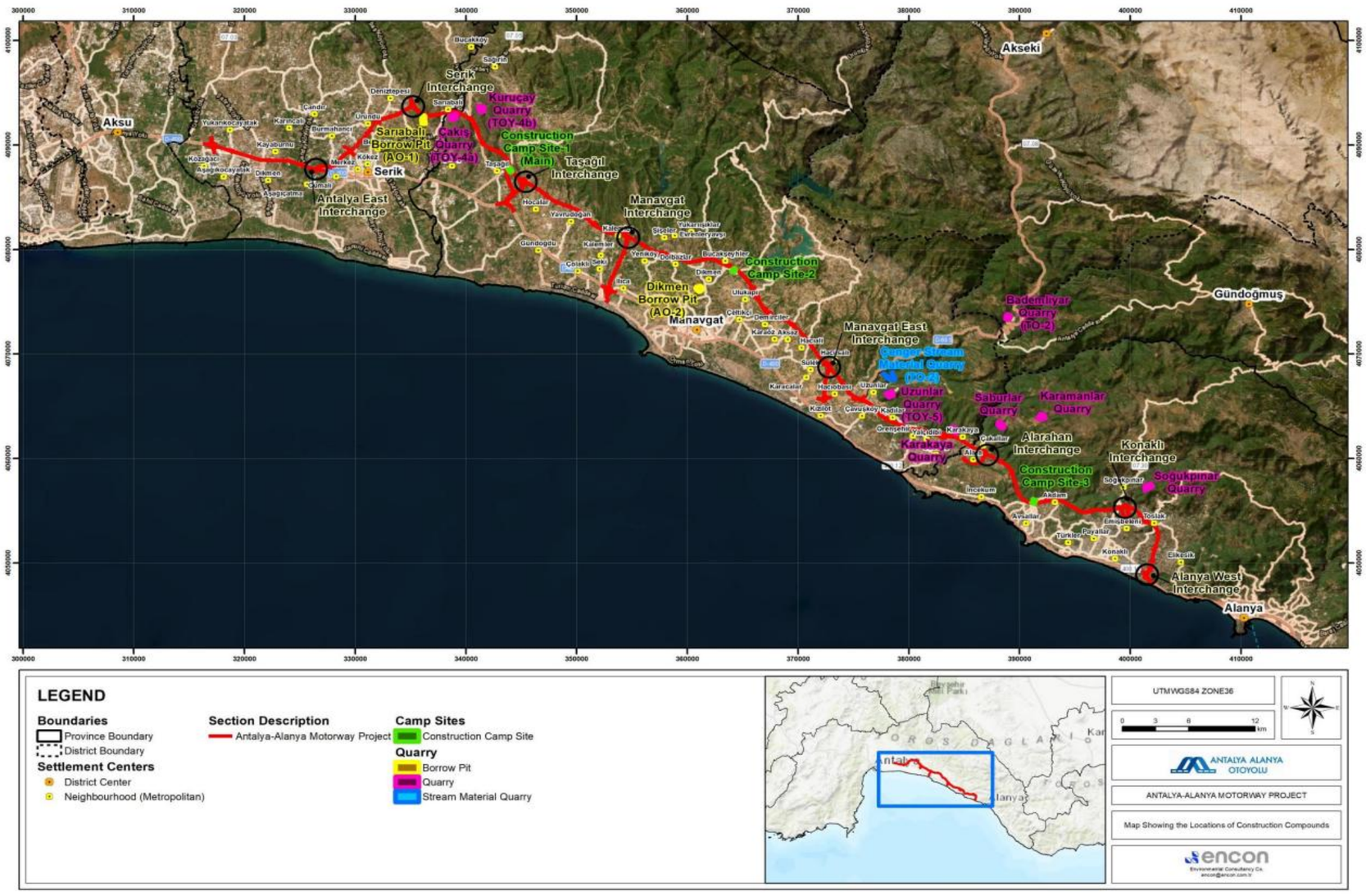

Figure I-I: MapShowing the Locations of Construction Compounds

Other structures to be built as part of the project are as follows:

- 16 viaducts,
- 22 bridges,
- 305 culverts,
- 25 interchanges,
- 56 overpasses,
- 43 underpasses, and
- 5 tunnels.

I.2 PURPOSE AND SCOPE

This Plan has been prepared by Antalya-Alanya Otoyolu İnşaat Yatırım ve İşletme A.Ş. ("AAOİAŞ" or "SPV") for the Antalya-Alanya Motorway Project ("the Project").

This management plan is a living document developed with the best available information and will be reviewed and revised as necessary due to the nature of the construction and progress.

The purpose of this Plan is to define the principles and procedures for the blasting activities in accordance with applicable national regulations and international standards. The Plan aims to minimize risks to human health, property, and the environment arising from the transportation of explosives from licensed/authorized company and blasting activities during the construction phase.

This Plan outlines actions that should be done to ensure that blasting activities occur in a safe, compliant, and environmentally responsible manner. It also provides guidance on the transportation of explosives, ground vibration, noise, air blast, and community safety. In addition, the management of air and noise-related impacts are thoroughly detailed in the air pollution and emissions management plan and noise and vibration management plan.

The Plan should be implemented by all parties involved in the construction phase, including the Project Sponsor – AAOİAŞ, the Main Contractor (Limak), and all subcontractors. Roles and responsibilities regarding blasting management should be clearly defined. The Plan should be reviewed and updated as necessary to reflect changes in project conditions, design, or legal requirements.

II. LEGISLATIVE FRAMEWORK AND REFERENCE STANDARDS

The Plan has been structured to align with both national and international requirements, including legislation, guidelines, and sectoral standards governing the blasting activities, as well as the management of associated risks such as ground vibration, air blast, noise, and community safety. Blasting operations will be conducted in line with the legislation in force and good industry practices/modern techniques.

II.1 National Requirements

The following Turkish laws and regulations provide the legal basis for managing blasting activities, including use of explosives, vibration and noise control, occupational safety, and community protection:

- Occupational Health and Safety
  - Regulation on Occupational Health and Safety Services – dated 29.12.2012, published in Official Gazette No. 28512.
  - Regulation on Occupational Health and Safety Risk Assessment – dated 29.12.2012, published in Official Gazette No. 28512.

- Regulation on Protection of Workers from Risks of Explosive Atmospheres – dated 30.04.2013, published in Official Gazette No. 28633.

- Explosives and Blasting Regulations
  - Regulation on Equipment and Protective Systems Used in Potentially Explosive Atmospheres - dated 30.06.2016, published in Official Gazette No. 29758.
  - Regulation on Explosives Exempted from Monopoly, Hunting Materials, and Similar Items– Cabinet Decree No. 87/12028, published in Official Gazette No. 19589 on 29.09.1987.
  - Regulations of the General Directorate of Mining Affairs regarding the use of explosives in mining, quarrying, and tunnel construction.

- Noise Control
  - Regulation on Environmental Noise Control - dated 29.12.2012, published in Official Gazette No. 28512

- Air Quality
  - Regulation on Air Quality Assessment and Management- dated 06.06.2008, published in Official Gazette No. 26898

- Waste Management
  - Regulation on Waste Management – dated 02.04.2015, published in Official Gazette No. 29314.
  - Regulation on the Control of Excavated Soil, Construction and Demolition Wastes – dated 18.03.2004, published in Official Gazette No. 25406.

- Fire Protection
  - Regulation on Fire Protection of Buildings – dated 19.12.2007, published in Official Gazette No. 26735.

- Project-Specific
  - Technical Specifications of Highways – issued by the General Directorate of Highways (KGM), latest full update 2013.

II.2 International Standards and Conventions

The following international standards and procedures are applicable to the Project to ensure alignment with national legislation and recognize good industry practices.

AIIB is a multilateral development bank established to promote sustainable economic growth and improve infrastructure connectivity. According to the Articles of Agreement, AIIB aims to invest in infrastructure and productive sectors while fostering regional cooperation through partnerships with other development institutions. To ensure responsible operations, AIIB adheres to policies that address environmental and social impacts, outlined in its Environmental and Social Framework (ESF).

Also, the following international standards and reference frameworks should be used to align Project practices with international lender requirements and good practice environmental and social management:

- IFC Performance Standards (2012), specifically:
  - Performance Standard 1: Assessment and Management of Environmental and Social Risks and Impacts
  - Performance Standard 3: Resource Efficiency and Pollution Prevention
  - Performance Standard 4: Community Health, Safety, and Security
- IFC Environmental, Health and Safety (EHS) General Guidelines (2007)
- IFC EHS Guidelines for Toll Roads (2007)
- IFC Guidance Notes (2012)
- Equator Principles IV (2020)
- Directive 1999/92/EC of the European Parliament and of the Council of 16 December 1999 on minimum requirements for improving the safety and health protection of workers potentially at risk from explosive environments (Individual Directive 15 within the meaning of Article 16(1) of Directive 89/391/EEC).
- IFC Sector-Specific EHS Guidelines for Hazardous Materials Management
- Registration, Evaluation, Authorization, and Restriction of Chemicals (REACH)
- European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR)
- International Maritime Dangerous Goods (IMDG) Code
- ICAO Technical Instructions (for air transport)
- Regulations concerning the International Carriage of Dangerous Goods by Rail (RID).

These standards should guide the development of site-specific procedures, monitoring strategies, and corrective actions. In cases where national legislation and international standards diverge, stricter requirements should be adopted.

II.3 Project Standards

The acceptable thresholds are defined in the Air Pollution and Emissions Management Plan and the Noise and Vibration Management Plan to prevent damage to buildings, minimize community disturbance, and avoid health and safety risks. In cases where national limits are either not specified or less stringent, the most stringent international standards shall be applied in line with good industry practice.

III. LINKAGE WITH OTHER PROJECT PLANS AND PROCEDURES

This Plan is supported by other management plans and procedures developed under the Environmental and Social Management System (ESMS) of the Project. The following plans and procedures are particularly relevant and should be implemented in coordination with the Blasting Management Plan:

- Noise and Vibration Management Plan
- Community Health and Safety Management Plan
- Traffic Management Plan
- Hazardous Material Management Plan
- Environmental and Social Management and Monitoring Plan (ESMMP)
- Security Management Plan
- Emergency Preparedness and Response Management Plan
- Occupational Health and Safety (OHS) Plan
- Air Pollution and Emissions Management Plan
- Cultural Heritage Management Plan
- Environmental Accident and Spill Response Management Plan
- Excavated Material Management Plan

The effective integration of these plans should be ensured to maintain compliance with national regulations and international standards and to minimize the environmental and social impacts of blasting activities during construction phase of the project.

IV. ROLES AND RESPONSIBILITIES

Antalya Alanya Otoyol İnşaat Yatırım ve İşletme A.Ş. (SPV) as the Project Sponsor and Limak (EPC) as the main contractor of the Project will be responsible for the following:

- General Manager (SPV)
  - Define and implement overall SPV strategy alignment with shareholder and stakeholder expectations.
  - Ensure the development, revision, and execution of Blasting Management Plan, including other Environmental and Social Management Plans (ESMPs) in accordance with company policies, national - international standards and lender requirements.
  - Ensure the provision of necessary resources and organizational support for the implementation of Blasting Management Plan, and other ESMPs.
  - Supervise and coordinate EPC contractors and subcontractors to ensure proper execution of construction, commissioning, and operational phases.
  - Support the E&S Manager in preparing, disseminating, and implementing this plan.

- E&S Manager (SPV)
  - Review and ensure the preparation, revision, and implementation of this Blasting Management Plan in accordance with national laws, regulations, company policies, international standards and lender requirements.
  - Ensure the development, revision, and execution of this Blasting Management Plan, including all ESMPs in accordance with company policies and international standards.
  - Monitor the environmental and social performance of EPC and subcontractors to ensure compliance.

- H&S Manager (SPV)
  - Ensure the conditions and obligations specified in the health, safety, community related plans and documents are implemented and adhered to by EPC and subcontractors in accordance with company policies, regulatory obligations, international standards and lender requirements.
  - Contribute to project risk assessments and job hazard analyses and ensure these are updated regularly.
  - Ensure that all construction site activities including blasting activities are carried out safely by EPC and subcontractors.
  - Support EPC and subcontractors in the development and delivery of site-specific H&S training programs.

- Deputy E&S Manager (SPV)
  - Lead the development, implementation, and continuous improvement of the Environmental and Social Management.
  - Review the ESHS documents of subcontractors and suppliers and ensure that they comply with the Project ESHS requirements.
  - Monitor blasting-related permits, subcontractor compliance, and mitigation measures, including the implementation of this Blasting Management Plan.
  - Track the performance (including blasting activities) through Key Performance Indicators (KPIs), reports, audits, and meetings.
  - Oversee E&S related (including blasting-related) incidents and non-compliances, including investigations, corrective/preventive actions, and stakeholder communication.
  - Support E&S Manager (SPV) in executive decision-making by providing timely reports and insights on E&S performance, risks, and emerging trends.

- Lead community engagement strategies in collaboration with the Environmental Engineer and, and Social Chief to ensure effective grievance management and positive relations with project-affected communities.
- Ensure that EPC and subcontractor provide the necessary training through the review of training records and relevant training documents.

- Social Chief (SPV)

  - Supervise and mentor CLOs, ensuring their work aligns with project priorities and stakeholder engagement strategy.
  - Develop and implement work plans and schedules for the CLO team.
  - Oversee the delivery of pre-blast notifications.
  - Ensure local residents are provided with written notice at least 30 days before blasting, followed by additional written reminders.
  - Ensure blasting schedules are shared with grazing area users, residents, and local authorities, including the operator's contact details, the specific blasting locations, and the planned dates and time.
  - Ensure that complaints regarding blasting activities are recorded and managed through Grievance Mechanism channels, and resolved in time.
  - Ensure accurate, timely, and complete reporting of grievance outcomes and inform the E&S Manager about the basting related complaints and coordinate the assessment and solution of grievances with EPC team.

- Environmental Engineer (SPV)

  - Ensure corrective/preventive actions are taken for blasting-related incidents in collaboration with HSE, E&S teams, and subcontractors.
  - Integrate Blasting Management Plan requirements into work plans, method statements, and construction activities.

- Community Liaison Officer (CLO) (SPV)

  - Ensure local residents are provided with written notice at least 30 days before blasting, followed by additional written reminders.
  - Ensure blasting schedules are shared with grazing area users, residents, and local authorities, including the operator's contact details, the specific blasting locations, and the planned dates and time.
  - Track community complaints or grievances related to blasting, ensuring timely resolution via the Grievance Mechanism (GM).
  - Facilitate equitable community engagement and consultations, ensuring vulnerable or sensitive groups are informed about noise, vibration and air quality impacts of blasting operations.

- HSE Specialist (SPV)

  - Support the execution of the safety, health and community safety related plans including this Blasting Management Plan, and ensure site activities (including blasting activities) are carried out safely by EPC contractors and subcontractors in-line with applicable laws, international standards and lender requirements.
  - Conduct regular site inspections (including blasting sites), including pre-blast area checks hazard identification, and risk assessments; follow up on corrective and preventive actions.

- Monitor compliance with blasting safety protocols as well as H&S, ensuring that blasting operations are carried out in line with approved method statements, blasting schedules, and work procedures, with Health & Safety measures fully integrated.

- Project Director (EPC)

  - Define and oversee the implementation of the overall EPC execution strategy in alignment with contract objectives and company standards.
  - Lead interdisciplinary project teams, coordinating EPC functions to achieve key milestones.
  - In case of non-compliance regarding to blasting, ensure appropriate corrective and preventive actions are taken in coordination with the E&S Manager and H&S Manager.

- E&S Manager (EPC)

  - Facilitate coordination with the SPV's E&S Manager for compliance audits and reporting.
  - Implement environmental and social measures through site practices and method statements.
  - Ensure that all conditions and obligations outlined in the Blasting Management Plan as well as other ESMPs are implemented and adhered to during project activities.
  - Coordinate the assessment and solution of grievances with EPC team about the basting related complaints.

- H&S Manager (EPC)

  - Ensure the safe execution of construction activities in compliance with H&S Plan, legal requirements, international standards, SPV and lender obligations.
  - Prepare, review, and improve H&S Plans by integrating blasting control measures into site-specific risk registers, method statements, and monitoring programs.
  - Supervise and support Contractors/Subcontractors to implement blasting related mitigation measures, and monitor their compliance with H&S and NVMP requirements.
  - Coordinate with SPV H&S Manager and EPC HSE Manager to address blasting-related incidents, risks, and community safety concerns.
  - Ensure that all site personnel receive regular training and toolbox talks covering Blasting Management Plan obligations, and safe working practices.
  - Oversee emergency preparedness and response procedures for blasting incidents (e.g., blast vibration exceedances, community complaints).
  - Conduct investigations of blasting-related incidents or complaints, ensure corrective/preventive actions are taken, and report findings to Project Director and SPV.
  - Promote a safety-first culture by ensuring blasting risks are proactively managed and lessons learned are integrated into continuous improvement.

- Site Doctor (EPC)

  - Provide on-site medical support and emergency response, with focus on blasting-related health issues.
  - Conduct periodic health checks and maintain records to monitor impacts on blasting exposure.
  - Recommend and support preventive measures (e.g., hearing protection, work rotation) in coordination with HSE teams.
  - Deliver awareness sessions and medical input for risk assessments and incident investigations related to blasting.

- Archaeologist (EPC)
    - Conduct archaeological surveys and assessments within the project footprint before and during construction, and implement chance-find procedures with proper reporting.
    - Provide training for construction personnel and subcontractors on cultural heritage awareness, including chance-find protocols and legal obligations.
    - Inform blasting personnel about nearby cultural heritage areas and related protection requirements.

- Biodiversity Specialist (EPC)
    - Monitor and report biodiversity impacts of blasting on sensitive species and habitats.
    - Support implementation of mitigation measures under the Biodiversity and Blasting Management Plans.
    - Train and guide construction teams on protecting species from blasting related impacts.
    - Coordinate corrective actions with the Environmental Engineer and E&S Manager when non-compliances arise.

- H&S Chief (EPC)
    - Supervise daily implementation of HSE requirements on-site, with emphasis on blasting related measures.
    - Monitor contractor and subcontractor compliance with the Blasting Management Plan and report deviations to the HSE Manager.
    - Support incident/complaint investigations related to blasting and oversee corrective actions.
    - Maintain site records on blasting monitoring, inspections, and compliance checks.
    - Coordinate with the SPV HSE team during audits, inspections, and reporting.

- H&S Engineer (EPC)
    - Support the implementation and continuous improvement of the Blasting Management Plan across all site activities including blasting.
    - Provide technical guidance to contractors and subcontractors, maintain the site risk register, and carry out inspections and audits.
    - Lead investigations into accidents or unsafe conditions related to blasting activities, ensuring that findings are documented and corrective measures are applied.
    - Report regularly on H&S compliance, risks, and overall performance to the H&S Manager.
    - Provide technical input and guidance to workers on blasting safety measures.

- H&S Technician (EPC)
    - Assist in blasting hazard identification, risk assessments, and inspections of site conditions under the supervision of senior HSE staff.
    - Support implementation of Blasting Management Plan and HSE measures on-site, ensuring safe work practices.
    - Monitor daily use of PPE and adherence to HSE protocols and by workers and subcontractors.
    - Support toolbox talks, drills, and safety briefings while keeping records updated and accurate.
    - Escalate any observed non-compliance of blasting activities or HSE issues to the HSE Engineer or H&S Manager for timely action.

- H&S Worker (EPC)
    - Perform routine safety checks on construction activities and help enforce basic HSE rules on blasting site.
    - Report unsafe acts, incidents, and near-misses from blasting activities to HSE supervisors promptly.
    - Assist with the placement of safety signage , emergency logistics, and support during drills or evacuations related to blasting activities.
    - Participate in blasting site briefings and help maintain clear communication between workers and HSE staff and subcontractors.

- H&S Trainer and Document Controller (EPC)
    - Deliver HSE inductions, refresher courses, compliance to the Blasting Management Plan and awareness sessions tailored to blasting related risks.
    - Maintain updated training matrices, attendance records, and competency certifications for EPC and subcontractor staff related to Blasting Management Plan obligations.
    - Manage document control for blasting-related materials, ensuring that procedures, permits, and records are up-to-date and traceable.
    - Provide necessary documentation during audits and contribute to the continuous improvement of training content.

- Paramedic (EPC)
    - Provide immediate medical care, stabilize injured personnel, and coordinate medical evacuation when needed in the blasting sites.
    - Assist the site doctor with health checks, maintain records, and monitor the condition of medical supplies.
    - Participate in drills and awareness campaigns related to occupational health and safety and blasting.
    - Report blasting-related risks or recurring issues on the blasting sites to the H&S Manager and Site Doctor.

- Environmental Engineer (EPC):
    - Implement and monitor the Blasting Management Plan on-site, including subcontractor compliance.
    - Conduct routine inspections and measurements of noise and vibration levels to ensure mitigation measures are effective near the blasting sites.
    - Maintain accurate records and databases for noise, vibration and air quality monitoring related to blasting activities, and support reporting for audits or regulatory compliance.
    - Support training, toolbox talks, and inductions related to blasting awareness for site personnel.
    - Participate in investigations of blasting-related incidents and coordinate corrective/preventive actions with HSE and E&S teams.
    - Implement and monitor the Blasting Management Plan on-site, including subcontractor compliance.
    - Conduct routine inspections and measurements of noise, vibration and air quality levels; maintain records and report performance to E&S Manager and relevant stakeholders.
    - Coordinate corrective/preventive actions for blasting-related incidents in collaboration with HSE, E&S teams, and subcontractors.

- Integrate Blasting Management Plan requirements into work plans, method statements, and construction activities.

- Community Liaison Officer (CLO) (EPC)

  - Communicate with project-affected communities about blasting activities, including potential noise, vibration and air quality impacts.
  - Provide local residents written notice at least 30 days before blasting, followed by additional written reminders.
  - Share blasting schedules with grazing area users, residents, and local authorities, including the operator's contact details, the specific blasting locations, and the planned dates and time.
  - Log, track, and follow up on community complaints or grievances related to blasting, ensuring timely resolution via the Grievance Mechanism (GM).
  - Support monitoring and documentation of Blasting Management Plan implementation at site level, including subcontractor activities affecting the community.
  - Facilitate equitable community engagement and consultations, ensuring vulnerable or sensitive groups are informed about noise, vibration and air quality impacts of blasting operations.
  - Coordinate with E&S Manager and other project teams to integrate community feedback into Blasting Management Plan updates and corrective actions.

- Blasting Supervisor (EPC)

  - Follow and supervise this Blasting Management Plan and all blasting related procedures during site activities.
  - Ensure personal compliance (including subcontractor carrying blasting activities) and support the correct implementation of Blasting Management Plan requirements on-site.
  - Ensures that no unauthorized person carries out any work related to the use of explosives.
  - Inspects the blasting area to confirm adequacy of the blast specification.
  - Oversee the operation of blast planning to improve processes and practices.
  - Builds the team's knowledge of safe and effective blasting practices.
  - Ensures compliance with operational plans and work instructions.
  - Conducts regular inspections of worksites to promote HSE practices.
  - Manages the service provided by the blast supplier to ensure contractual compliance.
  - Reports any significant deviations from operational plans to the Project Manager.

V. BLASTING PRELIMINARY DESIGN MODELS

Preliminary design models for blasting provided in the sections below are provided by the ESIA Consultant ENCON, detailed blasting models are provided in the ESIA. The main explosive will be ANFO or its equivalents, initiated preferably with non-electric delay systems.
Within the scope of the "Antalya – Alanya Motorway Project," blasting will be carried in tunnel excavations and tunnels are planned at five different locations.

Quantities of Explosive Materials that may be needed during the Works

The quantities of explosives and accessories potentially required during the blasting excavation works for the Antalya – Alanya Motorway Project have been estimated.

The excavation phase is planned to last approximately 3 years, involving blasting for cuttings, foundations, and tunnels. The estimated excavation volume for cuttings and foundations is 17,500 m³, while the total excavation volume for tunnels is expected to be 14,000 m³. It is assumed that blasting will occur 26 days per month, 312 days per year, totaling 936 blasting days throughout the Project duration.

Based on the proposed blasting designs, the estimated quantities of explosives and accessories needed for cuttings and foundation excavations are provided in Table V-I, while those for tunnel excavations are given in Table V-II.

Table V-I: Estimated quantities of explosive materials and accessories to be required for cutting and foundation excavations

Explosives and Accessories	Daily Requirement	Monthly Requirement	Annual Requirement	Total Requirement (Project Duration)
ANFO / Booster-sensitive emulsion explosive	1000 kg	26,000 kg	312,000 kg	936,000 kg
Cap-sensitive emulsion explosive (dynamite)	9,500 kg	2,470 kg	29,640 kg	88,920 kg
Electronic detonator	50 units	1,300 units	15,600 units	46,800 units
Electric detonator	200 units	5,200 units	62,400 units	187,200 units
Non-electric detonator	190 units	4,940 units	59,280 units	177,840 units
Detonating cord	700 meters	18,200 meters	218,400 meters	655,200 meters

Table V-II: Estimated quantities of explosive materials and accessories required for tunnel excavations

Explosives and Accessories	Daily Requirement	Monthly Requirement	Annual Requirement	Total Requirement (Project Duration)
Cap-sensitive emulsion explosive (dynamite)	4,500 kg	1,170 kg	14,040 kg	42,120 kg
Electronic detonator	1,500 units	390 units	4,680 units	14,040 units
Electric detonator	500 units	130 units	1,560 units	4,680 units
Non-electric detonator	30 units	780 units	9,360 units	28,080 units
Detonating cord	10 meters	260 meters	3,120 meters	9,360 meters

V.1 Risk Assessment

The blasting design specifies the use of 10.82 kg of explosive per delay. For quarry operations, this charge is intended to control vibrations at 15 mm/s for durable structures and 8 mm/s for vibration-sensitive structures, with safe distances of 66.8 meters and 98.8 meters, respectively. For tunnels, cuts, and foundation excavations, the same explosive charge is used to limit vibrations to 10 mm/s for durable structures and 5 mm/s for vibration-sensitive structures, with corresponding safe distances of 86 meters and 132.5 meters.

Blast vibration assessments were carried out to identify areas that may be subject to potential impacts based on their proximity to vibration-sensitive structures. For tunnels (Table V-III), and cuts and foundations (Table V-IV), the vibration limits are set at 10 mm/s for durable structures and 5 mm/s for vibration-sensitive structures such as mosques, cultural heritage sites, and schools. In contrast, for quarries and borrow pits (Table V-V), the allowable limits increase to 15 mm/s for durable structures and 8 mm/s for vibration-sensitive structures.

Table V-III: Blast Vibration assessment for tunnels with vibration of 10mm/s for durable structures and 5 mm/s for vibration sensitive structure

Blasting Location	KM	Nearest Settlement/Cultural Heritage Sites	Distance to Sensitive Structures (m)	W (kg)	V (mm/s)	Exceedence of the limit of 10 mm/s for Durable Structures	Exceedence of the limit of 5 mm/s for Vibration Sensitive Structures	Vibration Impact
Tunnel 1	Start Km: 54+311	Sarıabalı	158	10.82	3.77	**-6.23**	**-1.23**	**No Impact**
	End Km: 55+378		40	10.82	34.19	**24.19**		**Potential Impact**
	End Km: 55+378	HRM 8*	177	10.82	3.14		**-1.86**	**No Impact**
	Start Km: 54+311	Student Hostel	700	10.82	0.35		**-4.65**	**No Impact**
Tunnel 2	Start Km: 57+366	Çakış	215	10.82	2.30	**-7.70**		**No Impact**
	End Km: 57+985		750	10.82	0.31	**-9.69**		**No Impact**
	Start Km: 57+366	HRM 8*	53	10.82	21.77		**16.77**	**Potential Impact****
Tunnel 3	Start Km: 60+935	Taşağıl	195	10.82	2.69	**-7.31**		**No Impact**
	End Km: 62+477		80	10.82	11.24	**1.24**		**Potential Impact**
	End Km: 62+477	HRM 11*	196	10.82	2.67		**-2.33**	**No Impact**
	End Km: 62+477	Mosque	845	10.82	0.26		**-4.74**	**No Impact**
Tunnel 4	Start Km: 70+131	HRM 16*	163	10.82	3.59		**-1.41**	**No Impact**
	End Km: 70+475		60	10.82	17.84		**12.84**	**Potential Impact****
	End Km: 70+475		60	10.82	17.84		**12.84**	**Potential Impact****
Tunnel 5	Start Km: 88+671	Ulukapı	150	10.82	4.10	**-5.90**		**No Impact**
	End Km: 89+544		110	10.82	6.74	**-3.26**		**No Impact**
	End Km: 89+544	HRM 36*	248	10.82	1.83		**-3.17**	**No Impact**
	End Km: 89+544	Mosque	854	10.82	0.25		**-4.75**	**No Impact**

**See Chapter 13 of ESIA for the details of the locations of Cultural Heritage sites*
*** Site-specific vibration measures for the protection of cultural heritage sites have been detailed in the Table V-VI to address these potential impacts*

Table V-IV: Blast vibration assessment for Quarries and Borrow Pits with vibration of 15mm/s for durable structures and 8 mm/s for vibration sensitive structure

Blasting Location	KM	Nearest Settlement/Cultural Heritage Sites	Distance to Sensitive Structures (m)	W (kg)	V (mm/s)	Exceedence of the limit of 15 mm/s for Durable Structures	Exceedence of the limit of 8 mm/s for Vibration Sensitive Structures	Vibration Impact
Sarıabalı (AO-1) Borrow Pit	Km 53+800	Sarıabalı	63	10.82	16.49	**1.49**		**Potential Impact**
		Student Hostel	720	10.82	0.33		**-7.67**	**No Impact**
Çakış (TOY4a) Quarry	Km 56+500	Çakış	180	10.82	3.06	**-11.94**		**No Impact**
		Mosque	570	10.82	0.48		**-7.52**	**No Impact**
Kuruçay (TOY4b) Quarry	Km 58+500	Sağırın	800	10.82	0.28	**-14.72**		**No Impact**
		HRM 8*	720	10.82	0.33		**-7.67**	**No Impact**
Dikmen Borrow Pit	Km 83+000	Sarılar	100	10.82	7.86	**-7.14**		**No Impact**
		HRM 20*	100**	10.82	7.82	**-**	**-0.18**	**No Impact**
		Mosque	770	10.82	0.30		**-7.70**	**No Impact**
Bademliyar (TO2) Quarry	Km 104+750	Güçlüköy	1060	10.82	0.18	**-14.82**		**No Impact**
		School	1060	10.82	0.18		**-7.82**	**No Impact**
Uzunlar (TOY5) Quarry	Km 106+000	Uzunlar	910	10.82	0.23	**-14.77**		**No Impact**
Karakaya Quarry	Km 114+200	Karakaya	460	10.82	0.68	**-14.32**		**No Impact**
		School	620	10.82	0.42		**-7.58**	**No Impact**
Saburlar Quarry	Km 117+000	Saburlar	71	10.82	13.61	**-1.39**		**No Impact**
		Mosque	400	10.82	0.85		**-7.15**	**No Impact**
Karamanlar Quarry	Km 119+500	Karamanlar	366	10.82	0.98	**-14.02**		**No Impact**
Soğukpınar Quarry	Km 134+000	Toslak	326	10.82	1.18	**-13.82**		**No Impact**

**See Chapter 13 of ESIA for the details of the locations of Cultural Heritage sites.*
*** Site-specific vibration measures for the protection of cultural heritage sites have been detailed in the Table V-VI to address these potential impacts*

Table V-V: Blast Vibration Assessment for Cut, and Foundation with vibration of 10mm/s for durable structures and 5 mm/s for vibration sensitive structure

Blasting Location	KM	Nearest Settlement/Cultural Heritage Sites	Distance to Sensitive Structures (m)	W (kg)	V (mm/s)	Exceedence of the limit of 10 mm/s for Durable Structures	Exceedence of the limit of 5 mm/s for Vibration Sensitive Structures	Vibration Impact
Cut and Foundation	Serik Access Road Km 2+000	Sarıabalı	30	10.82	54.26	**44.26**		**Potential Impact**
		Mosque	820	10.82	0.27		**-4.73**	**No Impact**
	Serik Access Road Km 1+700	HRM 58	10**	10.82	316.41	**-**	**311.41**	**Potential Impact**
	Km 52+500	Deniztepesi	125	10.82	5.49	**-4.51**		**No Impact**
		HRM 5*	5**	10.82	962.52	**-**	**957.52**	**Potential Impact**
	Km 53+500	Sarıabalı	60	10.82	17.84	**7.84**		**Potential Impact**
		Student Hostel	990	10.82	0.20		**-4.80**	**No Impact**
	Km 58+800	HRM 9*	-**	10.82	-	**-**	**-**	**No Impact**
	Km 66+200	Hocalar	91	10.82	9.14	**-0.86**		**No Impact**
	Km 66+500	HRM 12*	332	10.82	1.15		**-3.85**	**No Impact**
	Km 73+500	Yavrudoğan	32	10.82	48.92	**38.92**		**Potential Impact**
	Km 76+500	Kalemler	26	10.82	68.27	**58.27**		**Potential Impact**
		Mosque	235	10.82	1.99		**-3.01**	**No Impact**
	Km 79+000	Yeniköy	110	10.82	6.74	**-3.26**		**No Impact**
	Km 84+000	Yukarıışıklar	62	10.82	16.92	**6.92**		**Potential Impact**
		Mosque	640	10.82	0.40		**-4.60**	**No Impact**
	Km 85+000	Dikmen	65	10.82	15.69	**5.69**		**Potential Impact**
		HRM 27*	166	10.82	3.48		**-1.52**	**No Impact**
		Mosque	290	10.82	1.42		**-3.58**	**No Impact**
	Km 94+500	Karaöz	57	10.82	19.37	**9.37**		**Potential Impact**
	Km 95+500	Aksaz	44	10.82	29.34	**19.34**		**Potential Impact**
		HRM 38*	15**	10.82	165.06	**-**	**160.06**	**Potential Impact**
	Km 97+500	Hacıali	51	10.82	23.15	**13.15**		**Potential Impact**
		School	510	10.82	0.57		**-4.43**	**No Impact**
	Km 100+500	Hacıaisalı	56	10.82	19.93	**9.93**		**Potential Impact**
	Km 104+500	Uzunlar	121	10.82	5.79	**-4.21**		**No Impact**
		HRM 41*	20	10.82	104.02		**99.02**	**Potential Impact**
		Mosque	260	10.82	1.70		**-3.30**	**No Impact**
	Km 105+500	Uzunlar	144	10.82	4.38	**-5.62**		**No Impact**
		School	800	10.82	0.28		**-4.72**	**No Impact**
	Km 112+000	Yalçıdibi	35	10.82	42.37	**32.37**		**Potential Impact**
		HRM 45*	30	10.82	54.26		**49.26**	**Potential Impact**
		Mosque	660	10.82	0.38		**-4.62**	**No Impact**
	Km 116+000	HRM 47*	258	10.82	1.72		**-3.28**	**No Impact**
	Km 116+500	Çakallar	53	10.82	21.77	**11.77**		**Potential Impact**
		School	330	10.82	1.16		**-3.84**	**No Impact**
	Km 118+500	Çakallar	55	10.82	20.51	**10.51**		**Potential Impact**
	Km 120+800	HRM 57*	10**	10.82	316.41	**-**	**311.41**	**Potential Impact**

Blasting Location	KM	Nearest Settlement/Cultural Heritage Sites	Distance to Sensitive Structures (m)	W (kg)	V (mm/s)	Exceedence of the limit of 10 mm/s for Durable Structures	Exceedence of the limit of 5 mm/s for Vibration Sensitive Structures	Vibration Impact
	Km 121+500	Hacılar	587	10.82	0.46	**-9.54**		**No Impact**
		Mosque	876	10.82	0.24		**-4.76**	**No Impact**
	Km 124+000	Avsallar	211	10.82	2.37	**-7.63**		**No Impact**
	Km 126+500	Akdam	30	10.82	54.26	**44.26**		**Potential Impact**
		Mosque	250	10.82	1.81		**-3.19**	**No Impact**
	Km 130+000	Türkler	130	10.82	5.16	**-4.84**		**No Impact**
		Mosque	350	10.82	1.05		**-3.95**	**No Impact**
	Km 133+000	Soğukpınar	39	10.82	35.61	**25.61**		**Potential Impact**
	Km 133+800	HRM 50*	74	10.82	12.74		**7.74**	**Potential Impact****
	Km 136+000	Toslak	65	10.82	15.69	**5.69**		**Potential Impact**
		HRM 51*	100	10.82	7.86		**2.86**	**Potential Impact****
		HRM 52*	106	10.82	7.16		**2.16**	**Potential Impact****
	Km 140+000	Konaklı	27	10.82	64.26	**54.26**		**Potential Impact**
		HRM 53*	26	10.82	68.27		**63.27**	**Potential Impact****
		Mosque	630	10.82	0.41	**-9.59**		**No Impact**
	Km 141+500	Mosque	250	10.82	1.81	**-8.19**		**No Impact**

**See Chapter 13 of ESIA for the details of the locations of Cultural Heritage sites*
*** Site-specific vibration measures for the protection of cultural heritage sites have been detailed in the Table V-VI to address these potential impacts*

To address the environmental impacts of blasting at the specified locations concerning ground vibration, site-specific actions detailed in have been implemented or are planned for the identified cultural heritage sites (HRM 5, HRM 8, HRM 9, HRM 16, HRM 20, HRM 38, HRM 41, HRM 45, HRM 50, HRM 51, HRM 52, HRM 53, HRM 57, and HRM 58), particularly where vibration-sensitive structures are located within 132.5 meters and the potential for threshold exceedance is elevated.

Table V-VI: Site-Specific Vibration Measures for Cultural Heritage

Cultural Heritage Site	Explanation
HRM 5	This area is currently undergoing salvage excavation. Construction activities will only proceed once the archaeological excavation has been fully completed and the necessary approvals have been obtained from the Board, the Municipality, and the Republic of Türkiye Ministry of Environment, Urbanization and Climate Change. Upon permit approval, minimal explosive charges will be used to prevent damage to the site. (Distance to the blasting location 5 m)
HRM 8	This area is a natural protected zone. Therefore, throughout the entire process, we will reduce the maximum charge per delay (kg) and conduct survey and monitoring activities through an external contractor..(Distance to the blasting location 53 m)
HRM 9	This area was not Registered by the Board and construction permit has been obtained. But in case of Chance Find during the construction, Article 4 of Law No. 2863, the work is to be halted, and the Museum Directorate must be notified.
HRM 16	Lowering the maximum Charge per Delay (kg). (Distance to the blasting location 60 m)
HRM 20	This area is not located on the project route, but is located within the Dikmen Quarry. The HRM-20 registered archaeological site is an aqueduct that supplied water to the ancient city of Side. Because the area has been designated a first-degree archaeological site, the opinion of the Antalya Board will be sought before any activity begins. Additionally, a 100-meter buffer zone will be established between the blasting area and the archaeological site to provide protection, and no activity will be carried out within this zone.
HRM 38	The archaeological site lies at the summit of the hill, whereas the designated blasting area is located along the foothill. Given the topographical separation and distance, vibrations are expected to be attenuated. Furthermore, the recent design change led to the determination of the work area by the shoring (IKSA) wall, which established a clear boundary. Within this defined area, preventive measures can be implemented using a small amount of explosives or through mechanical breaking methods to minimize any potential impact. (Distance to the blasting location 15 m)
HRM 41	Lowering the maximum Charge per Delay (kg). (Distance to the blasting location 20 m)
HRM 45	Lowering the maximum Charge per Delay (kg). (Distance to the blasting location 30 m)
HRM 50	Lowering the maximum Charge per Delay (kg). (Distance to the blasting location 70 m)
HRM 51	Lowering the maximum Charge per Delay (kg). (Distance to the blasting location 100 m)
HRM 52	Lowering the maximum Charge per Delay (kg). (Distance to the blasting location 106 m)
HRM 53	Lowering the maximum Charge per Delay (kg). (Distance to the blasting location 29 m)
HRM 57	With the design change, the route was moved outside the archaeological site, reducing potential impacts. A preliminary survey will be done to assess the situation, and measures like reducing explosives use will be applied. (Distance to the blasting location 10 m)
HRM 58	With the design change, the route was moved outside the archaeological site, reducing potential impacts. A preliminary survey will be done to assess the situation, and measures like reducing explosives use will be applied. (Distance to the blasting location 10 m)

For HRM 5, salvage excavation is underway, with construction paused until archaeological work is completed and approvals are secured from the Board, the Municipality, and the Republic of Türkiye Ministry of Environment, Urbanization and Climate Change. HRM 8, located 53 meters from the blasting site within a natural protected area, will involve reduced maximum charge per delay and continuous monitoring by an external contractor. HRM 9 has not been registered by the Board and a construction

permit has been granted for working on this area. In accordance with Article 4 of Law No. 2863, if any archaeological remains are encountered during construction, all activities must be halted immediately and the Museum Directorate must be notified. HRM 16, at 60 meters, will reduce the maximum charge per delay. HRM 20 is a 1st degree archaeological site, and to protect it, a 100-meter buffer zone will be established between the blasting location and the site. This buffer ensures the preservation of the archaeological area while minimizing any potential impact from the blasting activities. For HRM 38, which is already located on a hilltop, the blasting activities are confined to the lower slopes below, and a recent design revision incorporating a shoring wall has clearly defined the work zone. Within this boundary, the use of minimal explosives or mechanical breaking methods will help reduce potential vibration impacts on the site above. HRM 41, HRM 45, HRM 50, HRM 51, HRM 52, and HRM 53, at distances of 20, 30, 70, 100, 106, and 29 meters respectively, will implement tailored reductions in maximum charge per delay based on proximity and sensitivity. For HRM 57 and HRM 58, route changes have moved blasting outside the archaeological sites, though preliminary surveys and reduced explosive use will address residual risks. These measures ensure compliance with ground vibration thresholds (15 mm/s at 66.8 m and 8 mm/s at 98.4 m for quarries; 10 mm/s at 86 m and 5 mm/s at 132.5 m for tunnels and cut-and-formation works) while protecting cultural heritage and nearby settlements.

At the Kuruçay (TOY4b) Quarry and at Km 52+500, Km 85+000, Km 95+500, Km 112+000, Km 136+000, and Km 140+000, the blasting pattern will be selected based on the presence of vulnerable sensitive.

In addition to vulnerable structures, some durable structures located nearby may also experience potential impacts due to flyrock and ground vibrations. The areas potentially affected include the neigborhoods of Sarıabalı, Taşağıl, Yavrudoğan, Kalemler, Yukarıışıklar, Dikmen, Karaöz, Aksaz, Hacıali, Hacıaisalı, Yalçıdibi, Çakallar, Akdam, Soğukpınar, Toslak, and Konaklı.

To reduce potential environmental impacts, it is recommended to use low-charge and delayed blasting techniques in areas close to settlements. Protective nets or coverings should be used to secure blasting zones and minimize the risk of rock throw. In addition monitoring systems for vibration should be installed in high-risk areas, and local communities should be informed prior to blasting activities with appropriate safety measures in place.

Due to the highly variable and often unpredictable geological conditions found within a tunnel the start and end points only have been defined in the blasting plan. The specific details regarding the blasting approach, including the charge per delay and blast pattern, will be determined by a consultant as the work progresses. This tailored risk mitigation strategy is necessary because the content and composition of the rock cannot be fully known in advance. Also, the consultant will conduct a blast attenuation survey to precisely determine how vibrations decrease with distance and the attenuation, ensuring that the impact on nearby receptors is accurately measured and kept within safe limits.

In addition, to enhance the efficiency and safety of blasting and drilling operations, the Project engaged a specialized contractor. In cases where Potential Impact Zones are identified and cannot be mitigated through design modifications or excavation adjustments, the contractor will implement a tailored risk mitigation strategy. This includes modifying the blast pattern and adopting a specialized low-risk blasting approach, such as reducing the charge per delay, to minimize potential hazards while maintaining operational effectiveness. Additionally, the a specialized consultant will be responsible for conducting a blast attenuation survey to determine the distance at which vibration levels decrease to lower magnitudes.

In the absence of mitigation measures, vibration damage and disturbances may occur, particularly in buildings located very close to construction areas based on worst-case estimates. However, it should be noted that all impacts related to the land preparation and construction phase will be intermittent and temporary (short-term and reversible) impacts for at most 3 years.

VI. BLASTING MANAGEMENT APPROACH

Blasting operations, by nature, involve risks that must be carefully managed to prevent harm to people, communities, and the environment. The potential for harm to human life and community safety represents the most severe consequence of inadequate blasting control. Therefore, risk mitigation measures shall prioritize the prevention of injury, protection of community well-being, and safeguarding of sensitive sites above all other considerations.

Blasting operations under the Antalya–Alanya Motorway Project will be conducted in quarries, tunnel sections, and cut-and-fill areas, and will follow a strict safety and environmental control protocol. Explosives will be carried to the site by authorized and licensed company, under the supervision of the Main Contractor, SPV and EPC in accordance with national legislation and international best practices. Blasting-related risks to be managed include but not limited to:

- Fly-rock projection,
- Ground vibration,
- Air overpressure,
- Blasting noise, and
- Dust and particulate emissions.

Dust emissions, while typically secondary, may contribute to temporary increases in PM_{10} and $PM_{2.5}$ levels, especially in dry weather and during surface blasting. Dust control measures will be applied as needed, including wetting of blasting areas and covering of loose materials. To manage these risks effectively, the following key measures will be implemented:

- Definition and enforcement of exclusion zones to prevent unauthorized access,
- Notification to nearby communities and relevant authorities,
- Use of proper charge calculation, blast timing, and detonation sequence design, and
- Post-blast inspections and incident documentation.

As part of the Environmental and Social Impact Assessment (ESIA) process, baseline studies and modelling studies near tunnel portals, quarries, and residential areas were assessed to support impact prediction and mitigation planning.

The Plan will be implemented in close coordination with the mentioned plans in Section III, to ensure comprehensive risk coverage and consistent safeguards.

VII. MITIGATION MEASURES FOR IMPACTS OF BLASTING

The following measures will be implemented throughout the construction phase to ensure the safe procurement, transport and use of explosives along with blasting activities to minimize risks to workers, communities, and the environment.

VII.1 Procurement of Explosives

- Explosives will be sourced only from licensed, authorized suppliers in compliance with Turkish regulations and international standards.
- Supplier will be prequalified based on legal compliance, HSE performance, and community safety record.
- Permits will be obtained from relevant local authority before any blasting works.

VII.2 Transport of Explosives

- Transport from the supplier's licensed facility to the site will be undertaken by licensed/approved operators using designated vehicles that meet regulatory requirements.
- All transport will comply with the Regulation on Transportation of Hazardous Materials by Road and relevant driver certification requirements.
- Vehicles will be inspected for mechanical condition (brakes, electrical systems) before transportation from the supplier and fitted with hard tops.
- Pre-transport checks will confirm suitable vehicle with functional fire extinguishers, route safety, weather conditions, and escort arrangements.
- No smoking, open flames, or unattended vehicles will be allowed during loading/unloading or transit.
- Explosives and detonators will be transported separately, in approved containers, with secure stacking to prevent damage/wetting.
- Within the project area, explosives will only be moved by authorized, trained operators using approved vehicles.
- Delivery logs will be signed upon receipt at the site.
- Only non-sparking materials may be used in contact with the cargo, which must be covered with fire- and water-resistant tarpaulins.
- Vehicles carrying explosives, blasting agents, or related supplies must never enter repair garages or workshops.
- Such vehicles may not be left unattended at any time.

VII.3 Handling and Use of Explosives

- Only trained, licensed blasting personnel will handle explosives.
- The Blasting Engineer and H&S engineer will conduct pre-blast safety checks, including:
  - Placement of safety mats,
  - Establishment of exclusion zones, and
  - Installation of warning signage and barricades.
- Misfire procedures will be implemented, including minimum re-entry wait times and controlled disposal of misfired charges.
- PPE requirements for blast crew (hearing, eye/face, head protection) will be enforced. Respiratory protection equipment will be of the suitable type and filter type based on the hazards that have been exposed.

VII.4 Blasting Operations

- The local gendarmerie and nearby communities will be notified 30 day before blasting and again prior to the blasting.
- An acoustic alert system will be used prior to each blast to ensure that individuals in potentially impacted locations (such as nearby grazing area users or settlements exposed to blasting noise) are warned.
- EPC CLO's will share the blasting schedules with grazing area users, residents, and local authorities, including the operator's contact details, the specific blasting locations, and the planned dates and time through public bulletin boards and verbal announcements through local meetings.
- Blasting operations will be clearly marked on at the entrance of the site with position, time, and date. The explosive warning signs and signals will be known to all personnel.
- Temporary road closures will be established within the exclusion zones.
- If concerns are raised regarding the strength of blasting vibrations, the Contractor or its subcontractors, under the Blasting Supervisors' oversight, will carry out vibration monitoring at different distances from the blast point to record seismic intensity.
- Blasts will only occur under acceptable weather conditions.
- Explosive charges will be optimized accordingly. Detailed records of blasting operations (location, date, the amount of explosives, and the responsible parties) will be kept and blasting related impacts will be closely monitored.
- Modern blasting techniques will be employed to minimize vibration, including the use of millisecond delays with low charge weights, which will be determined based on geological formation and rock density.
- Blasting activities will adhere to the limit values specified in the Air Pollution and Emissions Management Plan and the Noise and Vibration Management Plan. Compliance with regulatory limit values will be monitored to minimize impact in potential sensitive receptors.
- The Project's grievance mechanism will be active for any complaints related to noise/vibration, air quality or any blasting related impacts. Complaints will be thoroughly evaluated, and corrective actions will be implemented as necessary.
- Blasting works will be designed and scheduled to minimize vibration and its adverse effects.
- Blasting will be carried out at designated times in order to prevent disturbance.
- According to the Table V-III, Table V-IV, and Table V-V, grazing areas, settlements, or any cultural heritage sites stated having potential impact shall be inspected by the EPC

Environmental Engineer or CLO and a technical advisor. These inspections shall include photographic documentation of the site (before and after blasting) with a technical report. Based on the inspections, and in case of any damage caused by blasting activities, the incident will be recorded and followed up accordingly.

- Vibrations that could negatively affect nearby buildings, vegetation, or other sensitive structures will be systematically observed and recorded.
- Whenever explosives are applied, a detailed blast plan will be prepared in advance.
- A specialized blasting team will be engaged to ensure safe and efficient operations.
- Before any blast holes are charged, the designated area will be clearly identified using flags, cones, or other highly visible boundary markers.
- All staff engaged in or present around blasting operations will be given thorough instruction and training on relevant safety rules and procedures.
- EPC will safeguard personnel by ensuring regular safety training, appointing competent supervisors, providing protective equipment, maintaining effective communication, and enforcing notification protocols (covering both pre-blast and emergency alerts).
- In case of misfires, access will remain restricted until the charge is located, corrected, and safely re-fired.
- To minimize disturbance to the community, blasts will, where possible, be scheduled during busier times of day rather than quiet periods.
- Overly confined charges, such as those with excessive burden or subdrilling, will be avoided; primers will not be placed in subdrilled sections. If inadequate relief is expected in subsequent rows, one delay period may be skipped between rows.
- Increasing the delay intervals between charges may be considered, particularly for large charge weights at greater distances from structures, though this can lengthen the blast and heighten sensitivity among local residents.
- When sequencing delays within a row, the smallest delay will be assigned to the blast hole closest to the structure of concern, ensuring the detonation progresses away from that structure.
- After blasting, the site will be inspected to ensure no misfires remain and that ground conditions are safe before work resumes.
- During the entire construction phase, regular surveys will be carried out throughout blasting and drilling activities by the contractor, capturing photographic records of all structures adjacent to blasting areas to detect and evaluate any damage that may arise post-blasting. Explosive charges will be optimized accordingly.
- Detailed records of blasting operations will be kept and blasting related impacts will be closely monitored.
- Modern blasting techniques will be employed to minimize vibration, including the use of millisecond delays with low charge weights, which will be determined based on geological formation and rock density.
- The number of blasted holes per shot and total charge amounts per shot will be optimized to comply with the regulatory limit values and minimize fly rock incidents.
- Blasting activities will adhere to the limit values specified in the Regulation on Environmental Noise Control for ground vibrations. Records of air shock and vibration measurements will be maintained, and compliance with regulatory limit values will be monitored to minimize impacts on local residents.
- The Project's grievance mechanism will be active for any complaints related to vibration impacts. Complaints will be thoroughly evaluated, and corrective actions will be implemented as necessary.
- Construction works will be designed and scheduled to minimize vibration and its adverse effects.
- Blasting will be carried out at designated times in order to prevent disturbance.
- Construction machinery and equipment will be operated by taking into account the recommended minimum working distances.

- A specialized blasting team will be engaged to ensure safe and efficient operations.
- In locations where Potential Impact Zones are identified and cannot be mitigated through design or excavation changes, the contractor will implement tailored risk mitigation strategies
- Modifying blast patterns and using low-risk techniques, such as reducing charge per delay, to minimize hazards.
- For HRM 8, the relevant commissions decisions needs to be waited and based on the decision specialized monitoring needs to be done.
- Following blasting, and before re-entry, a check shall be made to ensure that atmosphere is fit for re-occupation and that it is safe to commence working.
- Prior to the blasting operations, the sensitivity of nearby settlements/buildings against noise and vibration will be assessed. Buildings located within 100 meters of major vibration sources will be identified and assessed for vibration sensitivity prior to construction. Structural conditions of buildings located within 100 meters of the motorway alignment will be recorded before and after construction works to assess any possible vibration-induced damage.

- **to Reduce Ground Vibrations**
  - Avoid overly confined charges caused by excessive burden or subdrilling, and do not place the primer in the subdrilling. If a row of blastholes does not have sufficient relief, skip a delay between rows.
  - Increase the delay time between charges, especially when firing large charge weights at significant distances from structures. While effective, this may prolong the blast and heighten public concern.
  - When arranging sequential delays within a row, place the shortest delay in the hole nearest to the structure, ensuring the blast moves away from it.
  - Schedule blasting during busy times of the day (e.g., lunchtime or after school hours) to minimize public sensitivity, and avoid blasting during typically quiet periods whenever possible.

- **to Reduce Airblast**
  - Do not use unconfined explosives. If surface detonating cord is applied, it should be buried; cords with lighter loads require less burial depth.
  - Drill holes with precision to maintain the intended burden, which is especially critical for inclined holes.
  - Reorient or reduce the height of a high free face when it is directed toward nearby populated areas.
  - Avoid blasting during early mornings, late afternoons, or at night when temperature inversions are likely, and refrain from blasting when strong winds blow toward communities.
  - Prevent excessively long delays that may cause a blasthole to lose confinement before detonation.

- **to Reduce Dust and Gases**
  - Wait briefly before re-entering the blast area, particularly if orange-brown nitrogen oxide fumes are visible. Persistent fumes should be investigated and corrected. Common causes of excessive nitrogen oxides include poor blasting agent mixtures, deterioration of agents, using non-water-resistant products in wet holes, or ineffective blasting due to insufficient confinement.
  - Apply dust suppression when needed.

VII.5 Emergency Preparedness

- All staff involved in blasting and hazardous materials management will receive training on emergency procedures, spill response, and safe handling, in line with the Emergency Preparedness and Response Management Plan and the Hazardous Material Management Plan.

VIII. TRAINING

The training program for blasting operations will be structured to identify competency requirements for each role involved, including blasting engineers, shotfirers, safety officers, monitoring staff, and other relevant personnel. These requirements will be defined in accordance with legal obligations, project standards.

All project employees and subcontractor personnel will receive induction training prior to commencing work. This will include hazard awareness related to blasting activities, correct use of PPE, safe working distances and exclusion zones, and emergency response procedures in the event of incidents such as misfires, premature detonations, or fly rock. Personnel with responsibilities for handling, transporting, or using explosives will be provided with detailed instruction on approved handling techniques, and immediate actions to be taken in case of unsafe conditions or explosive residues. This training will also cover coordination with the gendarmerie and compliance with all relevant permits.

Practical exercises will be used where appropriate to ensure competence in using relevant equipment and interpreting results. All training activities will be documented, including trainer and participant names, date, topics covered, and records will be maintained.

IX. MONITORING

A structured internal monitoring program will be implemented to assess the effectiveness of blasting-related mitigation measures outlined in this Plan during the construction phase of the Project. The scope and frequency of monitoring activities will be periodically reviewed and revised where necessary, based on site-specific blasting conditions, monitoring results, stakeholder concerns, or changes in applicable regulations and good international industry practices.

Monitoring activities will be coordinated by the EPC E&S Manager and their team, in close collaboration with the H&S Manager, blasting supervisors, and the appointed competent blasting engineer. Key responsibilities will include verifying the implementation of site-specific blasting plans, checking compliance with approved blast designs and schedules, and ensuring the consistent application of safety measures for workforce protection, community safety, and environmental safeguarding—particularly for sensitive receptors such as settlements, schools, healthcare facilities, historical sites, and ecologically sensitive habitats.

The performance of contractors and subcontractors in implementing blasting safety and environmental protection measures will be reviewed through environmental audits, site supervision reports, and field observations. Any identified non-conformities will trigger immediate corrective and preventive action plans. Follow-up assessments will be conducted to verify the effectiveness of implemented measures and to ensure recurrence is prevented.

The Blasting Engineer, together with the EPC Environmental Engineer and EPC's CLO's will assess conditions before, during, and after blast.

If there is a complaint from sensitive receptors (e.g., residents, schools, or hospitals) regarding blasting impacts—such as excessive vibration, noise, dust, or damage—targeted sampling and monitoring will be conducted at the complaint location in accordance with ESIA requirements and applicable blasting regulations.

Monitoring efforts will be guided by the framework provided in Table IX-I, which outlines the parameters to be monitored, the corresponding monitoring locations, frequency of measurements, and responsible parties. These monitoring activities will be essential for evaluating the effectiveness of blasting impact and mitigation measures, ensuring full compliance with national regulations and Project standards.

Table IX-I: Key Monitoring Activities

Parameter	Monitoring Station / Location	Monitoring Method	Monitoring Frequency	Responsible Parties
Pre-blast warning and public notification	Around the blasting site	Notification of relevant gendarmerie unit and local community prior to blasting operation; public announcements and on-site warnings issued before blast and during the blast	Prior to blasting event	SPV EPC Sub-Contractor
Pre-blast site safety verification (warning signs, exclusion zones)	Blasting site	Visual inspection of warning signage, and exclusion zones	Prior to blasting event	SPV EPC Sub-Contractor
Fly rock risk assessment	Blast site and surrounding exclusion zone	Post-blast inspection	After blast	SPV EPC Sub-Contractor
Integrity of nearby roads, utilities, and structures	Areas within influence zone of blasting	Site inspection and damage assessment	Before and after blast	SPV EPC Sub-Contractor
Statistics on the grievances received on impacts related with blasting operations	The field subject to the complaint	Review of grievance logs	Weekly	SPV EPC
Blasting activities	Location of quarries	Site audit	Daily	SPV EPC Sub-Contractor

*

In cases of non-compliance identified through internal oversight audits, AAOİAŞ will ensure that corrective and preventive measures are promptly implemented in coordination with the Contractor (Limak) and all relevant subcontractors.

All findings related to blasting activities, including exceedance of limit values, non-compliance incidents, or complaints received from surrounding communities, will be documented in accordance with national environmental regulations and Project procedures. In the event of non-compliances—such as significant exceedance of short-term or long-term limit values—AAOİAŞ will ensure that the issue is reported.

X. KEY PERFORMANCE INDICATORS

The following Key Performance Indicators (KPIs) will be monitored, verified, and evaluated.

Table X-I: Key Performance Indicators – Construction Phase KPIs

Monitoring Parameter / Performance Indicator	Target	Frequency	Responsible Party
Blast notification to community and on-site staff	100% of blasts with timely notifications issued	Prior to each blast	SPV, EPC
Pre-blast site safety verification (warning signs, exclusion zones)	100% compliance prior to each blast	Prior to each blasting event	SPV, EPC
Explosives transport compliance (route safety, regulatory checks)	100% compliance with transport procedures	Before each blast	SPV EPC
Weather condition checks before blasting (wind speed, direction, temperature)	Blasting only under acceptable weather conditions	Prior to each blasting event	SPV, EPC
Statistics on the grievances received on impacts related with blasting operations	Zero unresolved grievances	Upon each grievance	SPV, EPC
Verification of blasting permits	100% valid permits and licenses	Quarterly	SPV EPC

XI. AUDIT AND REVIEW

The implementation of this Plan should be regularly monitored and reviewed in accordance with the ESMMP. Each item below should be documented and reported as outlined in the Plan:

- Blasting-related incidents,
- Exceedances of vibration or air overpressure limits,
- Labor-related incidents, and
- Non-conformities.

Contractors and subcontractors should be subject to audits conducted by the Project Sponsor within the scope and schedule defined in the Contractor and Subcontractor Management Plan. These audits and the associated records should be managed in compliance with the Project's established management plans. Records to be reviewed during blasting audits will include, but are not limited to:

- Weather condition checks prior to blasting
- Pre-blast safety checklists
- Blast design and execution records, and
- Incident and grievance logs related to blasting impacts.

Observations and deficiencies identified during audits should be recorded in formal audit reports, and all findings requiring improvement should be registered under Corrective Actions. Project management should review audit outcomes and corrective action records, follow up on progress, and ensure that additional measures are implemented where necessary to ensure full compliance with labor legislation and international standards.

XII. REPORTING

Regular reporting will be conducted to ensure the effective implementation and continuous improvement of blasting management measures throughout the construction phase of the Project. Reporting will address both internal monitoring and auditing outcomes, as well as external compliance obligations and stakeholder engagement requirements.

Based on monitoring results, necessary corrective and preventive actions will be identified, and any required updates will be incorporated into this Plan. The blasting safety training program will also be revised accordingly to address observed gaps. Regular audits and inspections will be conducted to verify that all blasting activities are undertaken in accordance with the provisions of this Plan, approved blast designs, and relevant permits.

The Quarterly Environmental and Social Monitoring Report will cover at least, but not be limited to, the following items. The report will be prepared by the SPV with input data provided by the EPC to evaluate the Project's performance and compliance with related plans:

- KPIs and performance trends (see Table X.1),
- Current status of key blasting-related monitoring activities (see Table IX.1),
- Relevant blasting-related training activities completed and attendance registers maintained,
- Legal authority audit reports (e.g., blasting permits),
- Site inspection logs, pre-blast checklists, and post-blast inspection findings, and
- If exists, records of grievances related to blasting impacts and associated resolutions.

In addition, the following external reporting will be done:

- All blasting-related incidents, exceedances of vibration or air overpressure limits, labor-related incidents, and non-conformities will be appropriately documented, notified, and reported in accordance with the procedures and terms defined in this Plan accordance with established procedures the terms and conditions by EPC to SPV.
- Incident notification and reporting to relevant Turkish regulatory bodies (e.g., Ministry of Environment, Urbanization and Climate Change, General Directorate of Mining Affairs, local gendarmerie) will be performed in line with applicable legislation and as stipulated in permits and licenses.
- Lenders will be notified of incidents pursuant to the terms and conditions agreed upon in the Finance Agreements through the SPV.

All personnel are encouraged to raise concerns, suggestions, or complaints related to blasting activities through the established grievance mechanism by completing the grievance form. The communication channels available for submitting grievances are outlined in the Stakeholder Engagement Plan.

QUARRY MANAGEMENT PLAN

REVISION STATUS		
Revision Date	**Rev. No**	**Explanation**
08.09.2025	00	This plan is prepared according to Environmental and Social Due Diligence comments

QUARRY MANAGEMENT PLAN

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LIST OF ABBREVIATIONS

AAOİAŞ	Antalya-Alanya Otoyolu İnşaat Yatırım ve İşletme A.Ş.
QMP	Quarry Management Plan
CLO	Community Liaison Officer
CO	Carbon Monoxide
E&S	Environmental and Social
EHS	Environmental, Health, and Safety
EPC	Engineering, Procurement and Construction (Limak İnşaat Şanayi ve Tic. A.Ş.)
ESIA	Environmental and Social Impact Assessment
ESMMP	Environmental and Social Management and Monitoring Plan
ESMS	Environmental and Social Management System
EU	European Union
HC	Hydrocarbons
HSE	Health, Safety and Environment
H&S	Health and Safety
IFC	International Finance Corporation
KPIs	Key Performance Indicators
Limak	Limak İnşaat Şanayi ve Tic. A.Ş.
SPV	Special Purpose Vehicle (Antalya-Alanya Otoyolu İnşaat Yatırım ve İşletme A.Ş.)
PS	Performans Standards
WHO	World Health Organization

QUARRY MANAGEMENT PLAN

I. INTRODUCTION

Ministry of Transport, and Infrastructure (former Ministry of Transport, Maritime Affairs and Communications), General Directorate of Highways ("KGM" or "the Administration"), as the owner of the Antalya-Alanya Motorway Project, has tendered for a contract in accordance with the Law on Implementation of Some of the Investments and Services in the Framework of Build, Operate and Transfer Model (Law No: 3996). Following the tendering process, KGM has awarded Antalya-Alanya Otoyolu İnşaat Yatırım ve İşletme A.Ş. (AAOİAŞ or the Project Sponsor) with a Build, Operate and Transfer (BOT) contract for the implementation of the Project. Accordingly, AAOİAŞ will be referred as Project Sponsor[1] in the scope of this report. The main contractor for the Project has been designated as Limak and will henceforth be referred to as the Contractor (or EPC).

The project is designed to connect the districts of Serik and Alanya via the Manavgat district of Antalya province. The Project will enhance the existing transportation network services with its surrounding provinces: Burdur, Muğla, Konya, Isparta, Karaman and Mersin. Various environmental, social, and technical studies have been conducted along the initial route of the Project tendered by the KGM. Based on these studies, the route was optimized, incorporating engineering practices and addressing environmental and social considerations, particularly issues of involuntary and economic resettlement, before being finalized. According to the most current design, the total length of the Motorway, which will be a dual carriageway of mostly 3 and partially 2 lanes (3x2 and 2x2) in each direction, is 117.8 kilometers including the main carriageway and the access roads[2].

This Quarry Management Plan ("QMP" or "Plan") has been prepared by Antalya-Alanya Highway Construction Investment and Operation Inc. ("AAOİAŞ" or "SPV") for the Antalya-Alanya Highway Project ("Project") in accordance with national legislation, the Equator Principles ("EP"), the International Finance Corporation ("IFC") Performance Standards ("PSs"), and the international standards that reference the relevant legislative sections. The Plan covers the construction phase of the Project.

I.1 Project Description

The Project starts at Serik Interchange (Km: 52+000) and then proceeds eastward, following the corridor at the foothills of the Taurus Mountains within the boundaries of Serik and Manavgat districts, ending at north of Konaklı neighborhood of Alanya District (Km: 136+000). From this point onwards, the route turns southward with a 2x2 lane connection road and connects to the D400 state road at the Alanya West Interchange. As of April 2025, the current Project design includes a total of 117.8 kilometers of road, comprising 84 kilometers of main road (motorway) and 33.8 kilometers of access roads.

The map showing the construction components and road route within the scope of the Project's construction activities is provided in *Figure I-1.*

[1] The BOT Contract uses the term "Appointed Company" to refer Project Sponsor
[2] It should be noted that the environmental and social baseline characterization, maps and scoping assessments provided in this report are based on the most current design

QUARRY MANAGEMENT PLAN

Figure I-1.Map Showing the Locations of Construction Compounds

Other structures to be built as part of the project are as follows:

- 16 viaducts,
- 22 bridges,
- 305 culverts,
- 25 interchanges,
- 56 overpasses,
- 43 underpasses, and
- 5 tunnels.

I.2 Purpose and Scope

The purpose of this Plan;

- Defining country legislation and project standards,
- Defining the duties and responsibilities of the personnel, and
- Identify measures and corporate targets to reduce resource consumption, to avoid or, when avoidance is not possible, minimize and control impacts on the environment resulting from environment and greenhouse gases during the construction phase.

This management plan is a living document developed with the best available information and will be reviewed and revised as necessary due to the nature of the construction and progress.

The Plan has been developed to provide further details on the measures to be implemented during the construction phase of the Project to ensure that the actual environmental impacts are consistent with those evaluated in Environmental and Social Impact Assessment (ESIA) and that mitigation measures are applied as intended and effective. The requirements set out in this Plan are applied to all activities during the construction phase of the Project, including those carried out by subcontractors.

This Plan has been developed according to the Turkish regulatory framework, International Finance Corporation (IFC) Performance Standards (PSs) and IFC General and Sector Specific Environmental, Health and Safety (EHS) Guidelines, IFC Environmental, Health, and Safety Guidelines for Railways, IFC Environmental, Health, and Safety Guidelines for Construction Materials Extraction and related EU Directives.

The Plan has been developed in alignment with applicable national legislation and relevant international standards, including the requirements of international financial institutions. This plan will provide mitigation alternatives and an impact monitoring schedule in accordance with Turkish and international regulations and standards.

This Plan should be applied by all parties involved in the construction phase, including the Project Sponsor, Antalya-Alanya Otoyolu İnşaat Yatırım ve İşletme A.Ş. (AAOİAŞ), the Main Contractor (EPC or Limak), and all subcontractors. Responsibilities for implementation, monitoring, and reporting of resource efficiency related issues should be clearly assigned. Necessary updates to the Plan should be considered in case of changes in project design, construction methodology, or regulatory requirements.

The purpose of this Plan is to set out the strategic approach to manage and mitigate the impacts associated with the extraction of aggregates, gravel, sand and rock required for construction of the Project.

The aggregate, gravel sand and rock material will be supplied from the defined quarries and borrow areas within the quarry and borrow pit areas as well as by winning material during blasting and major excavations within the scope of the Project.

This QMP identifies the risks associated with both the immediate and ultimate extraction needs and provides mitigation strategies to be adopted by the SPV, EPC Contractor and all subcontractor to ensure that the risk is minimised to acceptable levels. The SPV, EPC Contractor and all subcontractor will be responsible to maintain this plan so that it is updated and aligned with the most recent construction design and delivery schedule.

The objectives of the QMP are as follows:

- Ensure adequate operational standards to the correct management of the areas planned to be exploited for rockfill material, aggregates as well as for the other borrow areas (sand, gravel);
- Assess the key environmental and social issues associated with various activities undertaken;
- Detail all the environmental and social safeguard measures to be implemented for the operation of quarry and borrow areas; and
- Verify the effectiveness of mitigation measures.

This Plan applies to all Project activities under the Contractor's supervision, its subcontractors and to all employees. The Contractor is the main responsible for the implementation of this Plan. Subcontractors will be responsible to work in line with all environmental and social management systems (ESMS) of the Contractor. This Plan applies to normal conditions during the construction phase activities and it is a living document, and the responsibilities, procedures and compliance actions should be updated as appropriate.

II. LEGISLATIVE FRAMEWORK AND REFERENCE STANDARDS

This section includes policies, standards and requirements of reference for this Plan that are applicable for, but not limited to, construction phase of the Project. Project standards are described in the Project ESIA and are listed below:

- National legislative requirements and all permits, licenses and approvals
- IFC PSs
- Equator Principles (EPs) IV
- Other good international industry practices (GIIP) including ISO 9001:2015 - Quality Management Systems, ISO 14001:2015 – Environmental Management Systems and ISO 45001:2018 - Occupational Health and Safety Management Systems
- International Conventions and Protocols Türkiye is a party to
- The Contractor's Quality Policy, Health, Safety and Environmental Policy and related practices and procedures.

II.1 National Requirements

The following Turkish laws and regulations will be used as the legal basis:

- Environmental Law No. 2872
- Regulation on Decreasing the Ozone Depleting Materials
- Regulation on Reduction of Sulphur Content of Some Fuel Types
- Regulation on Control of Exhaust Gas Emission and Quality of Fuel and Diesel
- Regulation on Monitoring of Greenhouse Gases Emissions
- Groundwater Law, Law No: 167,
- Regulation on Management of Surface Water Quality
- Regulation on the Water for Human Consumption of the Ministry of Health of Turkey, limit values for drinking and utilization waters
- Energy Efficiency Law No. 5627 dated 18/4/2007
- Regulation on the Improvement of the Energy Sources and the Efficiency in the Energy Usage
- Regulation on Assessment and Management of Environmental Noise
- Regulation on Environmental Noise Generation due to Equipment Used in Open Space
- Law on Protection of Soil and Land Use
- Regulation on Safety Data Sheets for Hazardous Substances and Mixtures
- Regulation on Registration, Evaluation, Permitting and Restrictions of Chemicals
- Regulation on the Classification, Labelling and Packaging of Hazardous Substances and Mixtures

II.2 International Standards and Conventions

In addition to national requirements, the following international guidelines frameworks, standards and agreements should be considered to ensure alignment with best practices and financial institution requirements:

To ensure responsible operations, AIIB adheres to policies addressing environmental and social impacts as outlined in its Environmental and Social Framework (“ESF”) document. Updated in June 2024, the ESF reflects AIIB's commitment to international standards and sustainable development practices. The ESF includes the Environmental and Social Policy (ESP), which sets mandatory requirements for all projects, supported by Environmental and Social Standards (“ESSs”).

The United States International Development Finance Corporation (“DFC”) applies its Environmental and Social Policy and Procedures (“ESPP”) to ensure that all investments meet strong environmental and social standards. The ESPP, revised in 2024 after broad stakeholder consultation, guides DFC through the full investment cycle, covering pre-investment reviews, public disclosure of high-risk projects, and post-investment monitoring.

The World Bank manages the environmental and social risks of its projects through the Environmental and Social Framework (ESF). At the core of the ESF are 10 ESS that are applied to borrowers and guide project preparation and implementation. These standards cover the following:

Moreover, the following standards, guidelines and directives should be used to align Project practices with international lender requirements and good practice environmental and social management:

- IFC Performance Standards (2012), specifically:
  - Performance Standard 3: Resource Efficiency and Pollution Prevention
  - Performance Standard 4: Community Health, Safety, and Security
- IFC Environmental, Health and Safety (EHS) General Guidelines (2007)
- IFC EHS Guidelines for Toll Roads (2007)
- IFC Guidance Notes (2012)

- Equator Principles IV (2020)
- EU Ambient Air Quality Directive (2008/50/EC)
- European Landscape Convention (entered into force in 2000, ratified by Türkiye in 2003)
- European Union Road Safety Policy Guidelines and Directives
- World Health Organization (WHO) Ambient Air Quality Guidelines (2005 and 2021)

These references should be used to guide the implementation, monitoring, and performance evaluation of air pollution and emissions control measures on-site throughout the construction phase.

III. LINKAGE WITH OTHER PROJECT PLANS AND PROCEDURES

This Plan is supported by other management plans and procedures developed under the Environmental and Social Management System (ESMS) of the Project. The following plans and procedures are particularly relevant and should be implemented in coordination with the Quarry Management Plan:

- Solid Waste Management Plan
- Water Quality, Wastewater and Storm Water Management Plan
- Spill Response Management Plan
- Community Health and Safety Management Plan
- Traffic Management Plan
- Hazardous Material Management Plan
- Blasting Management Plan
- Environmental and Social Management and Monitoring Plan (ESMMP)
- Training Management Plan
- Excavated Material Management Plan
- Noise and Vibration Management Plan
- Air Pollution and Emission Management Plan
- Water Quality, Wastewater And Storm Water Management Plan
- Occupational Health and Safety Plan
- Soil Management and Erosion Control Plan

The effective integration of these plans should be ensured to maintain compliance with national regulations and international standards and to minimize the cumulative environmental and social impacts of construction activities.

IV. ROLES AND RESPONSIBILITIES

Antalya Alanya Otoyol İnşaat Yatırım ve İşletme A.Ş. (SPV) as the Project Sponsor and Limak (EPC) as the main contractor of the Project will be responsible for the following:

General Manager (SPV)

- Define and implement overall SPV strategy alignment with shareholder and stakeholder expectations.
- Ensure the development, revision, and execution of Quarry Management Plan, including other Environmental and Social Management Plans (ESMPs) in accordance with company policies, national - international standards and lender requirements.
- Ensure the provision of necessary resources and organizational support for the implementation of Quarry Management Plan, and other ESMPs.
- Supervise and coordinate EPC contractors and subcontractors to ensure proper execution of construction, commissioning, and operational phases.
- Support the E&S Manager in preparing, disseminating, and implementing this plan.

E&S Manager (SPV)

- Review and ensure the preparation, revision, and implementation of the Quarry Management Plan in accordance with national laws, regulations, company policies, international standards and lender requirements.
- Ensure the development, revision, and execution of this Quarry Management Plan, including all ESMPs in accordance with company policies and international standards.
- Monitor the environmental and social performance of EPC and subcontractors to ensure compliance.
- Coordinate the assessment and solution of grievances with EPC team regarding quarry and borrow related complaints.

H&S Manager (SPV)

- Ensure the conditions and obligations specified in the health, safety, community related plans and documents are implemented and adhered to by EPC and subcontractors in accordance with company policies, regulatory obligations, international standards and lender requirements.
- Contribute to project risk assessments and job hazard analyses and ensure these are updated regularly.
- Support EPC and subcontractors in the development and delivery of site-specific H&S training programs.
- Ensure that all site personnel receive regular training and toolbox talks covering Quarry Management Plan obligations, and safe working practices.
- Coordinate with SPV H&S Manager and EPC HSE Manager to address quarry and borrow related incidents, risks, and community safety concerns.

Deputy E&S Manager (SPV)

- Lead the development, implementation, and continuous improvement of the Environmental and Social Management.
- Review the ESHS documents of subcontractors and suppliers and ensure that they comply with the Project ESHS requirements.
- Monitor quarry and borrow related permits, subcontractor compliance, and mitigation measures, including the implementation of this Quarry Management Plan.

- Track the performance (including quarry activities) through Key Performance Indicators (KPIs), reports, audits, and meetings.
- Oversee E&S related incidents and non-compliances, including investigations, corrective/preventive actions, and stakeholder communication.
- Support E&S Manager (SPV) in executive decision-making by providing timely reports and insights on E&S performance, risks, and emerging trends.
- Lead community engagement strategies in collaboration with the Environmental Engineer and, and Social Chief to ensure effective grievance management and positive relations with project-affected communities.
- Ensure that EPC and subcontractor provide the necessary training through the review of training records and relevant training documents.

Social Chief (SPV)

- Supervise and mentor CLOs, ensuring their work aligns with project priorities and stakeholder engagement strategy.
- Develop and implement work plans and schedules for the CLO team.
- Ensure that complaints regarding quarry and borrow activities are recorded and managed through Grievance Mechanism channels, and resolved in time.
- Ensure accurate, timely, and complete reporting of grievance outcomes and inform the E&S Manager about the basting related complaints and coordinate the assessment and solution of grievances with EPC team.

Environmental Engineer (SPV)

- Ensure corrective/preventive actions are taken for quarry and blasting operations related incidents in collaboration with HSE, E&S teams, and subcontractors.
- Integrate Quarry Management Plan requirements into work plans, method statements, and construction activities.

Community Liaison Officer (CLO) (SPV and EPC)

- Communicate with project-affected communities about quarry and borrow activities, including potential noise, dust, vibration, and traffic impacts.
- Log, track, and follow up on community complaints or grievances related to quarry operations, ensuring timely resolution via the Grievance Mechanism (GM).
- Support monitoring and documentation of Quarry Management Plan implementation at site level, including subcontractor activities affecting the community.
- Coordinate with E&S Manager and other project teams to integrate community feedback into Quarry Management Plan updates and corrective actions.

HSE Specialist (SPV)

- Support the execution of the safety, health and community safety related plans including this Blasting Management Plan, and ensure site activities (including quarry and borrow operations) are carried out safely by EPC contractors and subcontractors in-line with applicable laws, international standards and lender requirements.
- Conduct regular site inspections (including quarry and borrow sites), hazard identification, and risk assessments; follow up on corrective and preventive actions.
- Ensuring that quarry operations are carried out in line with approved method statements, quarry schedules, and work procedures, with Health & Safety measures fully integrated.

Project Director (EPC)

- Define and oversee the implementation of the overall EPC execution strategy in alignment with contract objectives and company standards.
- Lead interdisciplinary project teams, coordinating EPC functions to achieve key milestones.
- In case of non-compliance regarding to quarry and borrow operations, ensure appropriate corrective and preventive actions are taken in coordination with the E&S Manager and H&S Manager.

E&S Manager (EPC)

- Facilitate coordination with the SPV's E&S Manager for compliance audits and reporting.
- Implement environmental and social measures through site practices and method statements.
- Ensure that all conditions and obligations outlined in the Quarry Management Plan as well as other ESMPs are implemented and adhered to during project activities.
- Coordinate the assessment and solution of grievances with EPC team regarding quarry and borrow related complaints.

H&S Manager (EPC)

- Ensure the safe execution of construction activities in compliance with H&S Plan, legal requirements, international standards, SPV and lender obligations.
- Prepare, review, and improve H&S Plans by integrating quarry and borrow control measures into site-specific risk registers, method statements, and monitoring programs.
- Supervise and support Contractors/Subcontractors to implement quarry and borrow related mitigation measures, and monitor their compliance with H&S requirements.
- Coordinate with SPV H&S Manager and EPC HSE Manager to address quarry and borrow related incidents, risks, and community safety concerns.
- Ensure that all site personnel receive regular training and toolbox talks covering Quarry Management Plan obligations, and safe working practices.
- Oversee emergency preparedness and response procedures for quarry and borrow related incidents (e.g., slope stability risks, dust, noise and vibration exceedances, community complaints).
- Conduct investigations of quarry and borrow related incidents or complaints, ensure corrective/preventive actions are taken, and report findings to Project Director and SPV.
- Promote a safety-first culture by ensuring quarry and borrow risks are proactively managed and lessons learned are integrated into continuous improvement.

Site Doctor (EPC)

- Provide on-site medical support and emergency response, with focus on quarry and borrow related health issues.
- Conduct periodic health checks and maintain records to monitor impacts on dust, noise, or vibration exposure.
- Recommend and support preventive measures (e.g., hearing protection, work rotation, dust mask) in coordination with HSE teams.
- Deliver awareness sessions and medical input for risk assessments and incident investigations related to quarry and borrow operations.

Archaeologist (EPC)

- Conduct archaeological surveys and assessments within the project footprint before and during construction, and implement chance-find procedures with proper reporting.
- Provide training for construction personnel and subcontractors on cultural heritage awareness, including chance-find protocols and legal obligations.
  Inform quarry and borrow personnel about nearby cultural heritage areas and related protection requirements.

Biodiversity Specialist (EPC)

- Monitor and report biodiversity impacts of quarry and borrow operations on sensitive species and habitats.
- Support implementation of mitigation measures under the Biodiversity and Blasting Management Plans.
- Coordinate corrective actions with the Environmental Engineer and E&S Manager when non-compliances arise.

H&S Chief (EPC)

- Supervise daily implementation of HSE requirements on-site, with emphasis on quarry and borrow related measures.
- Monitor contractor and subcontractor compliance with the Quarry Management Plan and report deviations to the HSE Manager.
- Support incident/complaint investigations related to quarry acitivities and oversee corrective actions.
- Maintain site records on quarry and borrow monitoring, inspections, and compliance checks.
- Coordinate with the SPV HSE team during audits, inspections, and reporting.

H&S Engineer (EPC)

- Support the implementation and continuous improvement of the Quarry Management Plan across all site activities including blasting.
- Provide technical guidance to contractors and subcontractors, maintain the site risk register, and carry out inspections and audits.
- Lead investigations into accidents or unsafe conditions related to quarry and borrow activities, ensuring that findings are documented and corrective measures are applied.
- Report regularly on H&S compliance, risks, and overall performance to the H&S Manager.
- Provide technical input and guidance to workers on quarry and borrow safety measures.

H&S Technician (EPC)

- Assist in blasting hazard identification, risk assessments, and inspections of site conditions under the supervision of senior HSE staff.
- Support implementation of Quarry Management Plan and HSE measures on-site, ensuring safe work practices.
- Monitor daily use of PPE and adherence to HSE protocols and by workers and subcontractors.
- Support toolbox talks, drills, and safety briefings while keeping records updated and accurate.

- Escalate any observed non-compliance of quarry and borrow operations or HSE issues to the HSE Engineer or H&S Manager for timely action.

Paramedic (EPC)

- Provide immediate medical care, stabilize injured personnel, and coordinate medical evacuation when needed in the quarry and borrow sites.
- Assist the site doctor with health checks, maintain records, and monitor the condition of medical supplies.
- Participate in drills and awareness campaigns related to occupational health and safety and quarry and borrow operations.
- Report quarry and borrow related risks or recurring issues to the H&S Manager and Site Doctor.

Environmental Engineer (EPC):

- Implement and monitor the Quarry Management Plan on-site, including subcontractor compliance.
- Conduct routine inspections and measurements of noise, dust, and vibration levels to ensure mitigation measures are effective.
- Maintain accurate records and databases for monitoring related to quarry activities, and support reporting for audits or regulatory compliance.
- Support training, toolbox talks, and inductions related to quarry awareness for site personnel.
- Participate in investigations of quarry-related incidents and coordinate corrective/preventive actions with HSE and E&S teams.
- Integrate Quarry Management Plan requirements into work plans, method statements, and construction activities.

V. IMPACT PREVENTION PLANS, PROCEDURES AND PROGRAMS

V.1 General Description of Quarry and Borrow Sites

Construction works require aggregates, concrete, steel, aluminum, cement, bitumen, cables, etc. Concrete will be required for the construction of bridges, retaining walls, culverts and other engineering structures. Aggregate material for concrete production will be sourced from licensed quarries. After extraction, the aggregate will be crushed, screened and washed as necessary. Concrete types/grades to be used in the Project will include the following:

- Precast prestressed beam concrete
- Post-tensioned prestressed beam concrete
- Reinforced Concrete
- Flat concrete

Within the scope of the ESIA, seven quarries and borrow pits were assessed; however, under the current planning, four quarries will be prioritized for use. All quarries, including those planned for material extraction as well as those assessed during the ESIA impact assessment, are presented in Figure I-1.

The amount of material that will be needed for the construction activities are given in the below Table V.1.

Table V.1 Materials Needed for the Construction Activities

Source	Location	Material Type	Description of the Site / Plant	Concrete Aggregate (m^3)	Subbase – Plant Mix Base Aggregate (m^3)	Hot Bituminous Mixture (m^3)	Total Quantity (m^3)
Çakış (TOY4a) Quarry	56+500	Crystallized limestone, marble	Concrete Plant-1	241.870,03			**1.878.435,94**
			Concrete Plant-2	304.899,03			
			Concrete Plant-3	205.743,75			
			Mechanical Plant-1		800.525,05		
			Asphalt Plant-1			325.398,08	
Uzunlar (TOY5) Quarry	105+000	Crystallized limestone, marble	Mechanical Plant-2		695.577,54		**695.577,54**
Çenger Stream Material Quarry	105+000	Stream Material	Concrete Plant-4	158.552,65			**537.569,52**
			Concrete Plant-4a	104.838,11			
			Concrete Plant-5	274.178,77			
Karamanlar Quarry	123+000	Crystallized limestone, marble	Concrete Plant-6	315.393,23			**1.947.983,95**
			Mechanical Plant-3		938.660,04		
			Asphalt Plant-2			298.010,66	
			Asphalt Plant-3			395.920,03	
TOTAL				**1.605.475,56**	**2.434.762,63**	**1.019.328,76**	**5.059.566,95**

The activities with potential environmental risk in the field of quarry and borrow areas are:

- Site clearance
- Commissioning of machineries and equipment
- Excavation, blasting and quarrying
- Transportation of materials from / to quarry (rock fill material, aggregates, rip rap material) and borrow areas (sand, gravel, laterite clay)
- Vehicles moving along access roads
- Dust and gas dissipation from transportation activities
- Activities of re-cultivation of sites

V.2 Risk Assessment of Quarry and Borrow Sites

EPC Contractor will prepare a risk assessment that will be conducted to identify the project activities which might present a hazard or risk relating to extraction of quarry material and aggregates and assess the potential impacts which may arise.

The following tasks should be undertaken to analyse and evaluate risks and identify potential impacts during the preparation of risk assessment:

- Identify all activities and sub-activities associated with construction of the Project;

- Assess the likely impact of the activity on the environment, safety and security of workers and the public, and social/cultural aspects of the Project setting;
- Determine the possible consequences if each impact were to occur;
- Assess the likelihood of each impact occurring in the absence of any controls;
- Consider the severity of impact/s;
- Document current and future mitigation measures that need to be implemented to bring the level of risk down to an acceptable level; and
- Re-evaluate to determine the residual risks once the mitigation measures have been implemented.

Quarry and Borrow operations will cause environmental, social, health and safety impacts. Possible impacts of quarry and borrow sites are in terms of:

- ***Traffic and route issues*** originating from the proposed access and haulage routes between the quarry/borrow area and the destination for the extracted material.
- ***Generation of waste and spoil material*** to be extracted from the quarry and borrow operations, and disposal of such waste materials.
- ***Landscape and visual impacts*** of quarry activities on the surrounding area.
- ***Environmental pollution*** originated from any contamination to the ground in blasting or drainage activities such as soil, air and water pollution.
- ***Vegetation removal*** will be required due to ground works for quarry and borrow operations.
- ***Impact on community health and safety*** originating from construction hazard, traffic, environmental pollution (air, noise, water, soil).

V.3 General Principles and Measures

This Plan provides a range of measures which will be used to minimise the risks associated with aggregate extraction during Project construction. The EPC Contractor will draw on these measures to develop a tailored approach to mitigation of impacts. Some general principles and approaches, described in this section, will also be applied.

The EPC Contractor will minimise the impact of construction material extraction from the stream on the environment and people by siting them in lower impact areas wherever possible.

Major extraction issues that shall be investigated further by the EPC Contractor, in consultation with the SPV, shall include:

- Extractive material requirements for project construction – material types and volumes.
- The suitability of rock aggregate extracted from the tunnel and any other project excavation, and estimation of the volume of this suitable material.
- Extraction site options – review the suitability of the selected riverbed extraction sites, as well as other alternative extraction sites, taking into consideration operational issues and environmental and social impacts such as:
    - slope stability,
    - isolation from regular flooding accessibility; and
    - location

- Any government permits and/or landholder / community permission required, and agreed final site land use.

Stream areas shall be located and material shall be extracted from those areas so as not to destabilise the riverbed and banks.

The mitigation / management procedures noted in this section provides the approach to managing the potential aggregate extraction impacts during construction. The EPC Contractor will commit to implementing the identified mitigation / management procedures in order to avoid impacts on the local community and the environment.

The mitigation / management procedures were identified within the ESIA as being appropriate for the environmental impacts resulting from the anticipated construction activities, including aggregate extraction. Should extraction impacts arise from site activities, following the implementation of the procedures defined in this Plan, the EPC Contractor will review the need for additional measures to be taken and update this QMP accordingly.

V.4 Quarry and Borrow Management Procedures

Supervision

For the operation of quarry and borrow areas the EPC Contractor will appoint a Quarry and Borrow Pit Supervisor.

Before starting any operation or construction activity at the quarries and borrow areas the EPC Contractor will ensure that all technical data is prepared, and necessary permits are in place.

The Quarry and Borrow Pit Supervisor will be appointed as a full-time employee to oversee control of stages, slopes, earth fills, sides of trenches. Also, to monitor the local condition on regular basis, the works will be stopped when signs of geological movement are noticed.

During the operation of quarry, if the site is encountered with ground water seepage or any other water seepage, the site should be provided well established drainage with collection and pumping of water with required number of pumps.

Blasting Activities

No blasting shall be carried out without consent of the SPV. Precautions shall be taken to preserve the material outside the lines of excavation in an undisturbed condition.

The blasting activities at the quarry will be carried out in accordance with Blasting Management Plan. Blasts should be notified by public posting on the billboards, on the roads accessing to the Quarries. To avoid disturbance on the community actions defined in the Community Health and Safety Management Plan will be taken. For the safe handling of explosives, measures defined in the Hazardous Materials and Hazardous Waste Management Plan will be implemented.

VI. MITIGATION MEASURES FOR IMPACTS OF QUARRY ACTIVITIES

EPC Contractor will implement mitigation measures defined in Environmental and Social Management Plan and are given in the below management plans as well as in this Plan.

- Solid Waste Management Plan
- Water Quality, Wastewater and Storm Water Management Plan
- Spill Response Management Plan
- Community Health and Safety Management Plan
- Traffic Management Plan
- Hazardous Material Management Plan
- Blasting Management Plan
- Demolition Management Plan
- Environmental and Social Management and Monitoring Plan (ESMMP)
- Training Management Plan
- Excavated Material Management Plan
- Noise and Vibration Management Plan
- Air Pollution and Emission Management Plan
- Water Quality, Wastewater and Storm Water Management Plan
- Occupational Health and Safety Plan
- Soil Management and Erosion Control Plan

A list of mitigation measures with nomenclature relevant to the issues identified in this Plan is provided under the following headings.

Health and Safety

- Appoint a full-time Quarry Supervisor to monitor slopes, excavations, and geological stability; stop works if instability or risks are observed.
- Implement safe blasting procedures: area clearance, explosive storage and handling, transport, loading, countdown, shot, post-blast security, storage.
- Erect fencing and signage around excavation faces and settling basins to prevent unauthorized access.
- Monitor water quality before discharge; ensure effluent treatment is applied where necessary.
- Ensure hazardous materials, fuels, lubricants, and explosives are stored in approved, bunded facilities, away from sensitive areas.
- Implement long-term rehabilitation to prevent post-construction risks (e.g., erosion, slope failure).
- Only trained personnel are authorized to operate tools/machinery.
- Daily pre-use checks for tools/machinery will be logged
- A competent person must inspect excavations daily and after any weather event.

Traffic Management

- Define and use designated access and haulage routes between quarries/borrow pits and material destinations.
- Conduct extraction, stockpiling, and transport activities in line with approved method statements.
- Implement community safety measures related to site traffic (speed control, designated routes, signage).

- Restrict access to active quarry/borrow areas to trained personnel only, with proper safety measures.

Community Health and Safety

- Negotiate site access with landowners; reinstate land to pre-project condition if access roads are not retained.
- Implement community safety measures: fencing, restricted access to extraction sites, and safe traffic arrangements.

Planning & Site Management

- Prepare a dedicated Quarry and Borrow Areas Management Plan prior to construction.
- Ensure Quarry Management Plan includes: site extent, methods, haulage routes, extraction/waste volumes, disposal and rehabilitation.
- Apply standard environmental and social procedures to quarry and borrow areas as applied to all worksites.
- Prepare Method Statements for each extraction site, including risk assessment, site details, extraction methods and waste management, permits, and rehabilitation approach.
- Obtain all necessary permits prior to extraction.
- Inspect and approve each extraction site and crushing facility before use.
- Survey and mark extraction boundaries, access points, drains, and sediment basins before commencement.
- Complete all site preparation and environmental controls before extraction starts.
- Provide site induction/walkthrough for staff to ensure strict adherence to extraction requirements.
- Carry out site preparation (vegetation clearance, safety measures) by Construction/E&S teams prior to works.

Ecological Protection

- Prevent destabilization of riverbeds and banks during extraction.
- Extraction activities shall not take place during breeding and spawning seasons; monitor ecological areas.
- Manage noise and vibration impacts on ecology in accordance with ecological controls.
- Revegetation shall start at the earliest opportunity with local/native species.
- Plant grasses or erosion control material on embankments to control erosion and restore vegetation cover.

Erosion, Sediment and Soil Management

- Control extraction in alluvial areas to minimize suspended sediment and hazards.
- Stockpiling only in designated areas, outside flood zones and at least 20 m from watercourses.
- Limit extraction to approved volumes and designated areas.
- Stockpile and reuse topsoil for site rehabilitation; apply benches/terraces on slopes.
- Stabilize and re-vegetate overburden; spread organic debris to promote revegetation.
- Sequence construction to minimize exposed surfaces at any one time.
- Minimize vegetation removal and rehabilitate disturbed areas immediately after use.

Visual & Landscape Impact / Rehabilitation

- Minimize quarry size and visual impact through slope restoration, debris filling, and re-vegetation.
- Implement long-term rehabilitation measures to avoid health/safety hazards and environmental pollution.
- Ensure borrow areas are restored with stable slopes, drainage, vegetation, and avoidance of stagnant water.
- Distribute extraction over multiple sites rather than concentrating at a single source.
- Conduct full site restoration after works.

Air Emissions & Dust Control

- Implement dust suppression measures (e.g., water spraying on haul roads, covering stockpiles).
- Ensure trucks and machinery are well maintained to minimize exhaust emissions.

VII. TRAINING

The trainings to be organised will cover the Project activities during the construction phase. As a result of the general trainings to be held, the level of the trainings to be organized on the basis of the job description will be determined and the basic procedures for the execution and documentation of these trainings will be evaluated.

It will be ensured that all personnel involved in construction activities, specifically operators of construction machinery, including subcontractors and vendors, are adequately trained and informed on the requirements of the QMP. Training will be provided by E&S Team during construction phase. Until the construction phase is completed, refresher trainings will also be held at least once a year and in line with the requests and demands of the employees. The training will cover the following:

- Environmental and regulatory responsibilities specific to quarry and borrow areas management,
- Roles and responsibilities for the activities that will be carried out for quarry and borrow area management,
- Waste management hierarchy principles.

VIII. MONITORING

The monitoring of the activities on quarry and borrow areas defined for the project construction works will ensure that the measures and the procedures are implemented and are working. The level of air pollution and the level of the acoustic/vibration emissions caused by the quarry and borrow area operation activities will be monitored, such that if there are exceedances, mitigation measures are promptly implemented. The risk assessment will be updated, if necessary.

Monitoring activities will be coordinated by E&S Manager and his/her team, in close collaboration with the H&S Manager and his/her team. Key responsibilities will include verifying the implementation of dust suppression practices, monitoring equipment and vehicle emissions, evaluating the maintenance status of construction machinery, and ensuring the consistent application of mitigation measures near sensitive receptors such as residential areas, schools, and healthcare facilities.

The performance of contractors and subcontractors in implementing resource efficiency management requirements will be reviewed through environmental audits, site supervision reports, and field observations. Any identified non-conformities will trigger timely corrective and preventive action

plans. Monitoring will also include follow-up assessments to confirm the effectiveness of implemented measures and to ensure recurrence is prevented.

In addition to internal monitoring, inspections may be carried out by relevant public institutions, including the Ministry of Environment, Urbanization and Climate Change, in accordance with Turkish legislation. The frequency and scope of these inspections will be determined by the authorities and may include review of monitoring data, on-site emission control practices, and documentation of compliance.

Monitoring efforts will be guided by the framework provided in Table VIII.1, which outlines the parameters to be monitored, the corresponding monitoring locations, frequency of measurements, and responsible parties. These monitoring activities will be essential for evaluating the effectiveness of air quality and emissions mitigation measures and ensuring full compliance with national regulations and Project standards.

The methods implemented to monitor the quarry and borrow sites include:

- Visual monitoring (inspection on site provided by the E&S team).
- Measurement on site (the procedures and the monitoring points for the measurements of the acoustic/vibration and air pollution levels are defined in the Air Emissions and Dust Control Management Plan, Noise and Vibration Control Plan)
- Control over technical functionality of the machinery/equipment.

Table VIII.1 Key Monitoring Activities

Parameter	Monitoring Station/ Location	Monitoring Method	Monitoring Frequency	Responsible Parties
Effective implementation of QMP during material extraction works	Quarries and borrow areas	Documentation and site audit	Daily	-SPV -EPC
Permit requirements	Quarries and borrow areas	Documentation and site audit	Daily	-SPV -EPC
Location of stockpiles to waterways and road	Quarries and borrow areas	Site audit	Daily	-SPV -EPC
Dust and particulate matter	Quarries and borrow areas, Sensitive receptors close to Quarries and borrow areas	Site measurements	Quarterly or Upon Grievance, at the frequency specified in the Environmental Permit	-SPV -EPC -Accredited laboratories
-Mining method applied -Blasting activities -Production amount (m^3/day) -Slope stability -Borders of the camp sites -Management of waste rock	Quarries and borrow areas	Site audit	Daily	SPV
-List of hazardous materials/chemicals supplied, stored and used (inc. information on type and amount/volume) -Type (i.e. municipal, packaging, waste oil, etc.) and amount of wastes produced/disposed of -Waste management/disposal agreements done with licensed companies -Waste Management Plans -Temporary Waste Storage Areas	Quarries and borrow areas	-Site audit -Document review	Monthly	-SPV -EPC -Sub-Contractor
Environmental Noise (dBA)	Sensitive receptors close to Quarries and borrow areas	Site measurements (24 hour)	Quarterly or Upon Grievance	-SPV -EPC -Accredited laboratories
Ground vibration value	Sensitive receptors close to Quarries and borrow areas	-Measurement with vibrometer	Quarterly or Upon Grievance	-SPV -EPC -Sub-Contractor
-Use of PPEs -Health and safety signs -Fire safety equipment/systems	Quarries and borrow areas	-Site audit -Visual observation	Daily	-SPV -EPC

In cases of non-compliance identified through internal oversight or external audits, AAOİAŞ will ensure that corrective and preventive measures are promptly implemented in coordination with the Main Contractor (Limak) and relevant subcontractors.

IX. KEY PERFORMANCE INDICATORS

The following Key Performance Indicators (KPIs) will be monitored, verified, and evaluated.

Table IX.1 Key Performance Indicators – Construction Phase KPIs

Monitoring Parameter / Performance Indicator	Target	Frequency	Responsible Party
Zero non-compliance during blasting activities	100% compliance	Per blasting event	SPV
Noise and vibration levels at sensitive receptors (dB, mm/s)	Within legal limits and international standards	Quarterly / During blasting	SPV
Dust (PM_{10}/$PM_{2.5}$) concentration at site boundary	Within national/IFC guideline values	Quarterly	SPV
Stability of quarry slopes and benches (visual inspection & geotechnical monitoring)	No slope failure or unsafe conditions	Daily	SPV
Community grievances related to quarry operations	Zero unresolved grievances; continuous improvement in response time	Monthly	SPV
Number of worker trainings on quarry safety, blasting, and environmental management	100% of planned trainings delivered	Monthly	SPV

X. AUDIT AND REVIEW

The implementation of this Plan should be regularly monitored and reviewed in accordance with the ESMMP. All labour-related incidents and non-conformities should be documented and reported as outlined in the Plan. Contractors and subcontractors should be subject to audits conducted by the Project Sponsor within the scope and schedule defined in the Contractor and Subcontractor Management Plan.

Results of the monitoring will be reported to responsible parties to ensure that the Project activities comply with the national legislation and international standards. Depending on the monitoring results, the Plan will be reviewed and updated by Project E&S and H&S Managers.

The internal audit will address:

- The correct implementation of this Plan;
- The correct and timely implementation of an auditing and review system;
- Each of the point indicated in the table in Section 8 (Monitoring Activities) and Section 9 (KPIs) of this Plan.

Evidence and results of the inspection and audit activities are included in the audit reports and in the “Non-Conformity and Preventive/Corrective actions” records. Project Management reviews result of audits and inspections and the progress of the Preventive/Corrective actions and takes additional appropriate actions if necessary.

These audits and the associated records should be managed in compliance with the Project’s established human resources and labour-related procedures.

Observations and deficiencies identified during audits should be recorded in formal audit reports, and all findings requiring improvement should be registered under Corrective Actions. Project management should review audit outcomes and corrective action records, follow up on progress, and ensure that additional measures are implemented where necessary to ensure full compliance with labour legislation and international standards.

XI. REPORTING

Regular reporting should be conducted to ensure the effective implementation and continuous improvement of resource efficiency management activities throughout the construction phase of the Project. Reporting should be structured to address both internal monitoring and auditing outcomes, as well as external compliance obligations and stakeholder engagement requirements.

Based on monitoring results, necessary corrective and preventive actions should be identified and the required updates should be incorporated into this Plan. The training program will also be revised accordingly to address any observed gaps. Regular audits and visual inspections should be conducted to verify that all activities are being undertaken in accordance with the provisions of this Plan.

Evidence of the implementation of the actions/measures and related results are collected through inspection and auditing activities as detailed in Section X “Audit and Review” of this Plan; these evidences are described in the audit reports.

Contractors are responsible to collect the statistics (including all types of training delivered to employees, incident records, grievance records, their own subcontractor selection processes, etc.) on a monthly basis and report to the Contractor. If any subcontractor is involved, it is responsible for duly implementing requirements included in this Plan under the Contractor supervision.

The results and supporting evidence of these monitoring activities (e.g., measurements, logs, and photos) should be documented in detail within appropriate reporting formats. This section of the Plan outlines the instructions and requirements for implementing these reporting activities.

All personnel are encouraged to raise concerns, suggestions, or complaints related to air quality management through the established grievance mechanism by completing the grievance form. The communication channels available for submitting grievances are outlined in the Stakeholder Engagement Plan.

Throughout the construction phase of the Project, this Plan will be reviewed by the E&S manager, based on the results of audits.

ANTALYA ALANYA MOTORWAY	**ANTALYA-ALANYA MOTORWAY PROJECT**
Revision No: 0	**Date:** 08.09.2025
DEMOLITION MANAGEMENT PLAN	

REVISION STATUS		
Revision Date	**Rev. No**	**Description**
08.09.2025	00	This plan is prepared according to TS EN ISO/IEC 9001:2015, TS EN ISO/IEC ISO 14001:2015, TS EN ISO/IEC 45001:2018 and IFC Performance Standards

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LIST OF ABBREVIATIONS

AAOİAŞ – Antalya–Alanya Otoyolu İnşaat Yatırım ve İşletme A.Ş.
ACM – Asbestos-Containing Material
AFR – Accident Frequency Rate
CAPA – Corrective and Preventive Action
C&D Waste – Construction and Demolition Waste
ÇGGK – Çevresel Gürültü Kontrol Yönetmeliği (Environmental Noise Control Regulation)
COD – Chemical Oxygen Demand
DMP – Demolition Management Plan
EHS – Environmental, Health, and Safety
EIA/ESIA – Environmental (and Social) Impact Assessment
EMS/ESMS – Environmental (and Social) Management System
EPC – Engineering, Procurement, and Construction (Contractor)
GIIP – Good International Industry Practice
HSE – Health, Safety, and Environment
HKDY – Hava Kalitesi Değerlendirme ve Yönetimi Yönetmeliği (Air Quality Regulation)
IFC – International Finance Corporation
KPI – Key Performance Indicator
LCmax – Maximum C-weighted Sound Level
LOTO – Lock Out / Tag Out
LTIFR – Lost Time Injury Frequency Rate
MoEU – Ministry of Environment, Urbanization and Climate Change (Türkiye)
OHS – Occupational Health and Safety
PPE – Personal Protective Equipment
PPV – Peak Particle Velocity
PS1–PS8 – IFC Performance Standards (PS1: Assessment & Management of E&S Risks; PS2: Labor & Working Conditions; PS3: Resource Efficiency & Pollution Prevention; PS4: Community Health, Safety & Security; PS5: Land Acquisition & Resettlement; PS6: Biodiversity; PS7: Indigenous Peoples; PS8: Cultural Heritage)
RAP – Resettlement Action Plan
SEP – Stakeholder Engagement Plan
SPV – Special Purpose Vehicle (Project Company, AAOİAŞ)
TSP – Total Suspended Particles
TSS – Total Suspended Solids
UATF – Ulusal Atık Taşıma Formu (National Waste Transport Form)
WHO – World Health Organization
WBG – World Bank Group

I. INTRODUCTION

Ministry of Transport, and Infrastructure (former Ministry of Transport, Maritime Affairs and Communications), General Directorate of Highways ("KGM" or "the Administration"), as the owner of the Antalya-Alanya Motorway Project ("The Project"), has tendered for a contract in accordance with the Law on Implementation of Some of the Investments and Services in the Framework of Build, Operate and Transfer Model (Law No: 3996). Following the tendering process, KGM has awarded Antalya-Alanya Otoyolu İnşaat Yatırım ve İşletme A.Ş. ("AAOİAŞ" or the "Project Sponsor") with a Build, Operate and Transfer ("BOT") contract for the implementation of the Project. Accordingly, AAOİAŞ will be referred as Project Sponsor in the scope of this report. The main contractor for the Project has been designated as Limak and will henceforth be referred to as the Contractor (or "EPC").

The Project is designed to connect the districts of Serik and Alanya via the Manavgat district of Antalya province. The Project will enhance the existing transportation network services with its surrounding provinces: Burdur, Muğla, Konya, Isparta, Karaman and Mersin. Various environmental, social, and technical studies have been conducted along the initial route of the Project tendered by the KGM. Based on these studies, the route was optimized, incorporating engineering practices and addressing environmental and social considerations, particularly issues of involuntary and economic resettlement, before being finalized. According to the most current design, the total length of the Motorway, which will be a dual carriageway of mostly 3 and partially 2 lanes (3x2 and 2x2) in each direction, is 117.8 kilometers including the main carriageway and the access roads.

I.1 Project Description

The Project starts at Serik Interchange (Km: 52+000) and then proceeds eastward, following the corridor at the foothills of the Taurus Mountains within the boundaries of Serik and Manavgat districts, ending at north of Konaklı neighborhood of Alanya District (Km: 136+000). From this point onwards, the route turns southward with a 2x2 lane connection road and connects to the D400 state road at the Alanya West Interchange. As of April 2025, the current Project design includes a total of 117.8 kilometers of road, comprising 84 kilometers of main road (motorway) and 33.8 kilometers of access roads.

The map showing the construction components and road route within the scope of the Project's construction activities is provided in Figure I-1.

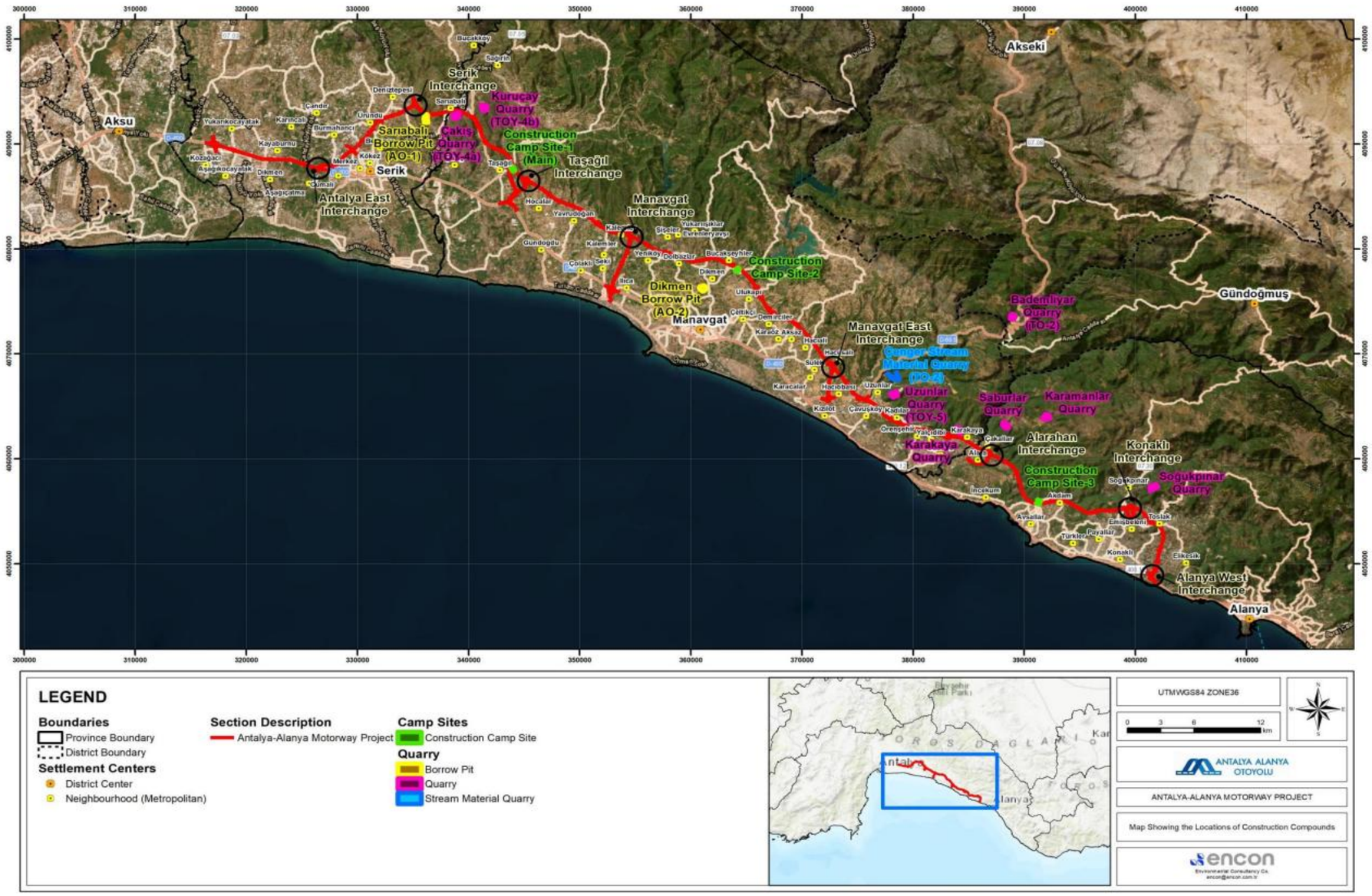

Figure I-1.Map Showing the Locations of Construction Compounds

Other structures to be built as part of the project are as follows:

- 16 viaducts,
- 22 bridges,
- 305 culverts,
- 25 interchanges,
- 56 overpasses,
- 43 underpasses, and
- 5 tunnels.

II. PURPOSE and SCOPE

The Project is anticipated to deliver benefits including relieving congestion on the Akdeniz Region's existing road network and building capacity for future traffic, providing better access to employment, markets, education, healthcare and cultural and tourism facilities and improved emergency response times, and creating social and local economic benefits through job creation and local and regional development.

Facilities to be constructed for use during operation include toll collection areas, service areas and a maintenance and operations area. During construction, temporary facilities required including three temporary construction camps with facilities, borrow pits/quarries (11 identified sites according to the draft Environmental and Social Impact Assessment (ESIA), June 2025), and storage sites (22 identified).

This Demolition Management Plan ("the Plan" or "DMP") has been prepared for the Antalya-Alanya Motorway Project ("the Project").

This Plan should be applied by all parties involved in the construction phase, including the Project Sponsor, EPC and all subcontractors. Necessary updates to the Plan should be considered in case of any changes to work location, construction and demolition methodology, or regulatory requirements.

The purpose of this Plan:

- Defining country legislation and Project standards,
- Defining the duties and responsibilities of the personnel, and
- Identify and outline mitigation, control, and monitoring measures to minimize adverse environmental and social impacts during the demolition activities.

The Demolition Management plan covers assigning roles and responsibilities for a safe, compliant, and traceable demolition process, and sets out procedures for risk assessment, permitting, stakeholder communication, work execution, waste and hazardous material management, training, monitoring, and reporting issues.

This management plan is a living document developed with the best available information and will be reviewed and revised as necessary due to the nature of the construction and progress.

The Plan has been developed in alignment with applicable national legislation and relevant international standards, including the requirements of international financial institutions. It outlines actions that should be done to manage possible negative impacts on the environment and social issues during the demolition activities.

III. LEGISLATIVE FRAMEWORK AND REFERENCE STANDARDS

This Plan has been developed to align with both Turkish legislation and international standards for environmental and social issues management. The references below should be used to guide the implementation and ensure that the Plan meets all required obligations during the demolition works.

1.1. National Requirements

The following primary regulations form the legal basis for demolition activities in Türkiye:

- Environmental Law No. 2872
- Turkish Zoning Law No. 3194
- Construction Supervision Law No. 4708
- Public Health Law No. 1593
- Misdemeanours Law No. 5326
- Regulation on the Assessment and Management of Air Quality
- Regulation on the Assessment and Management of Environmental Noise
- Water Pollution Control Regulation
- Regulation on the Protection of Groundwater against Pollution and Deterioration
- Waste Management Regulation
- Regulation on the Control of Excavation Soil, Construction and Demolition Wastes
- Regulation on the Control of Soil Pollution and Sites Contaminated by Point Sources
- Regulation on the Control of Pollution Caused by Hazardous Substances in Water and its Environment
- Regulation on Health and Safety Precautions in Work with Asbestos

Compliance with these regulations is mandatory, and ongoing monitoring and reporting should be conducted to verify adherence throughout the construction phase.

1.2. International Standards and Conventions

- IFC Performance Standards
  - ✓ Performance Standard 1: Environmental and Social Management System,
  - ✓ Performance Standard 3: Resource Efficiency and Pollution Prevention,
  - ✓ Performance Standard 4: Community Health and Safety,
  - ✓ Performance Standard 5: Land Acquisition and Involuntary Resettlement,
- IFC Environmental, Health and Safety (EHS) General Guidelines (2007)
- Equator Principles IV (2020)
- World Bank Group General EHS Guidelines (2007)

These references will be used to guide the implementation, monitoring, and performance evaluation of demolition practices across the construction phase of the Project, ensuring compliance with international environmental, occupational standards, and social principles.

IV. LINKAGE WITH OTHER PROJECT PLANS AND PROCEDURES

This Plan is supported by other management plans and procedures developed under the Environmental and Social Management System (ESMS) of the Project. The following plans and procedures are particularly relevant and should be implemented in coordination with the Demolition Management Plan. The Plan is designed to integrate closely with the Resettlement Action Plan ("RAP"), the Stakeholder Engagement Plan ("SEP") and project-specific plans as listed below.

- Occupational Health and Safety Management Plan
- Community Health and Safety Management Plan
- Subcontractor Management Plan
- Solid Waste Management Plan
- Water Quality, Wastewater and Storm Water Management Plan
- Hazardous Materials Management Plan
- Traffic Management Plan
- Environmental Accident and Spill Response Management Plan
- Security Management Plan
- Environmental and Social Management and Monitoring Plan (ESMMP)
- Noise and Vibration Management
- Air Pollution and Emissions Management Plan
- Excavated Material Management Plan
- Solid Waste Management Plan
- Hazardous Material Management Plan
- Soil Management and Erosion Control Plan
- Emergency Preparedness and Response Plan
- Community Management Plan
- Occupational Health and Safety Management Plan

V. ROLES AND RESPONSIBILITES

The organizational structure presented in Figure IV.1 outlines the key management roles and reporting lines for the construction phase of the Project. This structure defines the hierarchical distribution of responsibilities and facilitates coordination among various departments involved in the execution of environmental and social management plans. Each role within this structure should ensure that assigned tasks are executed in line with the Project's ESMS requirements and that inter-departmental coordination is maintained effectively.

In support of this structure, this part is provided to outline the roles and responsibilities specifically related to the implementation, monitoring, and reporting requirements of this Plan. This part of the Plan clarifies the functional duties of each party involved in ensuring the effective execution of the measures described herein and reinforces accountability across all relevant units.

SPV General Manager:

- Promote a culture of social responsibility across the SPV and its stakeholders.
- Ensure the provision of necessary resources and organizational support for the implementation of all plans.
- Supervise and coordinate EPC contractors and subcontractors to ensure proper execution of construction, commissioning, and operational phases.
- Support the E&S and H&S Manager in preparing, disseminating, and implementing this plan.In case of non-compliance, ensure correct and preventive actions are taken in collaboration with the EPC and SPV's E&S and H&S Manager and other responsible parties.
- Make executive decisions on project budgeting, resource allocation including employee, and capital management to support project execution and sustainability, environmental and social compliance.
- Ensure the monitoring environmental, social and financial performance, reporting, and risk exposure of the SPV, ensuring transparency and accountability to all stakeholders, including SPV, stakeholders and investors.

SPV E&S Manager

- Review and ensure the preparation, revision, and implementation of all plans in accordance with national laws, regulations, company policies, international standards and lender requirements.
- Ensure and monitor that EPC and subcontractors correctly implement site practices and management plans.
- Provide technical support to EPC and subcontractors for the implementation of the Plan.
- Collaborate with internal teams (e.g., H&S, Legal, Procurement) to integrate E&S criteria into project operations and contracts. Monitor the environmental and social performance of EPC and subcontractors to ensure compliance.
- Prepare and submit E&S compliance and performance reports to internal and external stakeholders, including lenders and regulators.
- Support stakeholder engagement activities and consultations with local communities.
- Engage with regulatory authorities, auditors, and NGOs on E&S compliance and performance matters.
- Lead the implementation of corrective actions and incident prevention measures.

SPV Health and Safety Manager

Duties of the SPV H&S Manager are as follows:

- Ensure the preparation, revision, and implementation of the health and safety-related plans and documents in accordance with the Project ESIA and EIA, SPV's corporate policies, regulatory obligations, international standards and lender requirements and are implemented by EPC and subcontractors through appropriate method statements and site practices.
- Ensure that all construction site activities are carried out safely by EPC and subcontractors.
- Ensure root causes are identified, documented, and that corrective actions are implemented and verified.

- Collaborate with internal teams (e.g., E&S, Legal, Procurement) to integrate E&S criteria into project operations and contracts. Monitor the environmental and social performance of EPC and subcontractors to ensure compliance.
- Monitor the compliance of EPC and subcontractors with the safety, health, and community safety related plans, and applicable laws, international standards and lender requirements.
- Conduct regular inspections, audits, and hazard identification walkthroughs on construction sites.
- Conduct a comprehensive accident and incident investigation process.
- Provide technical support to EPC and subcontractors for the proper implementation of the health and safety plans.
- Ensure the accurate records of inspections, incidents, safety meetings, and training records
- Engage with regulatory authorities on inspections, audits, and compliance verification.

EPC Project Director

The EPC Project Director has the overall responsibility and accountability for the Project including delivery of the construction activities in line with applicable national and international standards. He/She ensures relevant activities are carried out in accordance with the Plan.

- Ensure that all project activities comply with local laws, environmental regulations, corporate governance policies, and international best practices and lender requirements.
- Promote a culture of environmental and social responsibility across the EPC and its stakeholders.
- Define and implement the overall business strategy and direction of the EPC in alignment with SPV and stakeholder expectations.
- Support the E&S and H&S Manager in preparing, disseminating, and implementing this plan.In case of non-compliance, ensure correct and preventive actions are taken in collaboration with the SPV and other responsible parties.
- Make executive decisions on project budgeting, resource allocation including employee, and capital management to support project execution and sustainability, H&S compliance.
- Ensure the monitoring environmental, social and financial performance, reporting, and risk exposure of the SPV, ensuring transparency and accountability to all stakeholders, including EPC, stakeholders and other related parties.
- Approval of project management plans (HSE, E&S, QA/QC, etc.) in line with company policies, legal frameworks, international standards, SPV and lender requirements.
- Coordinate with regulatory authorities, community representatives, and auditors as required.
- Address stakeholder concerns proactively and transparently, particularly those related to safety, environmental, and social matters.

EPC E&S Manager

- Coordinate the preparation, revision, and implementation of the Plan with H&S Manager in accordance with the Project ESIA and EIA, SPV's corporate policies, regulatory obligations, international standards

and lender requirements and are implemented by EPC and subcontractors through appropriate method statements and site practices.

- Ensure the demolished material is assessed and managed by waste recycling and reuses good practices.
- Ensure all activities are managed safely, especially the assessment, removal, and disposal of asbestos (if any)
- Facilitate coordination with the SPV's E&S Manager for compliance audits and reporting.
- Implement environmental and social measures through site practices and method statements.
- Ensure that all conditions and obligations outlined in the environmental and social management plans are implemented and adhered to during project activities.
- Ensure employees and contractors fulfil the requirements and relevant training of the environmental and social management plans.
- Collaborate with internal teams (e.g., H&S, Legal, Procurement) to integrate E&S criteria into subconractor contracts.
- Ensure the environmental and social management plans are communicated and implemented by Contractors/Subcontractors.
- Conduct regular inspections, audits, and hazard identification walkthroughs on construction sites.
- Monitor compliance of Contractors/Subcontractors with environmental and social management plans requirements.
- Supervise the Environmental Engineers, Biodiversity Specialist, Archaeologist, CLOs and oversee monitoring site practices and management plans.
- Ensure the development and follow-up of corrective/improvement actions.
- Conduct comprehensive investigations of accidents and incidents and promote continuous improvement via lessons learned.

EPC H&S Manager

- Coordinate the preparation, revision, and implementation of the Plan with E&S Manager in accordance with the Project ESIA and EIA, SPV's corporate policies, regulatory obligations, international standards and lender requirements and are implemented by EPC and subcontractors through appropriate method statements and site practices.
- Ensure all activities are managed safely, especially the assessment, removal, and disposal of asbestos (if any)
- Collaborate with internal teams (e.g., E&S, Legal, Procurement) to integrate E&S criteria into subconractor contracts.
- Ensure that all construction site activities are carried out safely by EPC and subcontractors.
- Ensure root causes are identified, documented, and that corrective actions are implemented and verified.
- Monitor the compliance of EPC and subcontractors with the safety, health, and community safety related plans, and applicable laws, international standards and lender requirements.
- Conduct regular inspections, audits, and hazard identification walkthroughs on construction sites.
- Conduct and lead a comprehensive accident and incident investigation process. Analyse trends from incidents and near-misses to identify systemic issues and develop long-term preventive strategies.

- Provide technical support to EPC and subcontractors for the proper implementation of the Project's plans.
- Ensure the accurate records of inspections, incidents, safety meetings, and training records.
- Ensure the corrective actions process is followed up on by all parties strictly.
- Report on H&S performance, non-compliance, and corrective actions to the EPC Project Director.
- Engage with regulatory authorities on inspections, audits, and compliance verification.

VI. DEMOLITION ACTIVITIES MANAGEMENT APPROACH

Demolition works inherently involve cross-cutting risks and multiple interfaces, which require close alignment with other project management plans, procedures, and regulatory obligations.

The DMP is directly connected to the Resettlement Action Plan (RAP), since the removal of structures is tied to physical and economic displacement. Demolition cannot commence until resettlement entitlements are delivered, all necessary permits and legal requirements are obtained and community notifications are completed. Similarly, grievance handling for demolition-related issues is fully integrated with the Stakeholder Engagement Plan (SEP).

On the technical side, demolition waste management and documentation are implemented in alignment with the Solid Waste Management Plan, while asbestos and other hazardous substances are managed through the Hazardous Materials Management Plan. Employee and community health and safety is another critical interface during the demolition activities. The DMP operates in full alignment with the Occupational Health & Safety Plan, ensuring PPE usage, training, competence certification, and incident reporting are consistently enforced. The Method Statement of Demolition Works and risk assessment are prepared by the EPC Contractor, before work execution. Training requirements, including toolbox talks, asbestos awareness, and emergency drills, are coordinated with all relevant Project plans, ensuring that thresholds, mitigation measures and corrective measures are consistent across the Project. Community safety considerations are embedded through the Community Health, Safety & Management Plan and Traffic Management Plan, covering access control, fencing, traffic rerouting, and emergency communication with local stakeholders. Additional safeguards are provided by the Security Management Plan and the Emergency Response Plan, which detail security arrangements, evacuation protocols, and coordination with local authorities.

Environmental safeguards are supported by the relevant plans to ensure inert demolished material reuse opportunity and soil/water protection. Potential discoveries of cultural or archaeological significance are handled in strict coordination with the Cultural Heritage Management Plan and Chance Finds Procedure. Last but not least, the DMP also intersects with Human Resources and Labor Management and Subcontractor Management Plan, which ensure that labor conditions, subcontractor selection, and contractor oversight meet both national requirements and lender expectations.

Through these linkages, the DMP functions as a cross-sectoral tool within the ESMS, guaranteeing that demolition activities are carried out safely, lawfully, and in a manner consistent with the Project's environmental and social commitments.

VII. MITIGATION MEASURES FOR DEMOLITION WORKS RELATED RISKS AND IMPACTS

The following measures will be implemented across all Project sites to prevent or minimize demolition activities risks and ensure fair, safe, and compliant workforce, environmental and social impact management throughout the activities.

Screening of Possible Demolition Site

Demolishing sites are assessed and determined according to the road route, which is identified in the Project ESIA study.

Residential Structures

304 houses are identified for demolition, including permanent residences, prefabricated homes, seasonal houses, and abandoned/ruined buildings.

Greenhouses

831 greenhouses are affected, mostly used for tomato, cucumber, pepper, banana, and tropical fruit cultivation.

Business Structures

37 enterprises will be demolished, ranging from retail shops, workshops, and markets to marble workshops, farms, packaging/storage facilities, and local roadside vendors.

Non-Residential Structures

Ancillary structures such as fences, walls, coops, wells, and sheds will also be demolished.

Before the Commencement of Demolition Activities

Key stages of the project will be carried out as described in the relevant part of the Plan. Work will generally follow the sequence as indicated below.

Receive Handover of Site and sign off services

Residential Structures

- Households will not be displaced until compensation agreements are signed and alternative housing or rental support is secured.
- Demolition sequencing will follow the resettlement schedule, ensuring families have physically vacated before structures are dismantled.

Greenhouses

- Demolition will be carefully aligned with compensation for lost assets and livelihoods. In some cases, farmers will be allowed to harvest crops before structures are dismantled.
- Where possible, recoverable materials (plastic sheeting, metal frames, pumps) will be salvaged by owners prior to demolition, with support from the Contractor.

Business Structures

- Each business operator will be given sufficient time to relocate equipment, machinery, and stock. Demolition will only proceed after resettlement measures (e.g., financial compensation, livelihood restoration programs) are finalized.

Non-Residential Structures

- Ancillary structures such as fences, walls, coops, wells, and sheds will also be demolished. Compensation will be provided to owners as per RAP, and demolition will only occur once they have removed any salvageable materials.

The Project Expropriation, in coordination with E&S Manger, will inform the construction team regarding the status of structures to be demolished. Site mobilization activities will begin only when the Land Entry Permit is signed by the land owner. Job-specific risk assessment and method of statement, permit to work will be prepared by the Construction Team and E&S and H&S Department.

Site Mobilization and Site Induction

The construction team will arrange the necessary machinery and equipment to be ready at the site. A site induction is to be held before any work commences on site. The site induction includes the following:

- Induction of the Plan and other plans to the site execution team.
- Induction into the related parties and communication channel, and parties' responsibilities
- General HSE requirements for work execution according to the Project plans.
- Scope of the current work and requirements for the next step

Demarcate the site and define Exclusion Zones

The Demolition Site ("Site") will be fenced or barricaded with hard/soft barriers. Other areas of the Site may be demarcated as hazard removal areas, exclusion or Drop Zones. The access gate will be closed during demolition works and manned during load out.

Site notices to be displayed in a prominent position are:

- Unauthorized entry prohibited
- Warning Demolition in Progress
- Mandatory PPE information signage
- Emergency Contact Number

During the Commencement of Demolishing Activities

Site Investigation

An investigation of the structures to be demolished and the surrounding environment has been undertaken with the EPC H&S and E&S Manager and the Construction Team. The investigation are broken up into three (3) sections: 'Investigation of Structures', 'Investigation of Site', and 'Investigation of Services' as below.

Investigation of Structures

Description of Structures

Height of Structures and Distance to Boundaries

Investigation of Site

Description of Site

All neighboring building types and the situation during demolition activities. Neighboring issues will be considered during the review initial Method of Statement, planning control measures and any additional physical or chemical risk parameters.

Utilities and Underground Structures

The demolition area will control any mechanical or electrical services and identify responsible parties for deenergizing the structures. Before any demolition activities commence, all existing utility connections (electricity, water, wastewater, stormwater, telecommunications, natural gas, irrigation lines) within the demolition footprint shall be identified, documented, and safely disconnected. Coordination with relevant utility providers and local authorities is mandatory to prevent accidents, unplanned service interruptions, or environmental releases.

Hazardous Chemicals / Dangerous Goods Storage or Dumps

Any major hazardous chemicals or dangerous goods (e.g. munitions, chemical storage systems, underground storage tanks, compressed gas cylinders, fire retardant cylinders, medical gases, dumps of noxious or toxic or hazardous substances, etc.) will be identified.

- **Management of Asbestos / Asbestos-Containing Material**

One of the critical issues, which is contaminated with asbestos or asbestos-containing material management process will be addressed under this stage of the Plan.

This section sets project-wide requirements for identifying, removing, transporting, and disposing of asbestos-containing materials ("ACM") in line with Turkish legislation, EU 2009/148/EC Exposure to Asbestos at Work, IFC PS1/PS3, and Good International Industry Practice (GIIP).

In 2013, the extraction, processing, sale, and import of all types of asbestos, the import and sale of all kinds of asbestos-containing products, and the production and processing of asbestos products or products containing added asbestos were prohibited with the Turkish Regulation on Health and Safety Measures in Work with Asbestos. However, existing structures which were built before 2013 might contain ACM. If the suspicious material or component is identified during site investigation, a competent third-party asbestos management company will be informed by H&S Manager to conduct a detailed site investigation, according to local regulations requirements. At this stage, after the site investigation, the third-party company can collect samples for analysis, or they will notify the EPC Contractor via an "Asbestos Free" certificate. If the suspicious material contains asbestos, a third-party competent removal company with a certified Asbestos Expert will be assigned by the EPC according to the Turkish Regulation on Health and Safety Measures in Work with Asbestos.

All wastes will be managed by the related Project's plan and local regulatory requirements.

All site is cleaned by a third-party asbestos removal competent company, and the last check is conducted by a certified Asbestos Expert via visual check and air quality measurements. The "Asbestos Free Certificate" will be prepared by the certified Asbestos Expert. The "Asbestos Free Certificate" will be submitted to the Construction team by the H&S Manager to proceed to demolition activities.

Install Environmental Controls

EPC will endeavor to do everything reasonably practicable to make what is by nature a noisy and disruptive process as quiet and dust free as possible. A summary of the key environmental methods that will be used on site include:

- **Dust Control**

Demolition of brick and concrete can generate excessive amounts of dust. However, the Project have site site-specific Air Pollution and Emissions Management Plan including dust control measures. All measures will be followed up on during activities.

- **Noise and Vibration Management**

Vibration on this site will emanate from the excavator-mounted hydraulic hammers used in the process of breaking down the concrete and brick structure. The Project have site site-specific Noise and Vibration Management Plan with control measures. All measures will be followed up on during activities. The demolition activities will be conducted during the daytime for noise and vibration control.

- **Traffic Management**

The Project has a site-specific Traffic Management Plan and all control measures will be implemented during the demolition activities.

- Providing traffic controllers to control pedestrian and vehicular traffic
- Ensure trucks are covered prior to leaving the site
- Providing drivers information on access, routes and site conditions and sensitive receivers

Soft strip structure

The structures will be stripped-out by hand and appropriate hand tolls where required, prior to mechanical stripping in appropriate areas. No heavy machines will be placed if the structure owner requests the reuse of the component. The owner will be allowed to strip the soft component.

Bounded material such as non-loading bearing walls, partitions, and doors that may not be removed by machines will be removed by a combination of hand, picks, crow bars, and other associated tools, and stockpiled in the building or a secure area of site for load out by machines.

Mechanical Demolition

Before the start of the mechanical demolition, all hazardous materials and materials containing hazardous chemicals, such as fluorescent lamps, in the buildings will be collected and disposed of in accordance with the project-specific plans.

A watcher will work with plant and equipment operators at all times.

Water will be maintained at the face of demolition for dust suppression where required.

During demolition the floor area under the excavators and the bay area's being demolished will be closed off with warnings signs. No plant or personnel will be allowed in these areas.

Remove rubble and rubbish from the site

Waste Control

The Project have site site-specific Solid Waste Management Plan and all requirements will be followed up during activities.

- The demolition of 304 residential buildings is expected to generate approximately 182,400 tons of construction and demolition (C&D) waste.
- The demolition of 37 business structures is expected to generate approximately 22,200 tons of waste.
- The demolition of greenhouses is expected to generate approximately 83,100 tons of plastic waste.
- Given the expected 287,700 tons of construction and demolition waste from residential, greenhouse, and business structures, all construction and demolition wastes will be temporarily stored in designated storage areas and subsequently disposed of or recycled in compliance with applicable legislation and regulations.

The expected waste type is listed below table. The Waste EWC Code is listed under The Solid Waste Management Plan.

Waste Stream	Possible waste sources
Concrete & Masonry	Concrete, bricks, tiles
Metals	Rebars, steel frames, aluminum greenhouse structures
Wood	Doors, windows, timber beams
Glass	Greenhouse panels, windows
Plastic	Greenhouse covers, PVC pipes, packaging
Soil & Stones	Excavated soil, rubble
Hazardous Asbestos Waste	Roofing sheets, insulation, floor tiles
Hazardous Chemicals & Paints	Paints, solvents, pesticide residues from farms
Mixed Construction and Demolition Waste	Unsuitable residuals after segregation

Completion Status of Demolition Works

The Construction team will inform the E&S and H&S Manager to conduct a site inspection after all waste and debris have been removed from the demolition site.

VIII. TRAINING

The employees of the AAOİAŞ, Limak and subcontractors will require to attend the new-hire induction training that includes environmental and social awareness and compliance training to be aligned with Project ESIA and ESMS.

Regular internal and external (when necessary) trainings will be given to ensure that the mitigation measures indicated in this Plan are applied during the construction phase of the Project for all involved parties. Regular internal inspections will be conducted to ensure that the mitigation measures indicated in this Plan are applied during the construction phase of the Project.

Training is a cornerstone of the Demolition Management Plan, ensuring that all workers, supervisors, and subcontractors possess the necessary knowledge, skills, and awareness to perform demolition activities safely, effectively, and in compliance with national legislation, IFC Performance Standards, ESIA commitments and Project's plans. A structured training program will build competence in occupational health and safety, environmental protection, community health and safety, and emergency preparedness.

IX. MONITORING

A structured internal monitoring program will be implemented to assess the effectiveness of the mitigation measures outlined in this Plan during the demolition activities on the Project. The scope and frequency of monitoring activities will be periodically reviewed and revised where necessary, based on site-specific conditions, observed risks or incidents, stakeholder concerns, or changes in applicable national regulations and international standards.

Monitoring activities will be coordinated by the Corporate Communication, in close collaboration with the Environmental, Occupational Health and Safety (OHS), and Construction Management teams. Key responsibilities will include verifying the implementation of control measures, ensuring the visibility and condition of safety signage, reviewing traffic safety and demolition measures around construction zones and emergency response readiness near sensitive receptors such as residential areas, schools, and healthcare facilities.

Monitoring efforts will be guided by the framework provided in **Error! Reference source not found.**, which outlines key parameters to be monitored, relevant locations, monitoring methods, frequency, and responsible parties. These monitoring activities are essential for evaluating the effectiveness of demolition mitigation efforts and ensuring full compliance with applicable regulations and Project standards.

Key Monitoring Activities

Parameter	Monitoring Location	Monitoring Method	Monitoring Frequency	Responsible Parties
Number of Site Induction Conducted	Project personnel and contractor workers receiving training	Review of training records	Every demolition work Quarterly	EPC AAOİAŞ,
Compliance with Plan Implementation	Availability of relevant records in the system	Review of documented compliance with Plan procedures	Every demolition work Quarterly	EPC AAOİAŞ,
Number of Complaints Related to the Demolition Activities	Records kept under the Grievance Mechanism Procedure	Review of grievance registration and resolution logs	Every demolition work Quarterly	EPC AAOİAŞ,
Waste amount from demolition activities	Records keeping	Review of records	Every demolition work Quarterly	EPC AAOİAŞ,

In cases of non-compliance identified through internal oversight or external audits, AAOİAŞ will ensure that corrective and preventive measures are promptly implemented in coordination with the Contractor (Limak) and relevant subcontractors.

All demolition activities related findings will be documented in accordance with national environmental regulations and Project procedures. In the event of serious violations AAOİAŞ will ensure that the issue is reported to the competent authorities and that appropriate technical, procedural, and contractual actions are taken.

X. KEY PERFORMANCE INDICATORS

The following Key Performance Indicators (KPIs) will be monitored, verified, and evaluated.

Table X.1 Key Performance Indicators – Construction Phase KPIs

Monitoring Parameter / Performance Indicator	Target	Frequency	Responsible Party
Number of trainings conducted	All personnel to receive training	Quarterly	AAOİAŞ, EPC
Non-conformities with standards	0	Monthly	AAOİAŞ, EPC

XI. AUDIT AND REVIEW

The implementation of this Plan should be regularly monitored and reviewed in accordance with the Environmental and Social Management and Monitoring Plan (ESMMP). All incidents and non-conformities related to community health and safety should be documented and reported as outlined in this Plan. Contractors and subcontractors should be subject to audits conducted by the Project Sponsor within the scope and schedule defined in the Contractor and Subcontractor Management Plan. These audits and the associated records should be managed in compliance with the Project's established plans and procedures. Records to be reviewed during community health and safety audits will include, but are not limited to, the External and Internal Grievance and Suggestion Tracking Databases, records of community health and safety training sessions, non-conformity and incident records, emergency drill evaluations, and site-specific environmental and social monitoring data such as dust, noise, or vibration measurement reports. Observations and deficiencies identified during audits should be recorded in formal audit reports, and all findings requiring improvement should be registered under Corrective Actions. Project management should review audit outcomes and corrective action records, follow up on progress, and ensure that additional measures are implemented where necessary.

XII. REPORTING

Regular reporting should be conducted to ensure the effective implementation and continuous improvement of community health and safety management activities throughout the construction phase of the Project. Reporting should be structured to address both internal monitoring and auditing outcomes, as well as external compliance obligations and stakeholder engagement requirements.

Based on monitoring results, necessary corrective and preventive actions should be identified and the required updates should be incorporated into this Plan. The training program will also be revised accordingly to address any observed gaps. Regular audits and visual inspections should be conducted to verify that all activities are being undertaken in accordance with the provisions of this Plan.

Reports should be prepared using data gathered through community health and safety monitoring activities defined under this Plan. The results and supporting evidence of these monitoring activities (e.g., observations, grievance logs, community engagement records, and photos) should be documented in detail within appropriate reporting formats. This section of the Plan outlines the instructions and requirements for implementing these reporting activities.

Reporting activities under this Plan mainly relate to community grievances, implementation of awareness and training programs, performance of emergency response drills, monitoring of blasting activities and road safety measures near populated areas, and access control around high-risk construction zones. In the event of significant community health and safety incidents (e.g., injuries, unauthorized site access, unannounced blasting), an incident report including root cause analysis (RCA), mitigation and compensation measures should be submitted to the relevant authorities in accordance with Turkish legislation and Project procedures.

All data, together with the results of inspections and audits, should be summarized in the dedicated community health and safety chapter of the Environmental and Social Monitoring Report prepared on a quarterly basis. This report will include any non-compliances identified, corrective actions taken, and any recommended time-bound corrective measures. These should be supported with documentary evidence such as photographs, checklists, and field logs.

All personnel are encouraged to raise concerns, suggestions, or complaints related to community health and safety through the established grievance mechanism by completing the grievance form or using designated communication channels. Public grievances regarding safety, access, noise, blasting, or other community-related risks should also be addressed and followed up accordingly. The available communication channels for submitting grievances are outlined in the Stakeholder Engagement Plan.

Throughout the construction phase of the Project, this Plan will be reviewed by the E&S Manager, based on the results of audits and any community health and safety incidents or changes in site activities. Updates to the Plan will be agreed upon between the H&S Manager and the E&S Manager.

ANTALYA ALANYA MOTORWAY	**ANTALYA-ALANYA MOTORWAY PROJECT**
Revision No: 0	**Date:** 08.09.2025

ENVIRONMENTAL and SOCIAL MANAGEMENT and MONITORING PLAN

REVISION STATUS		
Revision Date	**Rev. No**	**Explanation**
08.09.2025	00	This plan is prepared according to TS EN ISO/IEC 9001:2015, TS EN ISO/IEC ISO 14001:2015, TS EN ISO/IEC 45001:2018 and IFC Performance Standards

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LIST OF ABBREVIATIONS

AAOİAŞ	Antalya-Alanya Otoyolu İnşaat Yatırım ve İşletme A.Ş.
AQECP	Air Quality and Emissions Control Plan
CLO	Community Liaison Officer
CO	Carbon Monoxide
E&S	Environmental and Social
EHS	Environmental, Health, and Safety
ENCON	ENCON Environmental Consultancy Co.
EPC	Engineering, Procurement and Construction (Limak İnşaat Şanayi ve Tic. A.Ş.)
ESIA	Environmental and Social Impact Assessment
ESMMP	Environmental and Social Management and Monitoring Plan
ESMS	Environmental and Social Management System
EU	European Union
GM	Grievance Mechanism
HC	Hydrocarbons
HSE	Health, Safety and Environment
H&S	Health and Safety
IFC	International Finance Corporation
KPIs	Key Performance Indicators
Limak	Limak İnşaat Şanayi ve Tic. A.Ş.
NO_x	Nitrogen Oxides (NO_2 and NO)
PM	Particulate Matter
RAMAQ	Regulation on Assessment and Management of Air Quality
RCA	Root Cause Analysis
SPV	Special Purpose Vehicle (Antalya-Alanya Otoyolu İnşaat Yatırım ve İşletme A.Ş.)
SO_2	Sulfur Dioxide
VOCs	Volatile Organic Compounds
WHO	World Health Organization

ENVIRONMENTAL and SOCIAL MANAGEMENT and MONITORING PLAN

I. INTRODUCTION

Ministry of Transport, and Infrastructure (former Ministry of Transport, Maritime Affairs and Communications), General Directorate of Highways ("KGM" or "the Administration"), as the owner of the Antalya-Alanya Motorway Project, has tendered for a contract in accordance with the Law on Implementation of Some of the Investments and Services in the Framework of Build, Operate and Transfer Model (Law No: 3996). Following the tendering process, KGM has awarded Antalya-Alanya Otoyolu İnşaat Yatırım ve İşletme A.Ş. (AAOİAŞ,SPV or the Project Sponsor) with a Build, Operate and Transfer (BOT) contract for the implementation of the Project. Accordingly, AAOİAŞ will be referred as Project Sponsor[1] in the scope of this report. The main contractor for the Project has been designated as Limak and will henceforth be referred to as the Contractor (or EPC).

The project is designed to connect the districts of Serik and Alanya via the Manavgat district of Antalya province. The Project will enhance the existing transportation network services with its surrounding provinces: Burdur, Muğla, Konya, Isparta, Karaman and Mersin. Various environmental, social, and technical studies have been conducted along the initial route of the Project tendered by the KGM. Based on these studies, the route was optimized, incorporating engineering practices and addressing environmental and social considerations, particularly issues of involuntary and economic resettlement, before being finalized. According to the most current design, the total length of the Motorway, which will be a dual carriageway of mostly 3 and partially 2 lanes (3x2 and 2x2) in each direction, is 117.8 kilometers including the main carriageway and the access roads[2].

This Environmental and Social Management and Monitoring Plan (ESMMP or The Plan) was prepared by AAOİAŞ as a part of Project ESIA Package which is a management tool to be used by SPV, EPC Contractor and its sub-contractors & suppliers to implement the Environmental & Social (E&S) mitigation measures identified in the ESIA report during construction phases.

I.1 Project Description

The Project starts at Serik Interchange (Km: 52+000) and then proceeds eastward, following the corridor at the foothills of the Taurus Mountains within the boundaries of Serik and Manavgat districts, ending at north of Konaklı neighborhood of Alanya District (Km: 136+000). From this point onwards, the route turns southward with a 2x2 lane connection road and connects to the D400 state road at the Alanya West Interchange. As of April 2025, the current Project design includes a total of 117.8 kilometers of road, comprising 84 kilometers of main road (motorway) and 33.8 kilometers of access roads.

The map showing the construction components and road route within the scope of the Project's construction activities is provided in *Figure I-1.*

[1] The BOT Contract uses the term "Appointed Company" to refer Project Sponsor

[2] It should be noted that the environmental and social baseline characterization, maps and scoping assessments provided in this report are based on the most current design

Figure I-1.. Map Showing the Locations of Construction Compounds

Other structures to be built as part of the project are as follows:

- 16 viaducts,
- 22 bridges,
- 305 culverts,
- 25 interchanges,
- 56 overpasses,
- 43 underpasses, and
- 5 tunnels.

I.2 Purpose and Scope

The purpose of this Plan is to ensure continuous and effective implementation of the mitigation measures set by the Project management plans and to provide an environmental and social monitoring program to achieve Project goals.

ESMMP will be supported by several management plans, which are a set of stand-alone documents that will evolve during the lifetime of the Project to encompass the construction of the motorway and will be integrated into the overall SPV's Environmental and Quality Management Systems.

The ESMMP includes:

- A summary of mitigation and enhancement measures to be implemented;
- Roles and responsibilities of the Project Sponsor, contractors, and E&S management teams;
- Environmental and social monitoring indicators, frequencies, and methods;

This ESMMP is a living document developed with the best available information and will be reviewed and revised as necessary due to the nature of the construction and progress.

I.3 Legislative Framework and Reference Standards

The Plan aims to ensure that all project activities are conducted in compliance with:

- Applicable Turkish national environmental and social legislation,
- Applicable International Standards,
- The International Finance Corporation (IFC) Performance Standards,
- Project-specific commitments outlined in the Environmental and Social Impact Assessment (ESIA) and associated management plans

II. ENVIRONMENTAL and SOCIAL MANAGEMENT SYSTEM

The main elements of an Environmental and Social Management System (ESMS) are provided in Figure II-1and comprise the following four phases, also described in below.

Figure II-1. Main Elements of the ESMS

Planning: Establishing the objectives and processes necessary to deliver results in accordance with the Project Guideline for Environmental Management.

Doing: Implementing the processes through defining mitigation measures and assigning responsibilities for undertaking or implementing such mitigation measures, typically through suites of Management Plans.

Checking: Monitoring and measuring these processes against the policy, objectives and targets, legal and other requirements (such as IFC), and reporting of the results.

Acting: Taking actions to continually improve the performance of the ESMS through the training of personnel and auditing of results.

An ESMS will include:

- Policy Statements – which describes Project's E&S objectives which will guide the Project in achieving E&S performance
- Process for Risk Identification – which, in addition to the ESIA, shall include a defined process for evaluating and managing environmental and social risks through the life of the Project;
- Management Programs – for environmental and social performance execution which are, in part, detailed below;
- Organisation Capacity/Competency – demonstrated through clear division of responsibility

and vetting of individual roles holding responsibility and accountability for environmental and social performance execution;

- Documentation such as ESIA, Stakeholder Engagement Plan (SEP), Resettlement Action Plan (RAP), Emergency Preparedness and Response Plan (EPRP), and ESMMP address how potential Environmental, Social, Health and Safety (ESHS) risks will be managed during the Project lifecycle;
- Monitoring and Review System – which will detail the process by which the Project will monitor and measure the effectiveness of the management program, including compliance with any regulatory requirements, legal requirements and/or contractual obligations.

An ESMS will provide a systematic structure and approach to enable the effective implementation and management of environmental & social risks, impacts, opportunities and related compliance. Effective management of environmental & social issues will consider, implement and address the following fundamental components as part of the robust ESMS:

- Project-specific policies related to the environmental and social considerations,
- Project-based E&S Objectives, Targets & Programme,
- Applicable E&S legal requirements and other compliance obligations (such as those required by lenders);
- E&S professionals, who have the experience, competence, and training necessary to assess and manage environmental impacts and risks, and carry out environmental & social management functions including the preparation of Project or activity-specific plans and procedures that incorporate the technical requirements presented in this document;
- Prioritisation of management programmes/ strategies with the objective of achieving an overall reduction of risk to human wellbeing and the environment, focusing on the prevention of irreversible and/or significant impacts;
- Favouring strategies (where possible) that eliminate the cause of the impact at its source, for example, by selecting less hazardous materials or processes that avoid the need for environmental controls;
- When impact avoidance is not feasible, incorporating controls to reduce or minimise the possibility and/or magnitude of undesired consequences, for example, with the application of pollution controls to reduce the levels of emitted contaminants;
- Preparing workers, informing, and cooperating with nearby communities and relevant stakeholders to respond to emergencies, and accidents, including providing technical and financial resources to control such events effectively and safely,
- Improving environmental performance (i.e., for continual improvement) through a combination of ongoing monitoring of facility performance and effective accountability;
- Performance ranges will be refined on a regular basis as more data becomes available, in turn enabling more accurate strategy development and benchmarking. As such, the ESMS documents will be treated as living documents, to be updated within a continuous process of improvement.

To ensure that the Project is implemented in compliance with the Project Requirements, Regulations and Standards, the following policies have been developed:

- Integrated Management Systems Policy,
- OHS Policy,
- Corporate Equality Policy,
- Zero Tolerance Policy
- Human Resources Policy,

The above-mentioned policies, to be included in the SPV´s ESMS, will establish the framework for the Project's environmental, social, health and safety management processes as further developed and defined within this ESMMP.

II.1 Managing Changes to Project Activities

Changes in the Project may occur due to unanticipated situations. Adaptive changes may also occur during the course of the project life cycle. SPV will implement a formal procedure to manage changes in the Project that will apply to all project activities.

A Change Management Plan has been prepared for the Project. As is typical for such a large infrastructure project, it is expected that there will be changes required to the design aspects of the Project. Many changes will be of a purely technical nature with little/no ESIA-relevance (e.g., incline of a ramp, or concrete specifications), and many other changes are expected to fall within the areas and issues already covered by the ESIA, ESMMP and Resettlement Action Plan (RAP) (e.g., change in areas of property expropriated from already-affected landowners, layout of facilities at the rest areas).

The objective of the plan is to ensure that the impact of changes on the health and safety of personnel, the environment, plant and equipment are identified and assessed prior to changes being implemented.

II.2 Roles and Responsibilities

Table II-1 is provided to outline the roles and responsibilities specifically related to the implementation, monitoring, and reporting requirements of ESMPs. The table clarifies the functional duties of each party involved in ensuring the effective execution of the measures described herein and reinforces accountability across all relevant units.

Table II-1. Roles and Responsibilities

Roles	Responsibilities
General Manager (SPV)	○ Define and implement the overall business strategy and direction of the SPV in alignment with shareholder and stakeholder expectations. ○ Ensure the development, revision, and execution of project-specific

Roles	Responsibilities
	management plans, including the Environmental and Social Management Plan (ESMP) in accordance with company policies and international standards. ○ Ensure the provision of necessary resources and organizational support for the implementation of all SPV plans, including E&S and H&S. ○ Oversee the day-to-day operations of the SPV to ensure project milestones and deliverables are achieved efficiently and sustainably. ○ Supervise and coordinate EPC contractors and subcontractors to ensure proper execution of construction, commissioning, and operational phases. ○ Ensure that managerial decisions are made regarding the implementation of all SPV policies and plans by EPCs and subcontractors. ○ Ensure the preparation, dissemination, and implementation of the Environmental and Social Management Plan, and that it is communicated clearly to all EPC contractors and subcontractors. ○ Supervise and ensure contractor/subcontractor compliance with E&S and H&S plans and standards. ○ In case of non-compliance, ensure correct and preventive actions are taken in collaboration with the EPC, SPV's E&S Manager, and H&S Manager. ○ Coordinate internal intervention and emergency response procedures in case of environmental, social, or safety-related incidents. ○ Make executive decisions on project budgeting, resource allocation, and capital management to support project execution and sustainability, H&S and E&S compliance. ○ Ensure sufficient funding and personnel are dedicated to environmental, social, and H&S obligations under the project's contractual and regulatory frameworks. ○ Ensure the monitoring environmental, social and financial performance, reporting, and risk exposure of the SPV, ensuring transparency and accountability to stakeholders and investors. ○ Promote a culture of environmental and social responsibility across the SPV and its stakeholders. ○ Ensure that all project activities comply with local laws, environmental regulations, corporate governance policies, and international best practices and lender requirements. ○ Liaise with legal counsel to manage the SPV's legal framework, mitigate

Roles	Responsibilities
	risks, and fulfil all contractual obligations. ○ Provide timely updates, reports, and presentations on the SPV's performance, risks, compliance status, and community engagement efforts. ○ Foster positive relationships with government agencies, financial institutions, civil society, and project-affected communities. ○ Lead the development and execution of the exit strategy or asset disposal plan upon project maturity or completion. ○ Oversee the financial and legal wind-down of the SPV in accordance with regulatory and shareholder requirements.
E&S Manager (SPV)	○ Review and ensure the preparation, revision, and implementation of E&S Management Plans in accordance with national laws, regulations, company policies, international standards and lender requirements. ○ Develop and manage the overall E&S management system and project-specific sub-plans. ○ Review and update the E&S Management Plan in coordination with the EPC's E&S Manager and construction teams. ○ Ensure that environmental, and community safety measures are implemented through method statements and site practices. ○ Ensure that all construction site activities are carried out safely by EPC and subcontractors. ○ Ensure that EPC and subcontractors correctly implement site practices. ○ Provide technical support to EPC and subcontractors for the implementation of E&S Plans. ○ Collaborate with internal teams (e.g., H&S, Legal, Procurement) to integrate E&S criteria into project operations and contracts. ○ Monitor the environmental and social performance of EPC and subcontractors to ensure compliance. ○ Monitor EPC and subcontractor adherence to the requirements of the E&S Management Plan. ○ Monitor EPC and subcontractor adherence to the requirements of the E&S Management Plan. ○ Ensure EPC and subcontractors maintain accurate records, including those of corrective and preventive actions.

Roles	Responsibilities
	○ Supervise the E&S Deputy Manager oversee the implementation of monitoring systems. ○ Ensure that EPC and subcontractors provide required E&S training. ○ Review and validate training records and related documentation. ○ Ensure effective investigation and documentation of environmental and social incidents. ○ Lead or support the implementation of corrective actions and incident prevention measures. ○ Coordinate emergency preparedness and community safety procedures. ○ Prepare and submit E&S compliance and performance reports to internal and external stakeholders, including lenders and regulators. ○ Maintain documentation related to site compliance, audits, training, and grievances. ○ Support stakeholder engagement activities and consultations with local communities. ○ Oversee the Grievance Mechanism (GM) and ensure timely resolution of community and worker complaints. ○ Engage with regulatory authorities, auditors, and NGOs on E&S compliance and performance matters ○ Coordinate obtaining environmental related permits
H&S Manager (SPV)	○ Ensure the preparation, revision, and implementation of the health, safety, community related plans and documents in accordance with company policies, regulatory obligations, international standards and lender requirements. ○ Ensure the conditions and obligations specified in the health, safety, community related plans and documents are implemented and adhered to by EPC and subcontractors in accordance with company policies, regulatory obligations, international standards and lender requirements. ○ Contribute to project risk assessments and job hazard analyses (JHAs) and ensure these are updated regularly. ○ Ensure that all construction site activities are carried out safely by EPC and subcontractors. ○ Ensure that safety, health, and community safety measures are implemented by EPC and subcontractors through appropriate method

Roles	Responsibilities
	statements and site practices. ○ Ensure that physical site boundaries are clearly defined and maintained by EPC and subcontractors to control site access and protect public safety. ○ Provide technical support to EPC and subcontractors for the proper implementation of the safety, health, and community safety related plans. ○ Supervise the integration of safety controls into daily work permits, toolboxes, and field activities. ○ Monitor the compliance of EPC and subcontractors with the safety, health, and community safety related plans, and applicable laws, international standards and lender requirements. ○ Conduct regular inspections, audits, and hazard identification walkthroughs on construction sites. ○ Track and analyze safety performance metrics (e.g., LTIs, near misses, TRIR) and recommend corrective measures. ○ Participate in and oversee comprehensive investigations of accidents and incidents. ○ Ensure root causes are identified, documented, and that corrective actions are implemented and verified. ○ Ensure timely and appropriate resolution of complaints related to public health and safety. ○ Support EPC and subcontractors in the development and delivery of site-specific H&S training programs. ○ Ensure safety inductions, toolbox talks, and job-specific training are conducted and recorded. ○ Maintain accurate records of inspections, incidents, safety meetings, and corrective actions. ○ Report on H&S performance, non-compliance, and corrective actions to Project General Manager and external stakeholders. ○ Coordinate with health and safety teams to align safety measures with broader site and community risk controls. ○ Engage with regulatory authorities on inspections, audits, and compliance verification.
Expropriation Manager (SPV)	○ Implement the Resettlement Action Plan (RAP) or equivalent frameworks in alignment with national regulations and international standards.

Roles	Responsibilities
	○ Identify affected lands, properties, and stakeholders in collaboration with survey, legal, and engineering teams. ○ Coordinate with government bodies and legal authorities for expropriation procedures and approvals. ○ Engage with landowners, occupants, and project-affected communities to explain project scope, land requirements, compensation processes, and grievance redress mechanisms. ○ Mediate and resolve disputes related to land ownership, valuation, or resettlement with tact and legal support where necessary. ○ Coordinate resettlement efforts where required, including livelihood restoration programs. ○ Maintain detailed documentation of compensation agreements, payments, and relocations. ○ Ensure expropriation processes comply with national laws, international standarts, lender requirements, and the SPV's internal policies. ○ Collaborate with E&S teams to ensure that land acquisition activities do not lead to violations of environmental or social management plans. ○ Track and report progress of land acquisition and resettlement activities to senior management and external stakeholders. ○ Provide input for audits, investor updates, and compliance reviews related to expropriation. ○ Identify and mitigate risks related to delayed acquisition, legal disputes, or community opposition. ○ Implement contingency plans to avoid disruption to project timelines due to expropriation issues.
Deputy E&S Manager (SPV)	○ Lead the development, implementation, and continuous improvement of the Environmental and Social Management. ○ Implement all project activities comply with local laws, environmental regulations, corporate governance policies, and international best practices and lender requirements. ○ Provide strategic leadership and oversight to the E&S team, including Managers, Specialists, Engineers, and Community Liaison Officers, ensuring effective coordination and resource allocation. ○ Ensure EPC contractors and subcontractors consistently comply with E&S requirements through monitoring, audits, corrective actions and training

Roles	Responsibilities
	programs. ○ Oversee incident and non-compliance management, including investigations, corrective/preventive measures, and stakeholder communication. ○ Serve as the principal liaison for all environmental and social matters with government regulators, financial institutions, communities, NGOs, and other stakeholders. ○ Promote a culture of environmental and social responsibility across the SPV and its stakeholders, driving continuous improvement and risk mitigation. ○ Support executive decision-making by providing timely reports and insights on E&S performance, risks, and emerging trends. ○ Lead community engagement strategies in collaboration with the Environmental Engineer, Agricultural Expert, Social Chief and CLOs to ensure effective grievance management and positive relations with project-affected communities. ○ Ensure E&S considerations are integrated into project planning, budgeting, and closure activities, including restoration and post-construction monitoring. ○ Support the environmental and community safety measures are implemented through site practices and method statements by the EPC and subcontractors. ○ Ensure that the EPC and subcontractors carry out site practices correctly. ○ Ensure that EPC and subcontractors maintain relevant records. ○ Ensure that EPC and subcontractors maintain records of corrective and preventive actions. ○ Ensure that Management Plans are prepared, revised, and implemented in accordance with company policies. ○ Ensure that EPC and subcontractor provide the necessary training through the review of training records and relevant training documents. ○ Conduct comprehensive investigations in case of accidents and incidents. ○ Manage waste within the entire project footprint and area of influence, prioritizing the designated areas to be used under the scope of the Project. ○ Coordinate environmental and social monitoring programs
Social Chief	○ Supervise and mentor CLOs, ensuring their work aligns with project

Roles	Responsibilities
(SPV)	priorities and stakeholder engagement strategy. o Develop and implement work plans and schedules for the CLO team. o Ensure consistent messaging, processes, and reporting methods across all field teams. o Conduct regular team meetings to review community issues, grievances, engagement outcomes, and field updates. o Lead the implementation of the Stakeholder Engagement Plan (SEP) and ensure it reflects community realities. o Oversee the planning and execution of community consultations, public meetings, and disclosure activities. o Ensure that engagement activities are inclusive of vulnerable and marginalized groups. o Build and maintain positive, trust-based relationships with local communities, leaders, and institutions. o Supervise the effective functioning of the grievance redress mechanism (GRM) at community and project levels. o Ensure all grievances are recorded, processed, and resolved in a timely and transparent manner. o Analyse grievance trends and escalate systemic issues to the E&S Manager. o Contribute to the continuous improvement of the GRM process based on community feedback and internal review. o Monitor the performance of social engagement activities and their compliance with SEP objectives. o Ensure accurate, timely, and complete reporting of CLO activities, stakeholder interactions, and grievance outcomes. o Review and validate weekly/monthly reports from CLOs and prepare consolidated updates for senior management. o Ensure all engagement activities meet national regulations and international standards (e.g., IFC PS, EBRD PR, Equator Principles). o Identify training needs and deliver or coordinate training for CLOs on stakeholder engagement, conflict resolution, o and field documentation.

Roles	Responsibilities
	○ Promote professional development and capacity building within the social team. ○ Train subcontractors and relevant staff on community interaction protocols and grievance management. ○ Contribute to the development, review, and periodic updating of the SEP and related social management plans. ○ Ensure CLOs support the implementation and documentation of these plans at the field level. ○ Support the integration of lessons learned into updated plans and engagement strategies. ○ Coordinate with the E&S Manager, E&S Specialists, H&S, legal, and construction teams to address community-related ○ impacts. ○ Support alignment between community concerns and project execution through proactive communication with ○ technical departments. ○ Contribute social performance inputs to reports for lenders, regulators, and corporate leadership.
Agricultural Expert (SPV)	○ Assess project impacts on agricultural land, productivity, and rural livelihoods in coordination with the expropriation and E&S teams. ○ Support the development and implementation of livelihood restoration strategies for project-affected farmers and agricultural households. ○ Conduct field visits to gather agricultural baseline data, monitor changes, and evaluate effectiveness of mitigation measures. ○ Provide technical input to social risk assessments, Resettlement Action Plans (RAPs), and Livelihood Restoration Plans (LRPs). ○ Engage with local agricultural institutions, cooperatives, and extension services to coordinate support and training programs. ○ Participate in community consultations with a focus on agricultural concerns and provide input into grievance resolution related to land use, crop loss, or livelihood impacts. ○ Help identify and implement sustainable farming initiatives and compensation strategies aligned with local practices and market trends. ○ Monitor and report on agricultural livelihood indicators, ensuring alignment

Roles	Responsibilities
	with project and lender requirements. ○ Contribute to the review and update of relevant social and livelihood management plans. ○ Support the Social Chief and Community Liaison Officers in field-level implementation, training, and stakeholder engagement related to agricultural matters.
Expropriation Engineer (SPV)	○ Review and validate cadastral maps, land parcel data, and expropriation plans in coordination with the design and survey teams. ○ Prepare and update technical drawings, parcel-level expropriation maps, and cross-sections for engineering verification. ○ Ensure that technical documentation aligns with the project's legal, spatial requirements, international standards and lenders requirements for expropriation. ○ Support the preparation of expropriation folders with complete technical details for each parcel. ○ Conduct field inspections and site verifications to confirm parcel boundaries, existing structures, crops, and utilities. ○ Record and document physical conditions of affected properties, including GPS coordinates and photographic evidence. ○ Collaborate with surveyors, property evaluators, and legal experts during field visits and technical assessments. ○ Maintain a database of technical information related to affected parcels, expropriation status, and engineering reviews. ○ Prepare technical summaries, verification reports, and progress updates for the Expropriation Manager. ○ Assist in tracking parcel-by-parcel technical clearance and report on delays or technical discrepancies. ○ Support interactions with landowners during technical inspections, mapping explanations, and asset identification. ○ Coordinate with municipal engineers, cadastral offices, and other public institutions to resolve technical inconsistencies. ○ Assist the legal and valuation teams by providing technical input for asset valuation and compensation processes. ○ Ensure all engineering-related activities comply with national laws, environmental and social standards, international standards, lender

Roles	Responsibilities
	requirements and project guidelines. ○ Support the preparation of technical annexes for land acquisition reports, grievance responses, and audit documentation. ○ Provide support during audits by lenders or regulatory agencies on technical matters related to expropriation.
Urban Planner (SPV)	○ Conduct land use assessments and spatial analysis to support expropriation, resettlement planning, and infrastructure alignment. ○ Identify and evaluate potential resettlement areas in collaboration with the social and engineering teams, ensuring suitability in terms of accessibility, services, and community integration. ○ Prepare or review layout plans for resettlement sites or impacted urban areas in compliance with national and local planning standards. ○ Support the preparation of expropriation and land-use strategy documents that align with municipal and regional development plans. ○ Ensure that project land acquisition activities are consistent with zoning, land classification, and regulatory requirements. ○ Liaise with urban planning authorities and municipalities to facilitate approvals, permits, and community development. ○ Work with the Legal and Expropriation teams to resolve spatial planning disputes or challenges related to land classification. ○ Participate in field visits, stakeholder consultations, and public meetings to present planning proposals and gather community feedback. ○ Prepare maps, presentations, and reports to communicate spatial strategies and resettlement layouts to stakeholders.
Surveying Engineer (SPV)	○ Plan, coordinate, and supervise all surveying activities related to the project, including topographic, cadastral, and engineering surveys. ○ Review and validate survey data, maps, and drawings prepared by EPC contractors or subcontractors to ensure accuracy and compliance with project requirements. ○ Support the expropriation process by verifying parcel boundaries, land ownership, and physical asset inventories. ○ Ensure that all survey activities are conducted using appropriate instruments (e.g., GPS, total station, drones) and are aligned with national and international standards. ○ Coordinate with design, engineering, and legal teams to resolve

Roles	Responsibilities
	discrepancies in land measurements, maps, and legal documentation. ○ Maintain an up-to-date geospatial database of all surveyed areas and assets affected by the project. ○ Participate in site inspections and field verifications alongside Expropriation Engineers, CLOs, and property evaluators. ○ Provide technical inputs for land acquisition documentation, grievance resolution, and community consultation processes. ○ Ensure survey documentation is archived properly and is accessible for audits, regulatory reviews, and internal controls. ○ Supervise EPC and subcontractor survey teams to ensure the implementation of safe and efficient survey operations within the project area. ○ Liaise with relevant public institutions (e.g., cadastral offices, municipalities) for official validation of survey outputs when required. ○ Contribute to the preparation of maps, cross-sections, and spatial plans for environmental, social, and engineering applications.
Surveyor (SPV)	○ Conduct detailed topographic and cadastral surveys of affected land parcels and assets using appropriate tools and technologies. (e.g., total stations, GPS, drones) ○ Mark land boundaries in coordination with landowners, communities, and relevant authorities to support clear delineation for expropriation. ○ Assist in preparing and verifying land acquisition maps, parcel boundaries, and infrastructure alignments based on project design and engineering data. ○ Support inventory of physical assets (buildings, trees, irrigation systems, crops, etc.) for compensation assessment purposes. ○ Ensure coordination between survey data and GIS systems, and assist in maintaining an up-to-date spatial database of all expropriation-related parcels and assets. ○ Work closely with the Expropriation, Legal, Social, and Civil Engineering teams to ensure consistency and technical accuracy in documentation. ○ Participate in site verification visits with stakeholders, ensuring transparency and consensus during boundary marking and inventory. ○ Provide survey data and documentation required for legal registration, compensation, and permitting processes.

Roles	Responsibilities
	○ Ensure the safe, efficient use and maintenance of all surveying equipment. ○ Maintain clear records and archives of field data, survey results, and maps in compliance with company and regulatory standards.
HSE Specialist (SPV)	○ Support the execution of the safety, health and community safety related plans, and ensure site activities are carried out safely by EPC contractors and subcontractors in-line with applicable laws, international standards and lender requirements. ○ Conduct regular site inspections, hazard identification, and risk assessments; follow up on corrective and preventive actions. ○ Monitor compliance with safety protocols and ensure H&S measures are integrated into method statements and work procedures. ○ Maintain H&S documentation, including safety permits, incident records, and training logs, etc. ○ Participate in accident and incident investigations, ensuring findings are documented and lessons are communicated across teams. ○ Support H&S training delivery for all relevant site personnel and review contractor training records for adequacy. ○ Ensure the construction site is properly demarcated and safety signage and barriers are in place and maintained. ○ Assist in resolving complaints related to occupational health, site safety, and community safety in coordination with relevant teams. ○ Contribute to the review and update of safety plans and procedures based on field experience and audit findings. ○ Provide technical guidance to contractors and subcontractors to improve health and safety performance. ○ Implement the integration of safety controls into daily work permits, toolboxes, and field activities. ○ Assist to H&S manager to monitor the compliance of EPC and subcontractors with the safety, health, and community safety related plans, and applicable laws, international standards and lender requirements. ○ Conduct regular inspections, audits, and hazard identification walkthroughs on construction sites. ○ Prepare safety performance metrics (e.g., LTIs, near misses, TRIR) and recommend corrective measures. ○ Participate in and oversee comprehensive investigations of accidents and

Roles	Responsibilities
	incidents. ○ Implement corrective actions and conduct root causes analysis. ○ Prepare documentation of remedial and corrective actions. ○ Conduct safety inductions, toolbox talks, and job-specific training are conducted and recorded. ○ Engage with regulatory authorities on inspections, audits, and compliance verification.
Project Director (EPC)	○ Define and oversee the implementation of the overall EPC execution strategy in alignment with contract objectives and company standards. ○ Lead interdisciplinary project teams, coordinating EPC functions to achieve key milestones. ○ Make strategic decisions regarding project resourcing, budget allocation, and the efficient use of materials and personnel. ○ Ensure all project personnel are fully informed of and compliant with project plans and standards. ○ Coordinate internal management intervention in case of emergencies. ○ Ensure the preparation, revision, and implementation of project management plans (HSE, E&S, QA/QC, etc.) in line with company policies, legal frameworks, international standards, SPV and lender requirements. ○ Communicate all relevant plans clearly to subcontractors and monitor their performance. ○ Approve and monitor regular site inspections and safety reviews. ○ Track project KPIs, timelines, and budgets to ensure performance objectives are met. ○ Ensure that all employees comply with the obligations specified in the project's management plans during activities. ○ In case of non-compliance, ensure appropriate corrective and preventive actions are taken in coordination with the E&S Manager and H&S Manager ○ Ensure all personnel receive necessary training in health, safety, environment, and social performance. ○ Approve training plans and assess their implementation across EPC and subcontractor teams. ○ Serve as the primary EPC representative to the SPV, client, and key

Roles	Responsibilities
	stakeholders. ○ Maintain communication channels with project owners, subcontractors, and vendors to ensure alignment and compliance. ○ Coordinate with regulatory authorities, community representatives, and auditors as required. ○ Address stakeholder concerns proactively and transparently, particularly those related to safety, environmental, and social matters. ○ Oversee risk management and mitigation strategies related to technical, health, safety, community safety, environmental, and social aspects. ○ Ensure quality management systems are applied consistently across project phases. ○ Supervise the preparation and approval of documentation related to claims, variations, and commercial issues. ○ Monitor third-party inspections, audits, and due diligence efforts. ○ Supervise and coordinate subcontractors to ensure proper execution of construction phases.
E&S Manager (EPC)	○ Ensure the preparation, revision, and implementation of E&S Management Plans in accordance with company policies, international standards, and lender requirements. ○ Review and update the environmental and social management plans in coordination with relevant contractor specialists and construction teams. ○ Facilitate coordination with the SPV's E&S Manager for compliance audits and reporting. ○ Implement environmental and social measures through site practices and method statements. ○ Ensure that all conditions and obligations outlined in the environmental and social management plans are implemented and adhered to during project activities. ○ Ensure employees and contractors in fulfilling the requirements and relevant trainings of the environmental and social management plans. ○ Ensure the environmental and social management plans are communicated and implemented by Contractors/Subcontractors. ○ Monitor compliance of Contractors/Subcontractors with environmental and social management plans requirements.

Roles	Responsibilities
	○ Ensure implementation of safety measures such as traffic regulation and utility protection. ○ Ensure site boundaries are properly defined and monitored. ○ Participate in regulatory inspections and third-party assessments. ○ Integrate E&S KPIs into contractor evaluations and performance reviews. ○ Ensure all site personnel receive appropriate E&S training. ○ Oversee subcontractor E&S onboarding and refresher sessions. ○ Promote toolbox talks and informal training to reinforce E&S awareness. ○ Monitor E&S performance of subcontractors and ensure compliance. ○ Supervise the Environmental Engineers, Biodiversity Specialist, Archaeologist, CLOs and oversee monitoring systems. ○ Ensure the development and follow-up of corrective/improvement actions. ○ Lead E&S performance reporting to the Project Director ○ Promote continuous improvement via lessons learned and incident analysis. ○ Conduct comprehensive investigations of accidents and incidents. ○ Ensure prompt resolution of complaints related to environmental and social issues. ○ Enforce behaviour protocols related to community safety. ○ Establish emergency preparedness and response procedures for E&S incidents. ○ Ensure inclusive practices by integrating gender, vulnerability, and social inclusion principles into site-level practices.
H&S Manager (EPC)	○ Ensure the safe execution of all construction site activities in accordance with project standards, procedures, legal requirements, international standards, lender and SPV requirements. ○ Ensure the preparation, revision, and continuous improvement of Health & Safety Management Plans in accordance with EPC and SPV policies. ○ Ensure the implementation and compliance of the conditions and obligations specified in the H&S Plan during project activities. ○ Support all employees in fulfilling the conditions and obligations of this

Roles	Responsibilities
	health and safety plans during project activities. ○ Provide technical support to Contractors/Subcontractors for the implementation of health and safety plans. ○ Monitor the compliance of Contractors/Subcontractors with the requirements of the health and safety plans and report non-conformities. ○ Maintain a site-specific risk register and ensure hazards are identified, assessed, and mitigated throughout the lifecycle of the project. ○ Implement health, safety and community safety measures through site practices and method statements. ○ Ensure that construction site boundaries are well-defined, adequately marked, and routinely monitored for safety. ○ Ensure the enforcement of behaviour protocols and community health and safety guidelines on and around the construction site. ○ Oversee the implementation of safety measures including traffic management, safe work zones, and protection of aboveground and underground utilities. ○ Coordinate emergency preparedness and response procedures, including drills and communication protocols, in collaboration with relevant departments. ○ Ensure toolbox talks, safety briefings, and daily pre-task planning meetings to reinforce safety culture and awareness on site. ○ Ensure that all personnel on-site, including contractors and subcontractors, receive regular and adequate safety training aligned with the obligations of the H&S Plan. ○ Ensure that this Plan is understood by all employees and Contractor/Subcontractor staff through regular training programs that include the obligations of this Plan. ○ Review and validate training records and related documentation from Contractor/Subcontractor. ○ Conduct and lead comprehensive investigations in the event of accidents, incidents, or near misses, ensuring findings are documented and corrective actions are implemented. ○ Ensure the development and follow-up of corrective and/or improvement actions to address safety-related gaps or risks. ○ Analyse trends from incidents and near-misses to identify systemic issues

Roles	Responsibilities
	and develop long-term preventive strategies. ○ Ensure prompt and structured resolution of complaints related to public health, safety, and security. ○ Prepare regular reports to Project Director summarizing H&S performance, compliance status, and key risks. ○ Foster a safety-first culture by promoting active participation, feedback, and ownership of safety responsibilities at all levels of the workforce.
Site Doctor (EPC)	○ Provide on-site medical care, first aid, and emergency response to site personnel. ○ Monitor the health status of workers through routine check-ups and assessments. ○ Maintain accurate and confidential health records and incident logs. ○ Identify and manage occupational health risks and recommend preventive measures. ○ Ensure availability and readiness of medical equipment, first aid kits, and emergency protocols. ○ Conduct health awareness sessions and support mental health and wellness programs. ○ Coordinate with H&S teams to implement hygiene, sanitation, and disease control measures. ○ Ensure compliance with local occupational health laws and project-specific health standards. ○ Collaborate with external hospitals or clinics for referrals and medical emergencies. ○ Participate in site inspections and contribute to health-related sections of HSE audits. ○ Provide medical input to risk assessments, method statements, and H&S Plans. ○ Support COVID-19 or other outbreak response procedures as needed. ○ Detect occupational injuries and illnesses and prepare relevant prevention plans. ○ Track of all health records of all employees including occupational injuries and illnesses.

Roles	Responsibilities
Archaeologist (EPC)	○ Conduct archaeological surveys and assessments within the project footprint prior to and during construction activities. ○ Monitor excavation and earthworks to identify and document any archaeological or cultural heritage findings. ○ Implement and support the continuous update of the Cultural Heritage Management Plan (CHMP) in compliance with national laws, project policies, international standards and SPV&Lender requirements. ○ Supervise the application of chance-find procedures across all construction areas and ensure proper documentation, preservation, or relocation of discovered artifacts. ○ Liaise with national and local cultural heritage authorities to secure necessary permits and approvals, and report findings as required. ○ Train construction personnel and subcontractors on cultural heritage awareness, including chance-find protocols and legal obligations. ○ Collaborate with Environmental, Social, and H&S teams to integrate cultural heritage considerations into broader site management and daily operations. ○ Participate in stakeholder engagement processes where cultural heritage concerns arise. ○ Coordinate with external experts or labs for advanced assessment and preservation strategies, when needed. ○ Maintain accurate records of archaeological work, including GPS data, photos, catalogues, and reports. ○ Promote community awareness and sensitivity toward cultural heritage protection where applicable. ○ Review contractor method statements and work plans to confirm inclusion of archaeological mitigation measures.
Biodiversity Specialist (EPC)	○ Conduct baseline biodiversity assessments to understand and document existing habitats, species, and ecosystem conditions in and around the project footprint. ○ Monitor biodiversity risks during construction activities, ensuring sensitive habitats, critical species, and ecological corridors are not adversely affected. ○ Ensure compliance with national environmental legislation and international biodiversity standards. ○ Implement Biodiversity Action Plan (BAP) and Biodiversity Management

Roles	Responsibilities
	Plan (BMP) and associated mitigation measures in coordination with the Environmental Engineer and E&S Manager. o Implement ecological mitigation measures (e.g., habitat restoration, species relocation, buffer zones) by contractors and subcontractors. o Train construction and environmental teams on biodiversity protection requirements and promote awareness of key species and habitats on-site. o Monitor biodiversity indicators and report findings in line with project performance monitoring systems and environmental management plans. o Ensure corrective actions are taken promptly when biodiversity-related non-compliances are observed. o Liaise with local environmental authorities, consultants, and NGOs on biodiversity matters as required. o Support environmental inspections and audits related to biodiversity performance. o Maintain biodiversity records and contribute to periodic reports and updates to the E&S Manager and Project Director. o Assist with community awareness activities related to biodiversity conservation in collaboration with the Community Liaison Officer when relevant. o Ensure integration of biodiversity considerations into site planning, construction methods, and landscape rehabilitation. o Review contractor/subcontractor method statements and work plans to confirm inclusion of biodiversity mitigation measures.
H&S Chief (EPC)	o Implement the safe execution of all construction site activities in accordance with project standards, procedures, legal requirements, international standards, lender and SPV requirements. o Implement the preparation, revision, and continuous improvement of Health & Safety Management Plans in accordance with EPC and SPV policies. o Perform the implementation and compliance of the conditions and obligations specified in the H&S Plan during project activities. o Support all employees in fulfilling the conditions and obligations of this health and safety plans during project activities. o Provide technical support to Contractor. o Monitor the compliance of Contractors/Subcontractors with the

Roles	Responsibilities
	requirements of the health and safety plans and report non-conformities.rs/Subcontractors for the implementation of health and safety plans. ○ Maintain a site-specific risk register and ensure hazards are identified, assessed, and mitigated throughout the lifecycle of the project. ○ Implement health, safety and community safety measures through site practices and method statements. ○ Implement that construction site boundaries are well-defined, adequately marked, and routinely monitored for safety. ○ Ensure the enforcement of behaviour protocols and community health and safety guidelines on and around the construction site. ○ Perform the implementation of safety measures including traffic management, safe work zones, and protection of aboveground and underground utilities. ○ Perform emergency preparedness and response procedures, including drills and communication protocols, in collaboration with relevant departments. ○ Ensure toolbox talks, safety briefings, and daily pre-task planning meetings to reinforce safety culture and awareness on site. ○ Ensure that all personnel on-site, including contractors and subcontractors, receive regular and adequate safety training aligned with the obligations of the H&S plans. ○ Ensure that H&S plans are understood by all employees and Contractor/Subcontractor staff through regular training programs that include the obligations of H&S plans. ○ Review and validate training records and related documentation from Contractor/Subcontractor. ○ Review and validate training records and related documentation from Contractor/Subcontractor. ○ Conduct and lead comprehensive investigations in the event of accidents, incidents, or near misses, ensuring findings are documented and corrective actions are implemented. ○ Ensure the development and follow-up of corrective and/or improvement actions to address safety-related gaps or risks. ○ Follow prompt and structured resolution of complaints related to public health, safety, and security.

Roles	Responsibilities
	○ Prepare regular reports to H&S manager summarizing H&S performance, compliance status, and key risks. ○ Foster a safety-first culture by promoting active participation, feedback, and ownership of safety responsibilities at all levels of the workforce.
H&S Engineer (EPC)	○ Implement the safe execution of all construction site activities in accordance with project standards, procedures, legal requirements, international standards, lender and SPV requirements. ○ Implement the preparation, revision, and continuous improvement of Health & Safety Management Plans in accordance with EPC and SPV policies. ○ Perform the implementation and compliance of the conditions and obligations specified in the H&S Plan during project activities. ○ Support all employees in fulfilling the conditions and obligations of this health and safety plans during project activities. ○ Provide technical support to Contractors/Subcontractors for the implementation of health and safety plans. ○ Monitor the compliance of Contractors/Subcontractors with the requirements of the health and safety plans and report non-conformities. ○ Maintain a site-specific risk register and ensure hazards are identified, assessed, and mitigated throughout the lifecycle of the project. ○ Implement health, safety and community safety measures through site practices and method statements. ○ Implement that construction site boundaries are well-defined, adequately marked, and routinely monitored for safety. ○ Ensure the enforcement of behaviour protocols and community health and safety guidelines on and around the construction site. ○ Perform the implementation of safety measures including traffic management, safe work zones, and protection of aboveground and underground utilities. ○ Perform emergency preparedness and response procedures, including drills and communication protocols, in collaboration with relevant departments. ○ Ensure toolbox talks, safety briefings, and daily pre-task planning meetings to reinforce safety culture and awareness on site. ○ Ensure that all personnel on-site, including contractors and subcontractors, receive regular and adequate safety training aligned with the obligations of

Roles	Responsibilities
	the H&S plans. ○ Ensure that H&S plans are understood by all employees and Contractor/Subcontractor staff through regular training programs that include the obligations of H&S plans. ○ Review and validate training records and related documentation from Contractor/Subcontractor ○ Conduct and lead comprehensive investigations in the event of accidents, incidents, or near misses, ensuring findings are documented and corrective actions are implemented. ○ Ensure the development and follow-up of corrective and/or improvement actions to address safety-related gaps or risks. ○ Follow prompt and structured resolution of complaints related to public health, safety, and security. ○ Prepare regular reports to H&S manager summarizing H&S performance, compliance status, and key risks. ○ Foster a safety-first culture by promoting active participation, feedback, and ownership of safety responsibilities at all levels of the workforce.
HSE Technician (EPC)	○ Support the implementation of the Health, Safety, and Environmental (HSE) Management Plans on-site. ○ Conduct field-level hazard identification and risk assessments under the supervision of the HSE Engineer or H&S Manager. ○ Assist in the inspection of site conditions, equipment, and practices to ensure compliance with HSE protocols. ○ Monitor proper use of PPE by workers and subcontractors and ensure daily compliance. ○ Assist in the documentation of incidents, near-misses, and unsafe acts/conditions. ○ Support the organization of safety toolbox talks and drills, and participate in site safety briefings. ○ Assist in maintaining updated HSE records, permits to work, and site-specific risk registers. ○ Coordinate with site teams to ensure safe work zones and adherence to safety signage and barriers. ○ Escalate HSE issues and observations to senior HSE personnel for timely

Roles	Responsibilities
	corrective actions. ○ Promote a proactive safety culture through daily site presence and informal engagement with workers.
HSE Worker (EPC)	○ Perform routine safety checks and observations on construction activities to support accident prevention. ○ Support field-level enforcement of basic HSE requirements such as PPE usage, housekeeping, and emergency access. ○ Report unsafe behaviours, near-misses, or incidents to the HSE Technician or Engineer. ○ Assist with basic safety logistics such as placement of safety signs, first aid kits, and fire extinguishers. ○ Provide assistance during emergency drills and real-time evacuations if needed. ○ Participate in on-site HSE briefings and serve as a communication link between labour teams and HSE staff. ○ Support the distribution and collection of HSE materials, permits, and records. ○ Assist in controlling site entry for compliance with safety rules (e.g., helmet, vest, ID badge). ○ Support spill response and clean-up efforts as guided by supervisors
HSE Trainer and Document Controller (EPC)	○ Develop and deliver HSE training modules tailored to job roles and risk levels in collaboration with the HSE Manager. ○ Maintain training matrices, attendance records, and competency certifications for all EPC and subcontractor staff. ○ Organize safety induction programs for new employees and visitors. ○ Organize refresher trainings, emergency drills, and awareness campaigns (e.g., heat stress, confined space). ○ Ensure that all training materials, method statements, and HSE procedures are up-to-date and properly archived. ○ Manage document control systems related to HSE plans, permits, inspection reports, and safety data sheets. ○ Ensure traceability of document revisions and compliance with audit requirements.

Roles	Responsibilities
	○ Support internal and external audits by providing required HSE documentation and evidence. ○ Contribute to the improvement of training content based on site observations and lessons learned.
Paramedic (EPC)	○ Provide immediate emergency medical care, stabilize patients, and coordinate medical evacuation when necessary. ○ Assist the Site Doctor in conducting health checks, maintaining patient records, and supporting follow-up treatments. ○ Monitor the stock and condition of emergency medical supplies, medicines, and first aid kits. ○ Respond to health-related incidents, accidents, or illnesses on-site and record incident details accurately. ○ Participate in health and safety drills and emergency response exercises. ○ Support hygiene monitoring and health awareness campaigns. ○ Maintain clean, safe, and operational medical facilities and first aid stations. ○ Contribute to incident investigations involving health or medical issues. ○ Report health risks or trends to the Site Doctor and H&S Manager.
Environmental Engineer (SPV and EPC)	○ Implement the monitoring and recording of this Plan's execution (including implementation by Subcontractors). ○ Ensure project activities comply with national environmental legislation, permits, international standards and lender requirements. ○ Implement and monitor the Environmental & Social Management Plans and its site-specific sub-plans to ensure compliance with national legislation, international standards, and lender requirements. ○ Conduct routine environmental inspections and ensure that all site activities by contractors and subcontractors are carried out in accordance with approved method statements and mitigation measures. ○ Implement environmental monitoring programs. ○ Maintain up-to-date environmental records and databases; support preparation of reports for regulatory or lender audits. ○ Manage waste within the entire project footprint and area of influence, prioritizing designated areas to be used under the scope of the Project.

Roles	Responsibilities
	○ Monitor contractor and subcontractor adherence to approved waste storage, segregation, and disposal practices. ○ Provide regular training to site personnel during the construction phase. ○ Ensure that necessary training on environmental management is provided and that all personnel receive the required training. ○ Support toolbox talks and induction sessions to raise site-level environmental awareness. ○ Conduct regular internal audits and report non-conformities. ○ Ensure that non-conformities are recorded and immediately addressed. ○ Participate in the development and follow-up of corrective and/or improvement actions. ○ Support investigation of environmental incidents and assist in root cause analysis and follow-up reporting. ○ Report the implementation performance of this Plan. ○ Support the review and update of this Plan. ○ Ensure lessons learned and field experiences are incorporated into plan revisions and training updates. ○ Collaborate with the H&S and Social teams to address cross-cutting issues. ○ Coordinate with subcontractors to ensure implementation of project-specific environmental measures. ○ Liaise with external laboratories, consultants, or regulators as needed for environmental monitoring or reporting. ○ Support obtaining environmental related permits ○ Ensure all environmental permits are obtained, renewed, and complied with throughout the project lifecycle. ○ Contribute to the periodic review and revision of environmental plans based on site experience, regulatory changes, and stakeholder feedback. ○ Prepare and submit environmental performance reports to the E&S Manager and relevant stakeholders. ○ Coordinate with construction teams to integrate environmental requirements into work plans. ○ Ensure appropriate waste management practices are applied across the

Roles	Responsibilities
	site, including segregation, storage, transportation, and disposal in designated and approved facilities. o Conduct internal audits and inspections; identify non-conformities and follow up on corrective and preventive actions.
Community Liaison Officer (CLO) (SPV and EPC)	o Inform the public about the Project's scope, progress, and potential impacts. o Organize and facilitate regular community meetings, focus groups, and engagement forums o Maintain open lines of communication with project-affected persons (PAPs), community leaders, and local institutions. o Develop and distribute communication materials tailored to various community audiences. o Ensure that all internal and external complaints, including those under the SEP, are managed in accordance with the Grievance Mechanism (GM). o Log, track, and follow up on grievances and appeals in a timely and respectful manner. o Facilitate resolution of community disputes or concerns related to project activities. o Assess how vulnerable or marginalized groups may be affected by the Project. o Propose mitigation measures or tailored engagement approaches for at-risk or underrepresented populations. o Ensure equitable participation in consultation processes, particularly for women, youth, elders, and people with disabilities. o Support the monitoring and recording of the implementation of the social related issues, including activities carried out by subcontractors. o Support the evaluation of the SEP's implementation performance and community feedback o Contribute to regular internal audits and the reporting of non-conformities. o Ensure that relevant non-conformities are recorded and addressed immediately. o Participate in the development of corrective and/or improvement actions and support their follow-up. o Support the periodic review and update of the SEP and related procedures

Roles	Responsibilities
	in coordination with the E&S Manager. ○ Provide input to lessons learned from engagement outcomes and grievance trends. ○ Maintain up-to-date records of all stakeholder meetings, grievances, resolutions, and community commitments. ○ Submit routine reports to the Social Chief and/or E&S Manager summarizing community feedback, grievance status, and engagement Milestones. ○ Ensure confidentiality and proper data handling, especially for sensitive community issues.
All Personnel (including Contractor/Subcontractor Personnel)	○ Follow this Plan and all related Plans and Procedures, and carry out all activities in accordance with the requirements of this Plan. ○ In case of any non-compliance related to the implementation of this Plan, report it first to the CLO and the E&S Manager. ○ Participate in relevant trainings. ○ Ensure self-sufficiency in the implementation of this Plan. ○ Fulfil and ensure the implementation of the requirements of this Plan

II.3 Training and Awareness

One of the most important mechanisms for the enhancement of the Project's ESHS performance will be the continued implementation of a programme of ESHS training for all project personnel including SPV, EPC Contractor, subcontractors and supplier personnel. All personnel will be given ESHS induction and awareness training aimed at achieving 'buy-in' by workers. Key project personnel whose management roles or job responsibilities/activities may have an impact on the ESHS will also receive specific issue training as appropriate (e.g. in waste management, fuel handling etc). ESHS training will be provided at each stage of the Project, from the initial establishment facilities through to construction.

A key message in each of the ESHS training programmes will be the means, methods, and mechanisms to be employed in the monitoring and audit of ESHS management. The priority afforded to ESHS issues will be highlighted both through the content of the training courses and through the day-to-day scrutiny provided by ESHS teams.

Following general topics shall be covered by the training and awareness program of the project as a minimum:

- Environmental and Social Sustainability Policy, objectives and goals;
- Code of Conduct;

- Gender-Based Violence and Harassment;
- Land Acquisition; Land entry and exit requirements;
- ESHS organization and responsibilities;
- Project E&S impacts and risk;
- HSE Site Rules;
- Potential risk to worker's health and safety;
- Knowledge of materials, equipment and tools;
- General safety requirements;
- Firs aid;
- Personal protective equipment (PPE) requirements, wearing and use;
- Precautions to prevent exposure to key hazards;
- Basic hygiene requirements;
- Safe driving and transportation;
- Prohibited substances and activities;
- Pollution prevention;
- Waste management;
- Working in the vicinity of heavy machinery;
- Coordination of activities;
- Individuals' responsibilities;
- Environmental DO's and DON'Ts;
- Incident reporting;
- Accident/incident management;
- Communication;
- Emergency preparedness and response;
- Community relations;
- RAP implementation;
- Stakeholder Engagement Plan; and
- Grievance Mechanism.

II.3.1. Subcontractor Training Program

EPC Contractor will be responsible for ensuring that all construction personnel are aware of their ESHS responsibilities. Subcontractors will develop and implement an ESHS training programme to the satisfaction of the EPC Contractor.

The ESHS training program will ensure that all site personnel:

- fully understand the ESHS requirements of the Project and how they will be implemented and monitored on-site;
- fully understand the potential impacts of the Project, the mitigation measures that have been adopted to address those impacts and how and where to apply these measures;
- fully understand the ESHS sensitivities of the areas through which the motorway and other facilities will be constructed;
- fully understand the procedures to be followed in the event of a non-compliance with the ESHS requirements;
- fully understand the procedures for responding to the media, unauthorised visitors to the site, and enquiries from the public;
- know how to deal with unforeseen ESHS incidents; and
- are aware of the roles of the contractor staff with respect to ESHS issues

In addition to the induction program, EPC Contractor will ensure that all construction personnel attend regular site-specific ‘tool-box’ training sessions on ESHS issues throughout the term of the contract. This will include updates on specific local issues such as seasonal constraints, valuable crops or archaeological sites.

II.4 Documentation

The ESHS management activities will be documented and tracked to effectively manage the ESHS performance of the Project. Non-compliance observations, decisions on identified issues, solutions, corrective, and preventive actions taken and the results of these actions will be documented.

II.5 Checking and Corrective Action

Inspection and monitoring of the ESHS effects of construction activities will enable the effectiveness of ESHS mitigation to be evaluated; it will also allow ESHS problems to be identified and responded to at an early stage.

EPC Contractor will be responsible for the implementation of an appropriate inspection and monitoring programme to the satisfaction of SPV during construction phase. This will enable both parties to ensure the works are being carried out in accordance with the requirements of the ESMMP and ESIA and to identify and implement any possible improvements.

In addition, any monitoring requirements specified by regulatory authorities will be fully complied with by EPC Contractor and its subcontractors and suppliers.

EPC Contractor will be required to undertake appropriate pre-construction survey activities to ascertain the following:

- Land acquisition and land permit status of the Project site;
- Pre-construction quality of temporary and permanent access roads;
- The presence, status and extent of ecological resources;
- Location and suitability of existing licensed quarries, stockyards, and dumpsites; and
- Infrastructure surveys for buildings to be conducted by EPC (through independent experts) for all buildings that could be potentially affected by the project i.e., due to vibration and construction activities prior to land entry.

Monitoring results should be compared against relevant standards, permit requirements, required thresholds, received complaints, audit findings.

Both SPV and EPC Contractor will be required to demonstrate how the requirements of the ESMMP and ESIA are being complied with. This will include a programme of inspections and audits by both SPV and EPC Contractor. Site inspections and more formal audits by the SPV's ESHS Inspectors will be undertaken using pre-prepared audit protocols that reflect the requirements of the ESMMP and the ESIA.

Where issues of non-compliance are identified by either SPV or EPC Contractor's representative, they will be immediately reported to SPV, and corrective action will be identified by the SPV and representative in conjunction with the EPC Contractor.

II.5.1 Non-Conformity and Corrective Actions

All non-conformances identified during audits, inspections and monitoring activities will be recorded and followed up as non-conformity. Clear processes for actions stated in the SPV. ESMS Handbook will be followed.

Non-conformances are instances where Project compliance obligations (such as a legal requirement, or ESMS requirement) are not being fulfilled, or cannot be evidenced. Examples of non-conformity include, but are not limited to:

- Breach of an environmental and social standard;
- Commencement of works without an approved risk assessment and method statement that covers environmental issues and land permits identified herein;
- No review of risk assessment and method statements following any significant changes in requirements that could adversely impact the environment and people;
- Appointment of a waste transport/disposal service provider that is not appropriately licensed;
- Failure to comply with waste storage/disposal requirements as identified by risk assessment and/or method statement;
- Failure to comply with chemical storage and/or handling requirements;
- Un-containable or uncontrollable spills of fuels or chemicals;
- Undertaken works outside the scope defined within the risk assessment and method statement;
- Discharge of untreated, contaminated wastewater to the environment; and
- Nonconformity on labour requirements including presence of child/forced labour; lack of work permits and social security and overtimes below legal requirements.

Each non-conformance and near miss will be recorded utilizing a developed reporting process. All non- conformances and near misses shall include the following information:

- Location and description of the non-conformance and the criteria/requirement that has been breached;
- The proposed corrective action including who holds responsibility for undertaking this action;
- The proposed preventative action to ensure against reoccurrence of the non-compliance;
- Any required monitoring and follow-up; and
- Key performance indicators and a deadline for the successful completion of the corrective and preventive action.

II.5.2 Emergency Response

An Emergency Preparedness and Response Plan (EPRP) has been prepared and will be implemented, including requirements for coordination with the applicable external agencies (i.e., emergency services), impacted stakeholders and statutory authorities in the instance that an ESHS incident occurs.

The Emergency Preparedness and Response Plan consider:

- Internal and external roles and responsibilities;
- Emergency response plan contact information;
- Implementation of the EPRP including emergency procedures for different emergency scenarios;
- Drills that will be conducted;
- Training and competence of employees within the scope of emergency management;
- Information on assembly areas and emergency evacuation plans;
- Monitoring, verification and evaluation; and
- Institutions to visit in case of emergency

II.5.3 Management and Reporting of Incidents

The SPV will prepare an annual report to the public on environmental, health and safety performance and implementation of the action plans and grievance procedure.

In addition, the SPV will commit to the following external reporting:

- Incident Notification and Reporting:

  All environmental and social incidents will be appropriately documented, notified and reported in accordance with established procedures.

  Incident notification and reporting to relevant Turkish regulatory bodies will be performed in line with applicable legislation in force and as stipulated in permits and licenses.

  The SPV will notify the Lenders of incidents pursuant to the terms and conditions agreed upon in the Finance Agreements.

II.5.4 Stakeholder Engagement and Grievance Mechanism

A Stakeholder Engagement Plan has been prepared for the project, including a Grievance Mechanism (GM) both for project workers (internal GM) and for the public (external GM).

The SEP includes, among others, procedures for the stakeholder engagement activities:

- Stakeholder identification and analysis;
- Disclosure and dissemination of information;
- Consultation and participation;
- External and internal grievance mechanism; and
- Ongoing reporting to affected communities.

II.5.5 ESMS Communication

The ESMS will establish, implement, and maintain processes needed for internal and external communication relevant to environmental and social performance of the Project.

Associated processes will establish:

- What will be communicated;
- When it will be communicated;
- With whom to communicate; and
- How to communicate.

When establishing communication processes relevant to the ESMS, particular note will be made to compliance obligations, including any reporting requirements to the statutory environmental authority.

II.5.6 Data Management and Record Keeping

The implementation of the ESMS will generate data that will be required to be managed. The appropriate management of records is a requirement of any successful ESMS and can be used to track progress, review effectiveness and demonstrate compliance.

The ESMS relevant to both the construction, commissioning and operational phases should include the collation of the records including (but not limited to) the following:

- Environmental and social induction and training records;
- Relevant records of competence/qualifications;
- Accident investigation reports;
- Grievance register;
- Internal audits reports (including close-out);
- Non-conformance reports;
- Incident reports;
- Environmental & social inspection & audit reports (including corrective action reports);
- Environmental & social monitoring results;

- Environmental & social risk assessments and method statements;
- Equipment & social inspections/certifications;
- Independent audit reports for lenders (including corrective action reports); and
- Emergency events

II.5.7 Review of ESMS

Project ESMS documentation will be 'living' and will need to be reviewed and updated in relation to changes in project circumstances, activities, environmental sensitivities, and future requirements defined by respective regulatory authorities and Project Lenders.

The ESMS should be regularly reviewed according to any changes in construction, commissioning, or operational activities, new (applicable) regulation and in response to results from monitoring, audits and inspection. Reviews should be undertaken at a frequency to ensure the adequacy of the ESMS and to ensure that all potentially significant adverse impacts are identified and that associated control measures are appropriate to the Project.

III. Monitoring Action Plan

This section defines the monitoring parameters, monitoring frequency, and responsible parties for the mitigation measures detailed in the ESIA for the construction phase of the Project (see Table III-1).

III.1 Monitoring - ESMS

Table III-1. Monitoring Table for Environmental and Social Management System (ESMS)

No	Sub-topic	Monitoring Parameter	Monitoring Station/Location	Monitoring Method	Monitoring Frequency	Responsibility*
C1	C1.1. Policy and ESMP	-Project-specific Environment and Social Policy -Organizational Structure (number and CVs of the personnel employed under the Environmental and Social Interaction Department) -Periodical ESMP Performance Review and Monitoring Reports -Number of non-compliant situations -Project-specific Emergency Preparedness and Response Plan -Existence and validity of the legal environmental and health and safety permits -Number and scope of trainings, number of participants, training hours per employee, training materials, trainings provided to sub-contractors, etc. -Measures taken to ensure compliance of sub-contracts with ESMP measures	Project office	Document review	Monthly	SPV

III.2 Monitoring - Land Use and Property

Table III-2. Monitoring Table for Land Use and Property

No	Sub-topic	Monitoring Parameter	Monitoring Station/Location	Monitoring Method	Monitoring Frequency	Responsibility*
C2	C2.1. Forest lands	-Forestry permits/applications -Afforestation protocols made with the Ministry of Agriculture and Forestry -Area of lost forestland (in hectare) -Number of the trees cut -Records on forest fires (if any)	Project office	Document review	Weekly	SPV
	C2.2. Agricultural lands	-List of expropriated agricultural parcels (inc. information on area and characteristics of the land plot) -Site allocation documents for expropriated lands; bilateral agreements, commitment and consent letters for non-expropriated lands	Project office	Document review	Weekly	SPV
		-Grievances received in the subjects of crossing of the expropriation borders, start of activities on non-expropriated lands, etc.	Project office	Review of grievance logs	Weekly	SPV
		-Number of cut trees	Project office	-Review of design documents -Site audit -Review of grievance logs	Weekly	-SPV -EPC
	C2.3. Pasturelands	-Area and number of pasturelands for which land use permits taken	Project office	Document review	Weekly	SPV
	C2.4. State-owned lands	-Area and number of state-owned lands for which land use permits taken	Project office	Document review	Weekly	SPV

No	Sub-topic	Monitoring Parameter	Monitoring Station/Location	Monitoring Method	Monitoring Frequency	Responsibility*
	C.2.5. Privately-owned lands	-List and number of expropriated private parcels (inc. information on area and characteristics of the land plot) -Site allocation documents for expropriated lands; bilateral agreements, commitment and consent letters for non-expropriated lands	Project office	Document review	Weekly	SPV
		-Number of grievances received in the subjects of crossing of the expropriation borders, start of activities on non-expropriated lands, etc.	Project office	Review of grievance logs		SPV

III.3 Monitoring - Topography and Soils

Table III-3. Monitoring Table for Topography and Soils

No	Sub-topic	Monitoring Parameter	Monitoring Station/Location	Monitoring Method	Monitoring Frequency	Responsibility*
C3	C3.1. Top soil management	-Grievances received in the subjects of crossing of the expropriation borders, start of activities on non-expropriated lands, etc.	-Expropriation boundaries	Site audit	Weekly	SPV
	C3.2. Earthworks	-Excavation and fill volumes (m^3) -Volume of reused materials (m^3) -Conditions at the storage sites - Inspection of dump sites and quarries	Excavated material storage sites (Km 52+544, Km 59+580, Km 61+500, Km 64+160, Km 71+800, Km 74+360, Km 76+240, Km 78+790, Km 86+340, Km 87+800, Km 95+410 , Km 95+410, Km 98+290, Km 100+000, Km 107+850, Km 110+820, Km 113+050, Km 123+000, Km 124+250, Km 127+000, Km 130+400, Km 132+720)	Site audit	Daily	-SPV -EPC -Sub-Contractor
		-Grievance	All active construction and camp areas, dump sites	Number of grievances received regarding to excavated material management, will be recorded.	Weekly	-SPV -EPC

No	Sub-topic	Monitoring Parameter	Monitoring Station/Location	Monitoring Method	Monitoring Frequency	Responsibility*
	C3.3. Erosion	-Erosion control measures taken (drainage channels, barriers, settling structures, etc.) -Area of exposed lands at each camp sites (m^2)	Locations of exposed lands within the expropriation corridor	Site audit	Daily	-SPV -EPC -Sub-Contractor
	C3.4. Quarry	-Mining method applied -Blasting activities -Production amount (m^3/day) -Slope stability -Borders of the camp sites -Management of waste rock	Location of quarries (Km 56+500, Km 58+500, Km 104+750, Km 105+000, Km 106+000, Km 114+200, Km 117+000, Km 119+500, Km 134+000)	Site audit	Daily	-SPV -EPC -Sub-Contractor
	C3.5. Soil quality	-Number of spill/leakage incidents and corrective measures taken	-Camp Sites (Km 64+500, Km 87+800, Km 124+300) -Road construction sites -Quarries (Km 56+500, Km 58+500, Km 104+750, Km 105+000, Km 106+000, Km 114+200, Km 117+000, Km 119+500, Km 134+000)	Site audit	Daily	-SPV -EPC -Sub-Contractor

III.4 Monitoring - Waste management and Hazardous Material

Table III-4. Monitoring Table for Waste management and Hazardous Material

No	Sub-topic	Monitoring Parameter	Monitoring Station/Location	Monitoring Method	Monitoring Frequency	Responsibility*
C4	C4.1. Waste management	-Type (i.e. municipal, packaging, waste oil, etc.) and amount of wastes produced/disposed of	Camp Site-1 (Main) at Km 64+400, Camp Site-2 at Km 87+500, and Camp Site-3 at Km 124+300. Borrow pits : Sarıabalı (AO-1) Borrow Pit at Km 53+800 and the Dikmen Borrow Pit at Km 83+000. Quarries: Çakış (TOY4a) Quarry at Km 56+500, the Kuruçay (TOY4b) Quarry at Km 58+500, the Bademliyar (TO2) Quarry at Km 104+750, the Uzunlar (TOY5) Quarry at Km 106+000, the Karakaya Quarry at Km 114+200, the Saburlar Quarry at Km 117+000, the Karamanlar Quarry at Km 119+500, and the Soğukpınar Quarry at Km 134+000. Asphalt plants: Asphalt Plant-1 at Km 59+400, Asphalt Plant-2 at Km 87+700, and Asphalt Plant-3 at Km 124+300. Concrete plants include Concrete Plant-1 at Km 55+450, Concrete Plant-2 at Km 59+400, Concrete Plant-3 at Km 80+400, Concrete Plant-4 at Km 87+700, Concrete Plant-4a at Km 89+700, Concrete Plant-5 at Km 99+200, and Concrete Plant-6 at Km 124+300. Mechanical plants: Mechanical Plant-1 at Km 59+400, Mechanical Plant-2 at Km 87+700, and Mechanical Plant-3 at Km 124+300.	-Site audit -Document review	Monthly	-SPV -EPC -Sub-Contractor
		- Validity and completeness of waste management/disposal agreements with licensed companies			Before every waste transfer	
		- Review and implementation consistency of Waste Management Plans			Yearly	
		- Inspection and condition of Temporary Waste Storage Areas			Monthly	
		-Site practices on waste management (e.g. general housekeeping rules, source separation practice, containers, containment structures, etc.)	Camp Site-1 (Main) at Km 64+400, Camp Site-2 at Km 87+500, and Camp Site-3 at Km 124+300	Visual inspection	Daily	-SPV -EPC -Sub-Contractor

No	Sub-topic	Monitoring Parameter	Monitoring Station/Location	Monitoring Method	Monitoring Frequency	Responsibility*
	C4.2. Hazardous Material	-List of hazardous materials/chemicals supplied, stored and used (inc. information on type and amount/volume)	Camp Site-1 (Main) at Km 64+400, Camp Site-2 at Km 87+500, and Camp Site-3 at Km 124+300. Borrow pits : Sarıabalı (AO-1) Borrow Pit at Km 53+800 and the Dikmen Borrow Pit at Km 83+000. Quarries: Çakış (TOY4a) Quarry at Km 56+500, the Kuruçay (TOY4b) Quarry at Km 58+500, the Bademliyar (TO2) Quarry at Km 104+750, the Uzunlar (TOY5) Quarry at Km 106+000, the Karakaya Quarry at Km 114+200, the Saburlar Quarry at Km 117+000, the Karamanlar Quarry at Km 119+500, and the Soğukpınar Quarry at Km 134+000. Asphalt plants: Asphalt Plant-1 at Km 59+400, Asphalt Plant-2 at Km 87+700, and Asphalt Plant-3 at Km 124+300. Concrete plants include Concrete Plant-1 at Km 55+450, Concrete Plant-2 at Km 59+400, Concrete Plant-3 at Km 80+400, Concrete Plant-4 at Km 87+700, Concrete Plant-4a at Km 89+700, Concrete Plant-5 at Km 99+200, and Concrete Plant-6 at Km 124+300. Mechanical plants: Mechanical Plant-1 at Km 59+400, Mechanical Plant-2 at Km 87+700, and Mechanical Plant-3 at Km 124+300.	-Site audit -Document review	Monthly	-SPV -EPC -Sub-Contractor
		Soil contamination risk from hazardous substances (e.g., fuel	Project area and sensitive receiving environments (e.g., soil, surface water)	Visual inspection for signs of leakage or spills; inspection of storage and handling practices; SDS and training record review	Daily	SPV EPC Subcontractors
		General site practices related to hazardous materials management	Entire construction corridor	Field observations on container integrity, spill kits, PPE use, and storage conformity	Weekly	SPV EPC Subcontractors
		Environmental enforcement actions and non-compliance records	Project area	Review of regulatory audit reports, notifications, and enforcement communications	Monthly	SPV EPC Subcontractors

III.5 Monitoring – Water Resources

Table III-5. Monitoring Table for Water Resources

No	Sub-topic	Monitoring Parameter	Monitoring Station/Location	Monitoring Method	Monitoring Frequency	Responsibility*
C5	C5.1. Water quality	Annex-5, Table 2 of the Regulation on the Surface Water Quality Regulation	-Receiving water bodies for treated wastewater discharges (Kaymazboğazı Stream)	-Water quality sampling, , laboratory analyses	Quarterly	-SPV -EPC - Acridities Laboratory
		Baseline monitoring surface and ground water quality measurement (Table 5, the Annex.5 of Regulation on Surface Water Quality, and IFC EHS Guideline Environmental Waste water and Ambient Water Quality)	ESIA baseline sampling points	Laboratory analyses	Annualy	-SPV -EPC
		Water supply point for humanitarian usage	Water quality sampling, laboratory analyses	Laboratory analyses	Quarterly	-SPV, -EPC, -Community Health Laboratory
	C5.2. Groundwater	- Groundwater usage permit - Water usage amount	Groundwater usage locations	-Water quality sampling, , laboratory analyses	Monthly	-SPV, -EPC,
	C5.3. Water supply	-Sources and amount of water supply -Water supply permits	All water usage areas (camp sites, concrete batching plants, dust suppression, etc.)	-Document review	Monthly	-SPV -EPC -Acridities Laboratory
		suppliers' water availability and capacity	Project office	Document review	Monthly	-SPV -EPC

No	Sub-topic	Monitoring Parameter	Monitoring Station/Location	Monitoring Method	Monitoring Frequency	Responsibility*
	C5.5. Wastewater management	-Environmental permits for package domestic wastewater treatment plant discharges -Wastewater disposal agreements/channel connection permits to be done with municipalities -Capacity of package domestic wastewater treatment plant - Waste water treatment plant maintenance and inspection records	Package domestic wastewater treatment plants (Km 59+400, Km 64+500, Km 87+800, Km 124+300)	-Document review	Quarterly	-SPV, -EPC,
		Quality of treated wastewater from the discharge of package domestic wastewater treatment plants (Water Pollution Control Regulation (Table 21.1))	Camp Sites(Km 59+400, Km 64+500, Km 87+800, Km 124+300)	Water quality sampling, laboratory analyses	*In the period to be specified in the environmental permit	SPV, EPC, Accredited Laboratories
		Wastewater management practices at concrete plants	- -Concrete Plant locations (Km 55+450,00, Km 59+400,00, Km 80+400,00, Km 87+700,00, Km 89+700,00, KM 99+200,00, Km 123+900,00)	-Site audit -Document review	Weekly	-SPV -EPC
		(WWTP) Maintenance	WWTPs (Camp Sites(Km 64+500, Km 87+800, Km 124+300))	as per the Plan relevant part	Daily, weekly, annually	AAOİAŞ, EPC

III.6 Monitoring - Ecology and Biodiversity

Table III-6. Monitoring Table for Ecology and Biodiversity

No	Sub-topic	Monitoring Parameter	Monitoring Station/Location	Monitoring Method	Monitoring Frequency	Responsibility*
C6	C6.1.Terrestrial Flora	*Pyrus serikensis* species	Maquis and rocky habitats around flora sampling points 11 (X: 344079,Y: 4087799) and 36 (X: 339991,Y: 4090218)	-Site survey	Annual (timing to be determined by experts)	-SPV
		Endemic plant species	At the flora sampling point 11 (X: 344079,Y: 4087799) for *Sideritis congesta,* sampling point 11 (X: 344079,Y: 4087799) and 25 (X: 394464,Y: 4055587) for *Phlomis leucophracta*, sampling point 25 (X: 394464,Y: 4055587for *Phlomis lycia*, sampling point 28 (X: 335259,Y: 4093731) for *Phlomis nissolii*			
		Maquis, Arboreal Matorral and Thermo-mediterranean Scrub	Maquis habitats along the motorway, especially at the maquis assessed as critical.		One-off (timing to be determined by experts)	

No	Sub-topic	Monitoring Parameter	Monitoring Station/Location	Monitoring Method	Monitoring Frequency	Responsibility*
	C.6.2. Terrestrial Fauna	*Lyciasalamandra atifi*	Coniferous forest habitats in the AoI at the elevation between 200-500m	-Site survey	Annual (timing to be determined by experts)	-SPV
		Lacerta pamphylica	Coniferous forest habitats in the AoI			
		Myotis capaccinii	Rocky areas, caves and flight corridors within the AoI, especially at the location of quarries (Km 56+500, Km 58+500, Km 104+750, Km 105+000, Km 106+000, Km 114+200, Km 117+000, Km 119+500, Km 134+000)			
		Rhinolophus mehelyi				
		Animal passes	Culvert locations along the motorway, Culverts are strategically positioned along the motorway, providing adequate passage for wildlife crossing.		-	
	C.6.3 Aquatic Flora/Fauna	*Alburnus baliki, Capoeta antalyensis, Oxynoemacheilus eregliensis, Pseudophoxinus fahrettini*	Locations where the motorway crosses surface running waters, at aquatic sampling points	Site survey	Annual (timing to be determined by experts)	-SPV

III.7 Monitoring – Air Quality

Table III-7. Monitoring Table for Air Quality

No	Sub-topic	Monitoring Parameter	Monitoring Station/Location	Monitoring Method	Monitoring Frequency	Responsibility*
C7	C7.1. Dust and gaseous emissions	-PM10 -PM2.5 -Settled dust -NOx, SOX, VOC	Sensitive Receptors considering all Project components including: Camp Site-1 (Main) at Km 64+400, Camp Site-2 at Km 87+500, and Camp Site-3 at Km 124+300. Borrow pits : Sarıabalı (AO-1) Borrow Pit at Km 53+800 and the Dikmen Borrow Pit at Km 83+000. Quarries: Çakış (TOY4a) Quarry at Km 56+500, the Kuruçay (TOY4b) Quarry at Km 58+500, the Bademliyar (TO2) Quarry at Km 104+750, the Uzunlar (TOY5) Quarry at Km 106+000, the Karakaya Quarry at Km 114+200, the Saburlar Quarry at Km 117+000, the Karamanlar Quarry at Km 119+500, and the Soğukpınar Quarry at Km 134+000. Asphalt plants: Asphalt Plant-1 at Km 59+400, Asphalt Plant-2 at Km 87+700, and Asphalt Plant-3 at Km 124+300. Concrete plants include Concrete Plant-1 at Km 55+450, Concrete Plant-2 at Km 59+400, Concrete Plant-3 at Km 80+400, Concrete Plant-4 at Km 87+700, Concrete Plant-4a at Km 89+700, Concrete Plant-5 at Km 99+200, and Concrete Plant-6 at Km 124+300. Mechanical plants: Mechanical Plant-1 at Km 59+400, Mechanical Plant-2 at Km 87+700, and Mechanical Plant-3 at Km 124+300. Bademliyar Quarry, Güçlüköy, Gençler, Taşkesiği Uzunlar, Hacıobası Districts, Saburlar, D-7 and Motorway Route -Villages where vehicles will pass while transporting materials (Bademliyar Quarry, Güçlüköy, Gençler, Taşkesiği Uzunlar, Hacıobası Districts, Saburlar, D-7 Locations)	-Site measurements	Quarterly or Upon Grievance	-SPV -EPC -Accredited laboratories
			-Hacıali Neighbourhood (Sensitive Receptor)	-Site measurements	Monthly and Upon grievance	

No	Sub-topic	Monitoring Parameter	Monitoring Station/Location	Monitoring Method	Monitoring Frequency	Responsibility*
		-Number of water trucks -Frequency of road watering	-Camp Sites, road construction sites, quarries, stabilized roads	-Document review	Daily or more frequently	-SPV -EPC -Sub-Contractor
		-Grievances received on impacts related with dust, air emissions	Project office	-Review of grievance logs	Weekly	-SPV -EPC
	C 7.2 Emissions	-Exhaust emissions	-Project office	- Maintenance records	Annually	SPV
	C.7.3. Weather conditions and humidity	Weather conditions and humidity	High-risk area due to flammable material storage and close to the forest area	Weather forecast report checking	Daily during summer period	AAOİAŞ, EPC
	C.7.4. Roads surface integrity and any damage	Roads surface integrity and any damage	Vehicles	Measurement	Annually	EPC Environmental Eng.

III.8 Monitoring – Climate Change

Table III-8. Monitoring Table for Climate Change

No	Sub-topic	Monitoring Parameter	Monitoring Station/Location	Monitoring Method	Monitoring Frequency	Responsibility*
C8	C8.1 Emissions	-GHG emissions due to fuel consumption	-Project office	-Document review	Quarterly	SPV
		-Environmental permits for concrete plants, asphalt plants	-Project office	-Document review	Quarterly	SPV
		-Exhaust emissions	-Project office	- Maintenance records	Quarterly	SPV
	C8.2 Physical Risks	-Extreme Rainfall, Overflow and Floods -Wildfires -Cold Waves and Snowfall - Heatwaves	-Project office -On site	-Visual review	Daily	SPV
	C8.3 Transition Risks	-Policy and Legal Risks -Technology Risks -Market Risks -Reputational Risks	-Project office	-Document Review	Quarterly	SPV

III.9 Monitoring – Environmental Noise and Vibration

Table III-9. Monitoring Table for Environmental Noise and Vibration

No	Sub-topic	Monitoring Parameter	Monitoring Station/Location	Monitoring Method	Monitoring Frequency	Responsibility*
C9	C9.1. Environmental Noise	Environmental Noise (dBA)	Sensitive Receptors considering all Project components including: Borrow pits : Sarıabalı (AO-1) Borrow Pit at Km 53+800 and the Dikmen Borrow Pit at Km 83+000. Quarries: Çakış (TOY4a) Quarry at Km 56+500, the Kuruçay (TOY4b) Quarry at Km 58+500, the Bademliyar (TO2) Quarry at Km 104+750, the Uzunlar (TOY5) Quarry at Km 106+000, the Karakaya Quarry at Km 114+200, the Saburlar Quarry at Km 117+000, the Karamanlar Quarry at Km 119+500, and the Soğukpınar Quarry at Km 134+000. Asphalt plants: Asphalt Plant-1 at Km 59+400, Asphalt Plant-2 at Km 87+700, and Asphalt Plant-3 at Km 124+300. Concrete plants include Concrete Plant-1 at Km 55+450, Concrete Plant-2 at Km 59+400, Concrete Plant-3 at Km 80+400, Concrete Plant-4 at Km 87+700, Concrete Plant-4a at Km 89+700, Concrete Plant-5 at Km 99+200, and Concrete Plant-6 at Km 124+300. Mechanical plants: Mechanical Plant-1 at Km 59+400, Mechanical Plant-2 at Km 87+700, and Mechanical Plant-3 at Km 124+300.	-Site measurements (24 hour)	Quarterly/ Monthly and upon grievance (depending on the intensity of construction work and the sensitivity of location)	-SPV -EPC -Sub-Contractor -Accredited laboratories
			Sarıabalı District (Sensitive Receptor)		Quarterly/ Monthly and upon grievance (depending on the intensity of construction work)	
		Number of non-conformance records related to noise emission management	Project construction and operation areas	Review and control of non-conformance logs	Quarterly	Environmental Eng. (SPV) and Environmental Eng. (EPC)
		Statistics on the grievances received on impacts related with noise generation	Project office	-Review of grievance logs	Weekly	CLO - SPV and EPC

No	Sub-topic	Monitoring Parameter	Monitoring Station/Location	Monitoring Method	Monitoring Frequency	Responsibility*
	C9.2. Vibration	Ground vibration value	Sensitive Receptors considering all Project components including: Borrow pits : Sarıabalı (AO-1) Borrow Pit at Km 53+800 and the Dikmen Borrow Pit at Km 83+000. Quarries: Çakış (TOY4a) Quarry at Km 56+500, the Kuruçay (TOY4b) Quarry at Km 58+500, the Bademliyar (TO2) Quarry at Km 104+750, the Uzunlar (TOY5) Quarry at Km 106+000, the Karakaya Quarry at Km 114+200, the Saburlar Quarry at Km 117+000, the Karamanlar Quarry at Km 119+500, and the Soğukpınar Quarry at Km 134+000. Asphalt plants: Asphalt Plant-1 at Km 59+400, Asphalt Plant-2 at Km 87+700, and Asphalt Plant-3 at Km 124+300. Concrete plants include Concrete Plant-1 at Km 55+450, Concrete Plant-2 at Km 59+400, Concrete Plant-3 at Km 80+400, Concrete Plant-4 at Km 87+700, Concrete Plant-4a at Km 89+700, Concrete Plant-5 at Km 99+200, and Concrete Plant-6 at Km 124+300. Mechanical plants: Mechanical Plant-1 at Km 59+400, Mechanical Plant-2 at Km 87+700, and Mechanical Plant-3 at Km 124+300.	-Measurement with vibrometer	Quarterly or Upon Grievance	-SPV -EPC -Sub-Contractor
		Number of non-conformance records related to vibration management	Project construction areas	Review and control of non-conformance logs	Quarterly	Environmental Eng. (SPV) and Environmental Eng. (EPC)
		Statistics on the grievances received on impacts related with blasting operations	Project office	-Review of grievance logs	Weekly	-SPV -EPC
	C.9.3. Noise and Vibration Training	Number of training sessions conducted	Project personnel and contractor workers	Tracking and recording training delivery	Quarterly	EPC E&S Manager / SPV Deputy E&S Manager

III.10 Monitoring – Cultural Heritage

Table III-10. Monitoring Table for Cultural Heritage

No	Sub-topic	Monitoring Parameter	Monitoring Station/Location	Monitoring Method	Monitoring Frequency	Responsibility*
C10	C10.1. Chance finds	-Employment data on cultural heritage expert/archaeologist -Number of chance finds procedure operated	Road construction sites	-Document review -Site audit	Weekly	SPV
	C10.2. Protected sites	Actions taken in accordance with the decisions of Conservations Boards (e.g. planning of bridges, embankments, etc.; number of georadar studies conducted, test or salvage excavations conducted, etc.)	Road construction sites	-Document review -Site audit	Quarterly	-SPV -EPC

III.11 Monitoring – Socio Economy

Table III-11. Monitoring Table for Socio Economy

No	Sub-topic	Monitoring Parameter	Monitoring Station/Location	Monitoring Method	Monitoring Frequency	Responsibility*
C11	C11.1. Employment	Employment statistics (direct and contracted workers, local/non-local/foreign)	Project office	-Document review	Monthly	SPV
		Employment agreements	Project office	-Document review	During the recruitment process	-SPV -EPC
	C11.2. Expropriation	-Agreement level for expropriation works -Number of court cases	Project office	-Document review	Monthly	SPV
	C11.3. Social responsibility/volunteer activities	Number and scope of social responsibility/volunteer projects/activities conducted	Project office	-Document review	Quarterly	SPV
	C11.4. Local Infrastructure	Local infrastructure (e.g. roads) relocated/maintained/improved	Project office	-Document review	Monthly	SPV
	C11.5. Land use restrictions	Locations and dimensions for culverts and underpasses that provide access to agricultural and/or pasturelands	Project office	-Document review -Site audit	Weekly	SPV

III.12 Monitoring - Health and Safety/Labour and Working Conditions

Table III-12. Monitoring Table for Health and Safety/Labour and Working Conditions

No	Sub-topic	Monitoring Parameter	Monitoring Station/Location	Monitoring Method	Monitoring Frequency	Responsibility*
C12	C12.1. Occupational Health and Safety/Labour and Working Conditions	-Number of work incidents/accidents/near misses -Number of personnel who are infected with an infectious disease -Source and quality of drinking water	-Project office -Camp Sites(Km 64+500, Km 87+800, Km 124+300)	-Document review	Weekly	-SPV -EPC
		-Use of PPEs -Health and safety signs -Fire safety equipment/systems -Accommodation conditions	-Camp Sites(Km 64+500, Km 87+800, Km 124+300) -Road construction sites - Quarries (Km 56+500, Km 58+500, Km 104+750, Km 105+000, Km 106+000, Km 114+200, Km 117+000, Km 119+500, Km 134+000)	-Site audit -Visual observation	Daily	-SPV -EPC
		Number of health and safety trainings provided	-Project office -Camp Sites(Km 64+500, Km 87+800, Km 124+300)	-Document review	Monthly	-SPV -EPC
		-Number of drills conducted	Project office	-Document review	Semi-annual	-SPV -EPC
		-Grievance mechanisms for Project personnel -Grievances received from Project personnel	Project office	-Document review	Weekly	-SPV
		Number of trainings conducted related to traffic	Construction camp and administrative offices	Tracking the number of Project personnel and contractor workers who have received training	Quarterly	-SPV -EPC

No	Sub-topic	Monitoring Parameter	Monitoring Station/Location	Monitoring Method	Monitoring Frequency	Responsibility*
	C12.2. Community Health and Safety	-Employment data on the security personnel	-Project office -Camp Sites (Km 64+500, Km 87+800, Km 124+300)	-Document review	Weekly	-SPV -EPC
		-Trainings provided to security personnel			Quarterly	
		- Grievances received and replied to regarding the acts of security personnel			Weekly	
		Number of complaints received on traffic	Public relations records and grievance system	Logging and monitoring of grievances as per the Grievance Mechanism Procedure	Weekly	-SPV -EPC
		Certificates of operators and drivers	Relevant department	Certificates will be ensured by the relevant department	During the recruitment process	-SPV -EPC
		Number of Trainings, participants, Conducted	Project personnel and contractor workers receiving training	Review of training records	Monthly	-SPV -EPC

III.13 Monitoring - Visual Aesthetics

Table III-13. Monitoring Table for Visual Aesthetics

No	Sub-topic	Monitoring Parameter	Monitoring Station/Location	Monitoring Method	Monitoring Frequency	Responsibility*
C13	C13.1. Visual Disturbance	-Visual barriers	-Camp Sites(Km 64+500, Km 87+800, Km 124+300) Quarries (Km 56+500, Km 58+500, Km 104+750, Km 105+000, Km 106+000, Km 114+200, Km 117+000, Km 119+500, Km 134+000) -The settlements that are classified as the fully visible (Aşağıçatma, Çakallar, Kayaburnu, Kızılot, Kökez, Merkez (Serik), Sarılar, Soğukpınar, Sülek, Üründü, Uzunlar)	-Site audit -Review of grievance logs	Monthly	SPV

III.14 Monitoring - Public Consultation

Table III-14. Monitoring Table for Public Consultation

No	Sub-topic	Monitoring Parameter	Monitoring Station/Location	Monitoring Method	Monitoring Frequency	Responsibility*
C14	C14.1. Stakeholder Engagement	-Implementation of Stakeholder Engagement Plan -Number of stakeholder engagement activities/events conducted -Presence and functionality of Project web-site	Project office	-Document review	Weekly	-SPV - EPC
	C14.2. Grievance Mechanism	-Statistics on the grievances received and solved	Project office	-Document review -Media screen	Monthly	SPV