

GREEN AND FUTURE CITIES (GFC) PROJECT

ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN (ESMP)

KÖŞK WASTEWATER TREATMENT PLANT CONSTRUCTION PROJECT OF KONYA WATER AND SEWERAGE ADMINISTRATION

July, 2026



Document History

Revision	Submitted to	Issue Date	Revision Details
v1	İLBANK INC. (İLBANK)	07.10.2025	Draft
v2	İLBANK INC. (İLBANK)	06.02.2026	Draft
v3	İLBANK INC. (İLBANK)	19.06.2026	Draft
v4	İLBANK INC. (İLBANK)	06.07.2026	Final

This Environmental and Social Management Plan has been prepared by POSEİDON Environmental Social Consulting Engineering Trade Ltd. Co. on behalf of KOSKİ within the scope of Green And Future Cities (GFC) Project supported by the World Bank (WB) with İLBANK as the financial intermediary



TABLE OF CONTENTS

EXECUTIVE SUMMARY	1
1. INTRODUCTION	3
1.1. Background	3
1.2. Objective of the ESMP	3
1.3. Overview of E&S Requirements Applicable to the Subproject	4
1.4. Review and Update	4
1.5. Implementation Arrangements.....	4
2. SUBPROJECT DESCRIPTION	5
2.1. Subproject Information.....	5
2.2. Subproject Location.....	7
2.3. Site Access Route.....	13
2.4. Associated Facilities	13
2.5. Other Institutions' Infrastructure to be Displaced	17
2.6. Subproject Impact Area	17
2.7. Environmental and Social Baseline	21
2.7.1. Physical Environment	21
2.7.2. Biodiversity	29
2.7.3. Socio-Economic Environment	36
3. SUBPROJECT ACTIVITIES	41
3.1. Construction Phase	41
3.1.1. Construction Activities.....	41
3.1.2. Construction Facilities.....	43
3.2. Operation Phase	44
3.2.1. Operation Activities	44
3.2.2. Operation Facilities	45
3.3. Labor Requirements.....	52
3.4. Land Acquisition Status	52
3.5. Permitting Status	57
4. ESMP MATRIX: RISK AND IMPACTS, MITIGATION AND MONITORING	59
4.1. E&S Risk and Impacts of the Subproject	59
4.1.1. Environmental Risks and Impacts	60
4.1.2. Social Risks and Impacts.....	67
4.2. Construction ESMP Matrix	74
4.3. Operation ESMP Matrix	108
4.4. Monitoring and Reporting	131
4.5. List of Associated Plans and Procedures	142
4.6. Management of Change.....	142
5. CAPACITY DEVELOPMENT AND TRAINING	144
5.1. Organizational Capacity.....	144
5.2. Roles and Responsibilities	145
5.3. Capacity Building and Training	147
5.4. Implementation Schedule	148

5.5. Cost Estimates	148
List of Annexes.....	149
Annex A – List of the Individuals/Organizations that Prepared or Contributed to the ESMP	150
Annex B – Coordinates of Subproject Facilities	151
Annex C – Title Deeds.....	152
Annex D – Existing Permitting Documentation.....	156
Annex E - DSİ Official Opinion on Flood Risk, Surface Water Drainage and Irrigation Infrastructure Constraints.....	170
Annex F – Site Photographs	174
Annex G – Baseline Measurements.....	175
Annex H – E&S Incident Notification Form Template.....	176
Annex İ – E&S Incident Investigation Form Template	179
Annex J – Chance Finds Procedure	182
Annex K – Change Notification Form	192
Annex L – Legislative Framework and Gap Analysis.....	194
Annex M Agreement Documents	206

LIST OF TABLES

Table 1 Relevance of the WB ESSs to the Subproject	4
Table 2 Key Technical Information on the Subproject.....	6
Table 3 Key Technical Information on the Subproject.....	6
Table 4 Parcels Overlapping with the Köşk Wastewater Treatment Plant[.....	8
Table 5 List of Associated Facilities of the Subproject	17
Table 6 Summary of Baseline Field Studies.....	21
Table 7 Meteorological Data from the Konya Meteorological Observation Station	24
Table 8 Konya - Laboratory Air Quality Monitoring Station Measurement Results	25
Table 9 Air Quality Index Levels	26
Table 10 Environmental Noise Level Limit Values	26
Table 11 Environmental Noise Level Limit Values	27
Table 12 2024 Populations of the Neighborhoods	36
Table 13 Disadvantaged or Vulnerable Individuals or Groups	41
Table 14 Construction Machinery and Equipment	42
Table 15 Construction Facilities.....	43
Table 16 Design Pollution Values of Köşk Wastewater Treatment Plant	46
Table 17 Accepted Influent and Effluent Water Quality Criteria and Expected Removal Rates for the Project.....	46
Table 18 Köşk WWTP Pollution Load Calculation Table	46
Table 19 Labor Requirements of the Subproject	52
Table 20 Land Acquisition Status for the Subproject.....	54
Table 21 Status of Permits for the Construction Phase	57
Table 22 Key Performance Indicators for Both Construction and Operation Phases of the Subproject.....	131
Table 23 Construction Environmental and Social Monitoring Table	134
Table 24 Operation Environmental and Social Monitoring Table.....	138
Table 25 Plans and Procedures associated.....	142
Table 26 Organization Structure – Project Implementation Unit (PIU)	144
Table 27 Roles and E&S related Responsibilities of Key Parties associated with ESMP Implementation.....	145
Table 28 Training Components for Training of Contractor Staff.....	147
Table 29 Duration of Activities.....	148
Table 30 ESMP Cost Breakdown for Implementation and Monitoring.	148
Table 6-3 Roles and Responsibilities associated with Chance Finds Procedure Implementation	184
Table 6-4 Regulations and/or Communiques regarding Environmental, Social, Labor, Health and Safety Aspects .	196

Table 6-5.Key Gaps Between WB ESSs And Turkish E&S Legislation	202
Table 6-6 Key Gaps Between WB ESSs And Turkish E&S Legislation	203

LIST OF FIGURES

Figure 1 Project Area	9
Figure 2 Collector Lines.....	10
Figure 3 Discharge Point.....	11
Figure 4 Site Access Route.....	13
Figure 5 Potable Water, Discharge Point, Collector Lines and Sensitive Reseptors	14
Figure 6 Beyşehir Transformer Center and Project Area	15
Figure 7 Electricity Transmission Line Drawing Approved by MEDAŞ.....	16
Figure 8 Aol of the Subproject	19
Figure 9 Aol of the Subproject (Closer View)*.....	19
Figure 10 Earthquake Risk Map of Subproject Area.....	23
Figure 11 Earthquake Risk Map of Köşk Basin Subproject Area	23
Figure 2-12 Average Temperatures	25
Figure 13 Image of the Nearest Legally Protected Area to the Subproject Area.....	31
Figure 14 Image of the Nearest Internationally and Nationally Recognized Key Biodiversity Area to the Subproject Area	32
Figure 15 Areas of Influence and Identified Receptors	39
Figure 16 Construction Camp Site Layout	44
Figure 17 Flow chart of the operation phase activities	45

ABBREVIATIONS

AoI	Area of Influence
AF	Associated Facility
DCC	Document Control Center or System
DG	Directorate General
E&S	Environmental and Social
EIA	Environmental Impact Assessment
EHS	Environmental Health and Safety
EHSG	Environmental, Health and Safety Guidelines
ERP	Emergency Response Plan
ERT	Emergency Response Teams
ESA	Environmental and Social Assessment
ESAP	Environmental and Social Action Plan
ESF	Environmental and Social Framework
ESMP	Environmental and Social Management Plan
ESMS	Environmental and Social Management System
ESP	Environmental and Social Policy
ESS	Environmental and Social Standards
ETL	Energy Transmission Line
EU	European Union
GFC	Green And Future Cities Project
GFI	Ground Fault Interrupter
GHG	Greenhouse Gas
GIIP	Good International Industry Practice
GM	Grievance Mechanism
GMP	Grievance Mechanism Procedure
GMCP	GM Contact Person
GN	Guidance Notes
HCl	Hydrogen chloride
HF	Hydrogen flouride
HS	Health and Safety
ICSC	International Chemical Safety Cards
IFC	International Finance Corporation
IFIs	International Financial Institutions
İLBANK	İller Bankası A.Ş.
KOSKİ	Konya General Directorate of Water and Sewerage Administration
KPI	Key Performance Indicator
LEL	Lower Explosive Limit
MoEUCC	Ministry of Environment, Urbanization and Climate Change
MSDS	Materials Safety Data Sheets
NO2	Nitrogen dioxide
OG	Official Gazette
OHS	Occupational Health and Safety
OHSMP	Occupational Health and Safety Management Plan
PAP	Project Affected People
Pb	Lead
PIU	Project Implementation Unit
PLN	Plan
PM	Particulate Matter
POSEİDON	POSEİDON Environmental Social Consulting Engineering Trade Ltd. Co.
PPE	Personal Protective Equipment
Project Company	Konya General Directorate of Water and Sewerage Administration (KOSKİ)
PS	Performance Standard

QAM	Quality Assurance Manager
RAQAM	Regulation on Air Quality Assessment and Management
RCIAP	Regulation on Control of Industrial Air Pollution
RD	Regional Directorate
RE	Renewable Energy
RoCIAP	Regulation on Control of Industrial Air Pollution
SCBA	Self-Contained Breathing Apparatus
SDS	Safety Data Sheets
SEP	Stakeholder Engagement Plan
SO₂	Sulfur dioxide
SOP	Standard Operating Procedures
SRS	Social Responsibility Staff
Subproject	Köşk Wastewater Treatment Plant Construction Project of KOSKI
SoW	Space of Work
The Project	Köşk Wastewater Treatment Plant Construction Project
TMP	Traffic Management Plan
TOC	Total Organic Compounds
UGR	Unlicensed Generation Regulation
VOC	Volatile Organic Compounds
WB	World Bank
WBG	World Bank Group
WHO	World Health Organization
WPCR	Water Pollution Control Regulation

GLOSSARY OF TERMS

Associated facilities	Facilities or activities that are not funded as part of the Subproject and are: (a) directly and significantly related to the subproject; (b) carried out, or planned to be carried out, contemporaneously with the subproject; and (c) necessary for the subproject to be viable and would not have been constructed, expanded or conducted if the subproject did not exist. For facilities or activities to be Associated Facilities, they must meet all three criteria.
Contractor	A person or organization providing services to an employer at the client worksite in accordance with agreed specifications, terms and conditions.
Excavated material	Materials/soils that are generated as a result of excavation and other similar activities carried out prior to construction
Legally protected area	Designated terrestrial, aquatic or marine ecosystems managed under the related legislation to protect and sustain the biodiversity features, natural and associated cultural resources. Legally protected areas of Türkiye include a diversity of natural ecosystems and associated features ranging from coastal zones to mountains, deltas, forests, plains, steppe, lakes, river systems, deep valleys, canyons, and glaciers.
Material borrow site	Sites, where loose material containing gravel, sand, silt, and clay, which is formed by the natural and geological processes of rock fracturing, fragmentation, alteration, transportation, and/or in-situ sedimentation, and which has the characteristics of slope debris, are extracted to be used as fill material.
Off-site accommodation	Accommodation of workers at hotels, rented housing, etc. available in the vicinity of Subproject area.
On-site accommodation	Accommodation of workers at temporary exploration camps, construction camps, dormitories, etc. established for the Subproject on site.
Risk	A combination of the likelihood of an occurrence of a hazardous event and the severity of injury or damage to the health of people caused by this event.
Topsoil	Part of soil that provides organic and inorganic materials, air and water required for vegetative growth, and is required to be stored separate from the subsoil.



EXECUTIVE SUMMARY

The Köşk Wastewater Treatment Plant (WWTP) Construction Project is implemented by the Konya Water and Sewerage Administration (KOSKI) within the scope of the Green and Future Cities (GFC) Project, financed by the World Bank with İller Bankası A.Ş. (İLBANK) acting as the Financial Intermediary.

The Subproject is located in Köşk neighbourhood of Beyşehir district, Konya province, and involves the construction and operation of an advanced biological wastewater treatment plant with an additional final disinfection unit, aiming to collect and treat domestic wastewater generated from Köşk as well as İmrenler and Selki neighbourhoods, and to ensure the controlled discharge of treated effluent to the receiving environment. The Subproject also involves the construction of a new wastewater sewer collector network with a total length of approximately 5,123 km. Sludge generated during the biological treatment and settling processes will be transferred to the sludge handling line. Sludge management activities will include thickening and dewatering operations, which will be carried out within the sludge dewatering building. Approximately 1 tons/day of dewatered sludge with dry solid content of 22%, namely sludge cake, is expected to be generated during operation. The sludge cake will be temporarily stored on site and subsequently transported to the Konya Wastewater Treatment Plant for sludge storage and further management in accordance with applicable regulations.

The electric transmission line will be financed within the scope of the subproject and is therefore not identified as an associated facility. However, the potable water supply connection will be constructed outside the scope of the subproject financing and is therefore identified as an associated facility..

Köşk WWTP is designed for a capacity of 750 m³/day. Its treatment process includes screening, grit removal, biological nutrient removal, secondary sedimentation, disinfection, and sludge handling and dewatering units. The subproject site is located on Block 0, Parcel 2308, Block 0, Parcel 6564 and Block 0, Parcel 6569 in Köşk neighborhood, and the service area is directly linked to rural settlements and the resident population in the vicinity. The main environmental benefit of the Project is the reduction of the pollution load that may currently reach the drainage channels/streambeds and ultimately Lake Beyşehir without treatment, thereby improving water quality and reducing pressure on the ecosystem. In this respect, the Project constitutes an important infrastructure investment in terms of environmental improvement and protection of public health in the region.

The routes of the collector lines, discharge line and electricity connection have been reviewed within the scope of the ESS5 land acquisition assessment. The collector system consists of two main branches: Line A, which conveys wastewater from Köşk Neighborhood to the WWTP, and Line B, which connects Selki Neighborhood to the Köşk collector system. Line A is approximately 1,598 m long, while Line B is approximately 1,968 m long, resulting in a total collector network length of approximately 5,123 km. The collector line routes partly follow existing asphalt roads and partly unpaved or stabilized public road corridors. Based on the current route assessment, the collector lines do not pass through privately owned parcels; therefore, no land acquisition, easement right, land use restriction, physical displacement or economic displacement is anticipated for the collector system.

The discharge line will convey treated effluent from the Köşk WWTP to Yanbay Stream and has a length of approximately 251 m. Based on the current design and route assessment, the discharge line is planned within public land, existing road corridors and/or the subproject-controlled area and does not pass through privately owned parcels. Therefore, no land acquisition, easement right, land use restriction, physical displacement or economic displacement is anticipated for the discharge line.

Electricity supply for the Köşk WWTP will be provided through connection to the existing 31.5 kV medium-voltage distribution network. The power supply will be sourced from the Beyşehir Transformer Center via the Hüyük feeder, using the existing distribution infrastructure. The required works will be limited to a capacity upgrade at the existing connection point, including replacement of the existing transformer with a 160 kVA transformer. Since no new dedicated energy transmission line, distribution line or off-site electrical infrastructure will be constructed, no additional land acquisition or resettlement-related impact is anticipated for the electricity connection under ESS5.

The Environmental Impact Assessment (EIA) process for the Köşk Wastewater Treatment Plant was first evaluated on 07 December 2017, and the Konya Governorship Provincial Directorate of Environment and Urbanization concluded that the subproject, with a design capacity of 750 m³/day and planned to serve approximately 5,652 people, remained below the 30,000 m³/day threshold defined in the applicable EIA Regulation and was therefore out of scope of the EIA process. In subsequent years, the subproject was re-evaluated due to administrative and technical updates, and following the application submitted by the Konya Water and Sewerage Administration, a second assessment was conducted on 09 January 2026. This reassessment confirmed that no capacity increase exceeding the EIA threshold had occurred and reaffirmed that the subproject does not require an EIA. Both decisions emphasize that exemption from the EIA process does not relieve the subproject from complying with the provisions of Environmental Law No. 2872 and other relevant environmental legislation, including the obligation to obtain all necessary permits and implement appropriate environmental protection measures.

The Subproject has been classified as Moderate Risk in accordance with the İLBANK Environmental and Social Management System (ESMS) by İLBANK. Accordingly, this Environmental and Social Management Plan (ESMP) has been prepared to identify and manage potential environmental and social risks and impacts during the construction and operation phases.

During land entry, mobilization and the construction phase, the most notable risks include excavation works, temporary dust emissions, equipment-related noise, construction waste management, temporary traffic impacts, occupational health and safety (OHS) risks within the construction site, and community health and safety risks resulting from unintentional/unauthorized access of local people to the work area. As no new access road is planned, the transportation of materials and equipment is expected to rely on existing routes. In this context, local roads that pass through Kışk settlement may be narrow and could pose additional risks in terms of pedestrian movement and child safety. Accordingly, construction traffic routes should be planned to avoid the settlement centre as much as possible; where this is not feasible, speed limits, warning signs, enhanced visibility measures, and scheduling of vehicle movements in line with local mobility patterns should be ensured. In addition, traffic safety briefings should be provided to drivers and construction personnel, and on-site traffic control should be managed by a designated responsible staff member.

Key recommended actions for the construction phase include: controlling dust through water spraying, covering trucks with tarpaulins, organizing and properly managing material stockpiles, limiting noisy works particularly near residential areas and during sensitive hours, and ensuring that wastes are segregated, temporarily stored in a controlled manner, and transferred to licensed facilities for disposal. From an OHS perspective, open excavations must be barricaded, warning and directional signs must be installed, the use of personal protective equipment must be enforced, work permit procedures must be applied for high-risk activities, and emergency preparedness measures must be actively implemented at the site.

During the operation phase, the most critical factor determining the effectiveness of the Project is the continuity of treatment performance and ensuring compliance of effluent quality with applicable regulatory limits. Therefore, process control must be conducted regularly, a preventive maintenance approach must be adopted to avoid failures affecting treatment efficiency, and effluent quality parameters must be monitored in line with the monitoring program. Since treated wastewater will be discharged to the receiving environment, water quality management is important to maintain compliance and to prevent potential indirect impacts on Lake Beyşehir.

1. INTRODUCTION

1.1. Background

Green and Future Cities (GFC) Project (hereinafter referred to as “the Project”) is a strategic initiative aimed at promoting climate-resilient, low-carbon, and sustainable urban development in Türkiye. The Project seeks to support municipalities and their affiliated utilities in enhancing resilience to climate change impacts, reducing greenhouse gas emissions, and strengthening environmental sustainability. In this context, the main objectives of the Project are to increase resilience against climate change and disaster risks, improve access to environmentally sustainable municipal infrastructure and services, and strengthen the capacity to respond effectively and in a timely manner to potential crises or emergency situations.

The GFC Project is financed by the World Bank (WB) and implemented in Türkiye through İller Bankası A.Ş. (İLBANK). İLBANK acts as the Financial Intermediary (FI) under the Project, while metropolitan municipalities and their affiliated utilities participate as sub-borrowers. The Project provides long-term and favorable financing to municipalities to enable the implementation of climate-resilient and environmentally sustainable infrastructure investments.

Konya Water and Sewerage Administration General Directorate (KOSKİ), affiliated with Konya Metropolitan Municipality (hereinafter referred to as “the Sub-borrower”), has applied to İLBANK for financing under the GFC Project for the KOSKİ Köşk Wastewater Treatment Plant Construction Project (hereinafter referred to as “the Subproject”). The Subproject is located in Köşk Neighborhood, Hüyük District, Konya Province, on Block 0, Parcel 2308, Block 0, Parcel 6564 and Block 0, Parcel 6569.

İLBANK has established an Environmental and Social Management System (ESMS) effective as of 24 December 2023. The ESMS has been designed in alignment with the World Bank Environmental and Social Framework (ESF, 2018) and the associated Environmental and Social Standards (ESSs). It also takes into account the environmental and social policies and standards of other International Financial Institutions (IFIs) with which İLBANK cooperates. The ESMS applies to all İLBANK projects and subprojects financed by IFIs, including those implemented under the GFC Project.

The main objective of the ESMS is to ensure the systematic identification, assessment, management, monitoring, and reporting of environmental and social risks and impacts associated with İLBANK-financed projects and subprojects. This process is implemented on an ongoing basis throughout the loan period, in line with applicable national legislation, international agreements ratified by Türkiye, and the environmental and social requirements of the World Bank and other lending IFIs. As a core element of the ESMS, İLBANK has adopted and disclosed an Environmental and Social Policy applicable to all IFI-financed projects and subprojects.

Under İLBANK’s ESMS and the World Bank ESF (2018), subprojects are classified as High Risk, Substantial Risk, Moderate Risk, or Low Risk, taking into account factors such as the type, location, scale, and sensitivity of the subproject; the nature and magnitude of potential environmental and social risks and impacts; and the institutional capacity and commitment of the sub-borrower.

In this context, an environmental and social screening and risk classification has been conducted by İLBANK for the Subproject. Based on the results of this assessment, the KOSKİ Köşk Wastewater Treatment Plant (WWTP) Construction Project has been classified as a Moderate Environmental and Social Risk subproject.

In line with this risk classification, the Sub-borrower has engaged an independent third-party consultancy firm to prepare the required environmental and social management instruments in accordance with the applicable requirements.

This Environmental and Social Management Plan (ESMP) has been prepared for the Subproject by POSEİDON Environmental Social Consulting Engineering Trade Ltd. Co., in compliance with the requirements of the GFC Project, İLBANK ESMS, the World Bank ESF (2018) and relevant Environmental and Social Standards (ESSs), the World Bank Group General Environmental, Health and Safety (EHS) Guidelines, and the national legislation in force in Türkiye.

The ESMP defines the mitigation measures, monitoring activities, institutional responsibilities, and implementation schedule to prevent, minimize, or reduce potential adverse environmental and social risks and impacts that may arise during the preparation, construction, and operation phases of the Subproject to acceptable levels. In addition, a stand-alone Stakeholder Engagement Plan (SEP) has been prepared for the Subproject.

1.2. Objective of the ESMP

This ESMP has been prepared to outline the measures to be taken during the construction (implementation) and operation (throughout the sub-financing agreement lifecycle) of the Subproject to eliminate or offset adverse E&S impacts and risks, or to reduce them to acceptable levels; as well as the actions required to carry out these measures.

1.3. Overview of E&S Requirements Applicable to the Subproject

The Subproject will be implemented in compliance with the requirements of the applicable national legislation and international agreements and conventions to which Türkiye is a party of, and in accordance with the following international requirements:

- İLBANK Environmental and Social Management System (ESMS),
- WB Environmental and Social Framework (ESF, 2018) and the Environmental and Social Standards (ESSs) forming part of the ESF,
- WB Group General Environmental, Health and Safety Guidelines (EHSGs) (2007),
- WB Group EHSGs for Water and Sanitation (2007),
- WB Group EHSGs for Waste Management Facilities (2007),
- WB Group EHSGs for Electric Power Transmission and Distribution (2007),

Table 1 Relevance of the WB ESSs to the Subproject

ESSs	Definition	Relevance to the Subproject
ESS 1	Assessment and Management of E&S Risks and Impacts	Relevant to the Subproject
ESS 2	Labor and Working Conditions	Relevant to the Subproject
ESS 3	Resource Efficiency and Pollution Prevention and Management	Relevant to the Subproject
ESS 4	Community Health and Safety	Relevant to the Subproject
ESS 5	Land Acquisition, Restrictions on Land Use and Involuntary Resettlement	Relevant to the Subproject
ESS 6	Biodiversity Conservation and Sustainable Management of Living Natural Resources	Relevant to the Subproject
ESS 7	Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities	Not relevant in Türkiye
ESS 8	Cultural Heritage	Relevant to the Subproject
ESS 9	Financial Intermediaries	Not relevant to the Subproject
ESS 10	Stakeholder Engagement and Information Disclosure	Relevant to the Subproject

When national requirements differ from the levels and measures presented in the EHSGs, the Subproject will achieve or implement whichever is more stringent.

A summary of the national legislation and international standards applicable to the management of environmental, social, health, and safety aspects of the Subproject is provided in Annex L.

1.4. Review and Update

This ESMP will be reviewed and updated by the Sub-borrower as necessary during Subproject implementation to reflect changes in national legislative framework, İLBANK's policies, or other developments. Specific circumstances warranting updates may include changes in the organizational structure, significant incidents or accidents, or the incorporation of new tools, software or database into the İLBANK E&S Risk Management System.

The Sub-borrower will notify İLBANK of any updates made to the ESMP and will ensure that such updates do not result in deviation from the requirements set forth by the national legislation and the E&S requirements applicable to the Subproject.

1.5. Implementation Arrangements

The Sub-borrower will hold ultimate responsibility for implementing this ESMP, ensuring compliance by the Sub-borrower and contractor teams (including sub-contractors engaged for the Subproject) throughout the sub-financing agreement lifecycle.

The Sub-borrower will ensure that adequate financial and human resources are allocated to enable effective ESMP implementation across the Sub-borrower, supervision consultant, and contractor organizations throughout the sub-financing agreement lifecycle.

The Sub-borrower will determine the arrangements for the Subproject's operation and will be responsible for ensuring compliance with the national legislation and Operation ESMP during its operation phase.

The roles and responsibilities of the Sub-borrower, contractor and sub-contractor teams concerning ESMP implementation are detailed in Chapter 5.

2. SUBPROJECT DESCRIPTION

2.1. Subproject Information

The Subproject involves the construction of a new Advanced Biological WWTP with a capacity of approximately 750 m³/day, the construction of a new wastewater sewer collector network with a total length of approximately 5,123 km, and the operation of the facility to treat domestic wastewater generated from Köşk Neighborhood as well as İmrenler and Selki neighborhoods. Regarding the current state of infrastructure, the area currently lacks a centralized wastewater collection and treatment system; therefore, domestic wastewater is discharged untreated into local drainage channels and streambeds, potentially reaching the ultimate receiving environment, Lake Beyşehir, and creating environmental pressure. The subproject site is located on Block 0, Parcel 2308, Block 0, Parcel 6564 and Block 0, Parcel 6569 in Köşk Neighborhood, and the Subproject includes the construction of a completely new wastewater treatment facility.

The primary objective of the Köşk WWTP Project is to protect the water quality of Lake Beyşehir—one of the largest freshwater lakes in Türkiye and a strategic source of drinking and utility water—by treating domestic wastewater generated within the Köşk Basin in Beyşehir District, thereby reducing public health risks associated with untreated discharges and contributing to the sustainable environmental development of the region. The resulting sludge cake (with 22% solid content), approximately 1.6 tons/day, will be temporarily stored on site and subsequently transported to the Konya Wastewater Treatment Plant for sludge storage and further management in accordance with applicable national regulations and quality standards.

The Köşk WWTP Subproject has been designed as an advanced biological wastewater treatment system with an additional final disinfection stage. The design capacity of the plant for the ultimate target year 2045 has been adopted as 750 m³/day, and the facility is expected to serve a population of 5,652 people in 2045. The Subproject covers the collection and treatment of wastewater originating from Köşk Neighborhood as well as İmrenler and Selki neighborhoods.

Within the scope of the Subproject, the Köşk WWTP collector system consists of two separate branches. As illustrated in Figure 2, Line B originates from Selki Neighborhood and connects to Köşk Neighborhood, while the collector line located within Köşk Neighborhood is referred to as Line A. The routes of these lines partly follow existing asphalt roads and partly unpaved or stabilized roads. Neither the collector lines nor the discharge line pass through privately owned parcels; therefore, no additional land acquisition requirements such as expropriation or easement rights are anticipated.

According to information provided by KOSKİ, the existing collector line was constructed prior to 2014 and has been in operation since that date. The section of the collector line extending from the currently used collector system to the WWTP will be constructed by KOSKİ under the scope of the Subproject. KOSKİ representatives have confirmed that the hydraulic capacity of the line is sufficient to meet the design flow requirements of the Karaali WWTP

The total length of Line A, which conveys wastewater from Köşk Neighborhood to the WWTP, is 1,598 m. The discharge line, which conveys treated effluent from the WWTP to the receiving environment, Yanbay Stream, is 251 m in length. In addition, the total length of Line B, which connects Selki Neighborhood to the Köşk collector system, is 1,968 m.

In the Köşk WWTP, the receiving water body for treated effluent is Yanbay Stream. The discharge standards applied in the plant design have been determined by taking into account national and international requirements, in particular the Water Pollution Control Regulation, the Urban Wastewater Treatment Regulation, and the EU Urban Wastewater Treatment Directive (91/271/EEC). Considering the sensitivity of the Lake Beyşehir Basin and the need to protect the receiving environment, the treatment process has been designed based on advanced biological treatment including nitrogen and phosphorus removal, rather than secondary treatment only. Accordingly, the plant is designed to achieve effective removal of carbon, nitrogen, and phosphorus and to comply reliably with more stringent discharge standards, thereby ensuring the protection of the receiving environment

The main units to be included in the Köşk WWTP are summarized below:

- o Inlet structure and inlet pumping station,
- o Coarse screen (basket screen),
- o Packaged grit removal and fine screen unit,
- o Biological phosphorus removal (Bio-P) tanks and RAS-denitrification (RAS-DN) tank,
- o Aeration tanks,
- o Final sedimentation tank (secondary clarifier),
- o Disinfection unit (chlorine contact tank),
- o Effluent flow measurement structure,

- o Sludge dewatering unit (centrifuge-decanter with polyelectrolyte preparation/dosing),
- o Operation/control building and auxiliary facilities.

The process flow diagram of the units is provided in the relevant drawings, and detailed technical information on unit sizing and design criteria is presented in the subproject documents together with the process and hydraulic calculations.

Key technical information on the Subproject is summarized in Table 2.

Table 2 Key Technical Information on the Subproject

Component	Features
Sanitation	
Sewerage	The Subproject includes the construction of a new wastewater sewer collector network serving Köşk, İmrenler, and Selki neighbourhoods. The collector system consists of two main branches conveying wastewater to the Köşk WWTP. The sewer network operates under gravity flow conditions. • Type of sewer: Sewerage system • Total network length: approximately 20.9 km • Length-1: 1,191 m – Diameter: 125 mm – Material: Corrugated sewer pipe – System: Gravity-fed • Length-2: 692 m – Diameter: 200 mm – Material: Corrugated sewer pipe – System: Gravity-fed • Length-3: 1,446 m – Diameter: 400 mm – Material: Corrugated sewer pipe – System: Gravity-fed • Length-4: 1,794 m – Diameter: 300 mm – Material: Corrugated sewer pipe – System: Gravity-fed
Wastewater Treatment Facilities	The Subproject consists of the construction and operation of the Köşk Wastewater Treatment Plant (WWTP), designed as an advanced biological wastewater treatment system with final disinfection. The WWTP has a design capacity of approximately 750 m³/day for the ultimate target year 2045 and is expected to serve a population of about 5,652 people within the Köşk Basin. The treatment process includes preliminary treatment (coarse screening and grit removal), advanced biological treatment with nitrogen and phosphorus removal, secondary sedimentation, final disinfection (chlorine contact tank), and sludge handling and dewatering units (centrifuge-decanter with polyelectrolyte preparation and dosing). Automation and control systems, including PLC and SCADA, will be installed to ensure efficient, safe, and reliable operation of the facility. Detailed descriptions of the treatment components, unit sizing, and design criteria are provided in the relevant technical sections of the subproject documentation.
Pumping and Lifting Stations	No separate wastewater pumping or lifting stations are included within the scope of the Subproject, apart from internal process-related pumping units within the WWTP.
Others	The WWTP will be equipped with auxiliary systems including flow meters, valves, corrosion protection measures, fire protection systems, and a SCADA-based automation and control system to ensure safe and efficient operation.

Table 3 Key Technical Information on the Subproject

Component	Features
Sanitation	
Sewerage	- Length-1: 1,191 meters - Diameter: 125 mm - Material: Corrugated Sewer Pipe - Pressure rating: Gravity-fed - Length-2: 692 meters - Diameter: 200 mm - Material: Corrugated Sewer Pipe - Pressure rating: Gravity-fed

Component	Features
	- Length-3: 1446 meters - Diameter: 400 mm - Material: Corrugated Sewer Pipe - Pressure rating: Gravity-fed - Length-4: 1794 meters - Diameter: 300 mm - Material: Corrugated Sewer Pipe Pressure rating: Gravity-fed
Wastewater Treatment Facilities	- The Subproject consists of the construction and operation of the Köşk Wastewater Treatment Plant (WWTP), designed as an advanced biological wastewater treatment system with final disinfection. The WWTP has a design capacity of approximately 750 m³/day for the ultimate target year 2045 and is expected to serve a population of about 5,652 people within the Köşk Basin. - The treatment process includes preliminary treatment (coarse screening and grit removal), advanced biological treatment with nitrogen and phosphorus removal, secondary sedimentation, final disinfection (chlorine contact tank), and sludge handling and dewatering units (centrifuge–decanter with polyelectrolyte preparation and dosing). Automation and control systems, including PLC and SCADA, will be installed to ensure efficient, safe, and reliable operation of the facility. Detailed descriptions of the treatment components, unit sizing, and design criteria are provided in the relevant technical sections of the subproject documentation.
Pumping and Lifting Stations	- No separate wastewater pumping or lifting stations are included within the scope of the Subproject, apart from internal process-related pumping units within the WWTP.
Others	- The WWTP will be equipped with auxiliary systems including flow meters, valves, corrosion protection measures, fire protection systems, and a SCADA-based automation and control system to ensure safe and efficient operation.

2.2. Subproject Location

The Subproject is located in Konya Province, Hüyük District, within Köşk Neighborhood. The wastewater sewerage and collector network associated with the Subproject will serve Köşk, İmrenler and Selki, neighborhoods within the Hüyük District. Information on the parcels overlapping with the Subproject is presented in Table 4. The parcels are under the ownership/use of KOSKİ, and title deed records are provided in Annex C. The total registered parcel area is 4,180 m², and no additional land outside these parcels is required for the WWTP facility.

The collector system consists of Line A, which conveys wastewater from Köşk Neighborhood to the WWTP, and Line B, which connects Selki Neighborhood to the Köşk collector system. The total length of the collector network is approximately 5,123 km. The discharge line, which conveys treated effluent to Yanbay Stream, is approximately 251 m long. The collector lines and discharge line are planned within existing public road corridors and/or project-controlled areas and do not pass through privately owned parcels; therefore, no land acquisition, expropriation or easement right is required.

Electricity supply will be provided through the existing 31.5 kV medium-voltage distribution network via the Beyşehir Transformer Center and Hüyük feeder. Since the works are limited to the existing connection point and transformer capacity upgrade, no additional land acquisition is anticipated for the electricity connection.

Further details on parcel ownership, land acquisition methods, and current status are provided in Section 3.4.

A map illustrating the location of the Subproject is presented in Figure 1 Figure 2.

Table 4 Parcels Overlapping with the Köşk Wastewater Treatment Plant[

District	Neighborhood/Village	Lot/ Parcel No.	Land Registry Type	Current Land Use
Beyşehir	Köşk Neighborhood	Block 0, Parcel 2308	Agricultural land	Raw Land
Beyşehir	Köşk Neighborhood	Block 0, Parcel 6564	Agricultural land	Agricultural land
Beyşehir	Köşk Neighborhood	Block 0, Parcel 6569	Agricultural land	Agricultural land
Beyşehir	Köşk and Selki Neighborhoods (Collector Lines)	-	-	Road



Figure 1 Project Area

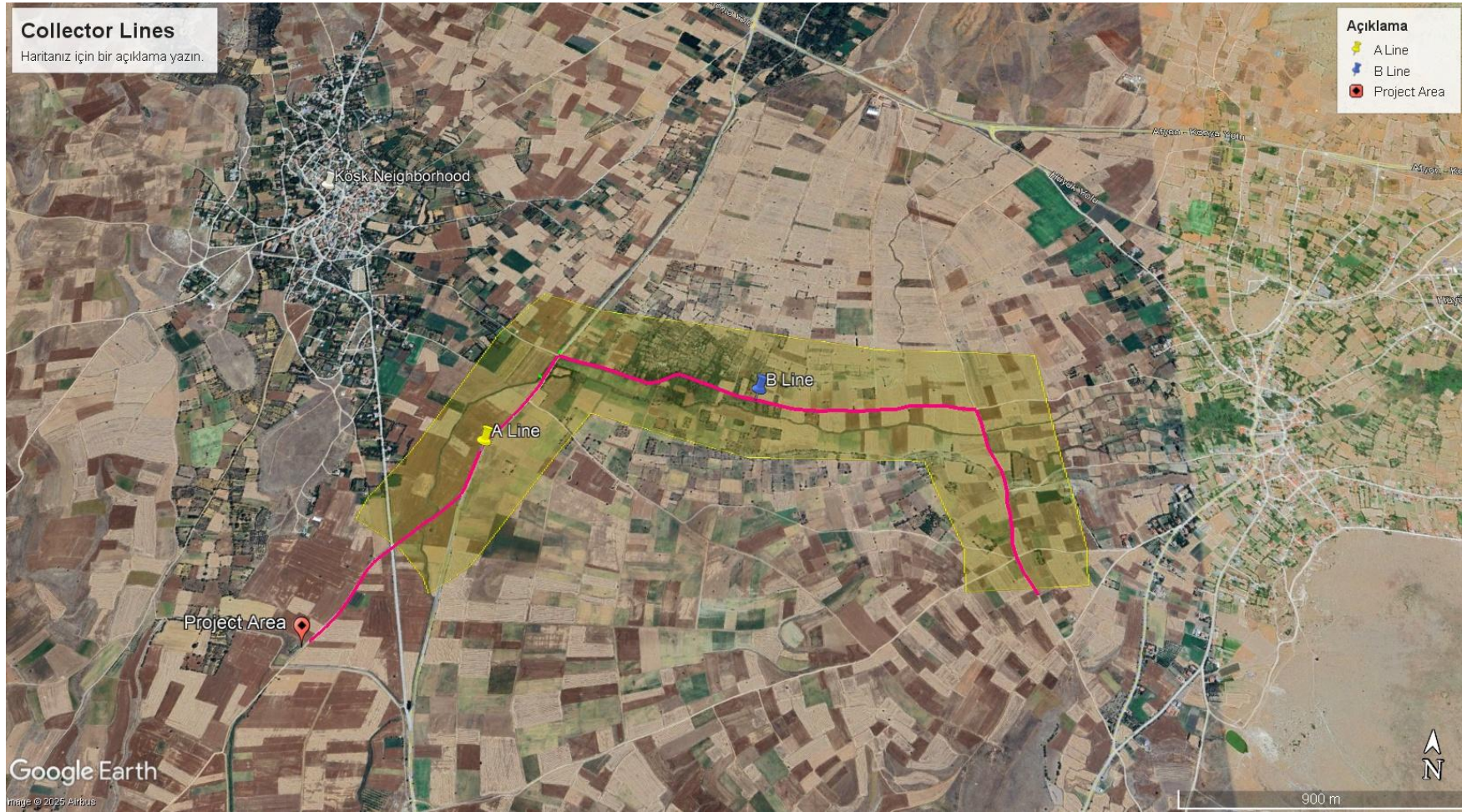


Figure 2 Collector Lines



Figure 3 Discharge Point

Discharge line

2.3. Site Access Route

Access to the Köşk Wastewater Treatment Plant (WWTP) site will be provided through existing municipal and village roads. The subproject site is accessible via roads that are already connected to the main transportation network, and no new access roads are planned to be constructed within the scope of the Subproject.

During the land preparation and construction phase, limited and temporary road improvement works may be required on existing stabilized or dirt roads to ensure safe access for construction machinery and heavy vehicles. These works will be limited to minor interventions such as surface leveling and, where necessary, gravel surfacing. No permanent road widening, new road construction, or route realignment is envisaged.

Construction of the wastewater sewerage and collector lines will be carried out within the existing rights-of-way of neighborhood roads. Accordingly, no new service roads will be required. Any road sections temporarily affected during construction activities will be reinstated to their original condition upon completion of the works.



Figure 4 Site Access Route

2.4. Associated Facilities

According to the World Bank's Environmental and Social Framework (ESF), an Associated Facility refers to a facility or activity that is not financed as part of the subproject but is directly and significantly related to it, carried out or planned to be carried out contemporaneously, and necessary for the subproject to be viable. Associated Facilities (AF) for the Subproject are listed in Table 5.

A 1 km potable water connection line will be constructed to connect the facility to the existing KOSKİ main network which will be financed and implemented by KOSKİ.

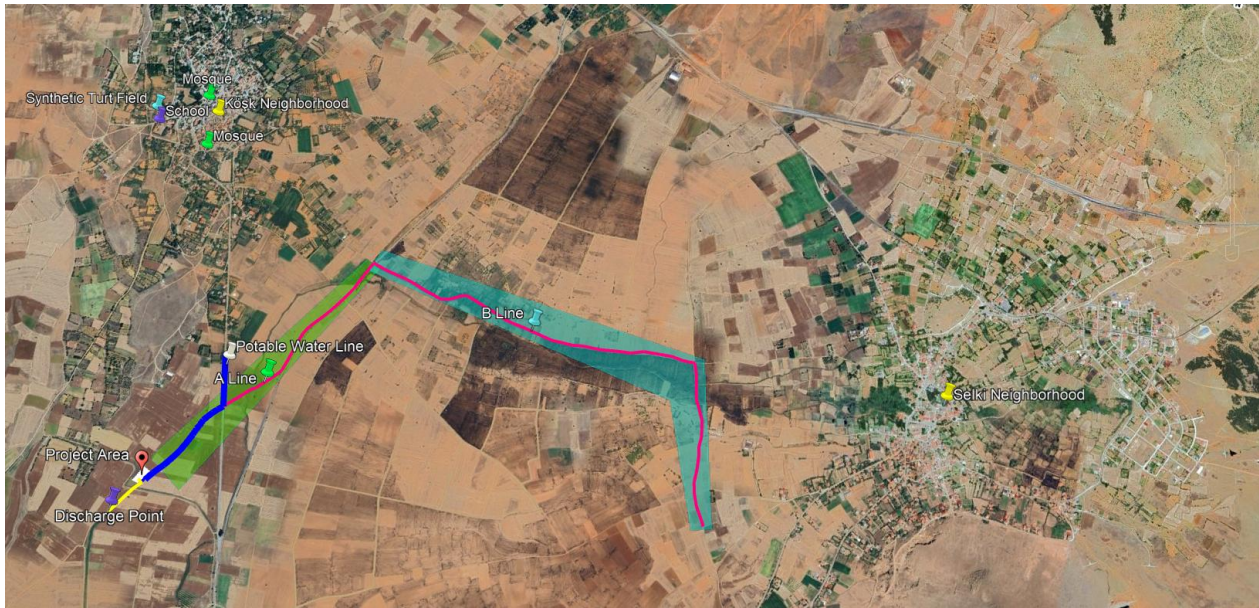


Figure 5 Potable Water, Discharge Point, Collector Lines and Sensitive Reseptors

Based on the assessment of the technical and operational requirements of the Subproject, no additional third-party facilities are required for the viability or functionality of the system. In particular, no dedicated energy transmission lines, new access roads, or off-site infrastructure developments other than the potable water connection are necessary. All infrastructure required for the effective operation of the WWTP is included within the defined scope of the Subproject, while existing regional infrastructure is utilized for routine utility connections without the need for significant expansion or construction by third parties.

The electricity supply for the Köşk WWTP will be provided through connection to the existing medium-voltage (MV) distribution network at a voltage level of 31.5 kV. The power supply will be sourced from the Beyşehir Transformer Center via the Hüyük feeder, using the existing distribution infrastructure. In order to meet the operational electricity demand of the facility, a capacity increase will be implemented at the existing connection point. This will involve the replacement of the existing transformer with a 160 kVA transformer, without the construction of any new energy transmission line (ETL/ENH), distribution line, or off-site electrical infrastructure.



Figure 6 Beyşehir Transformer Center and Project Area

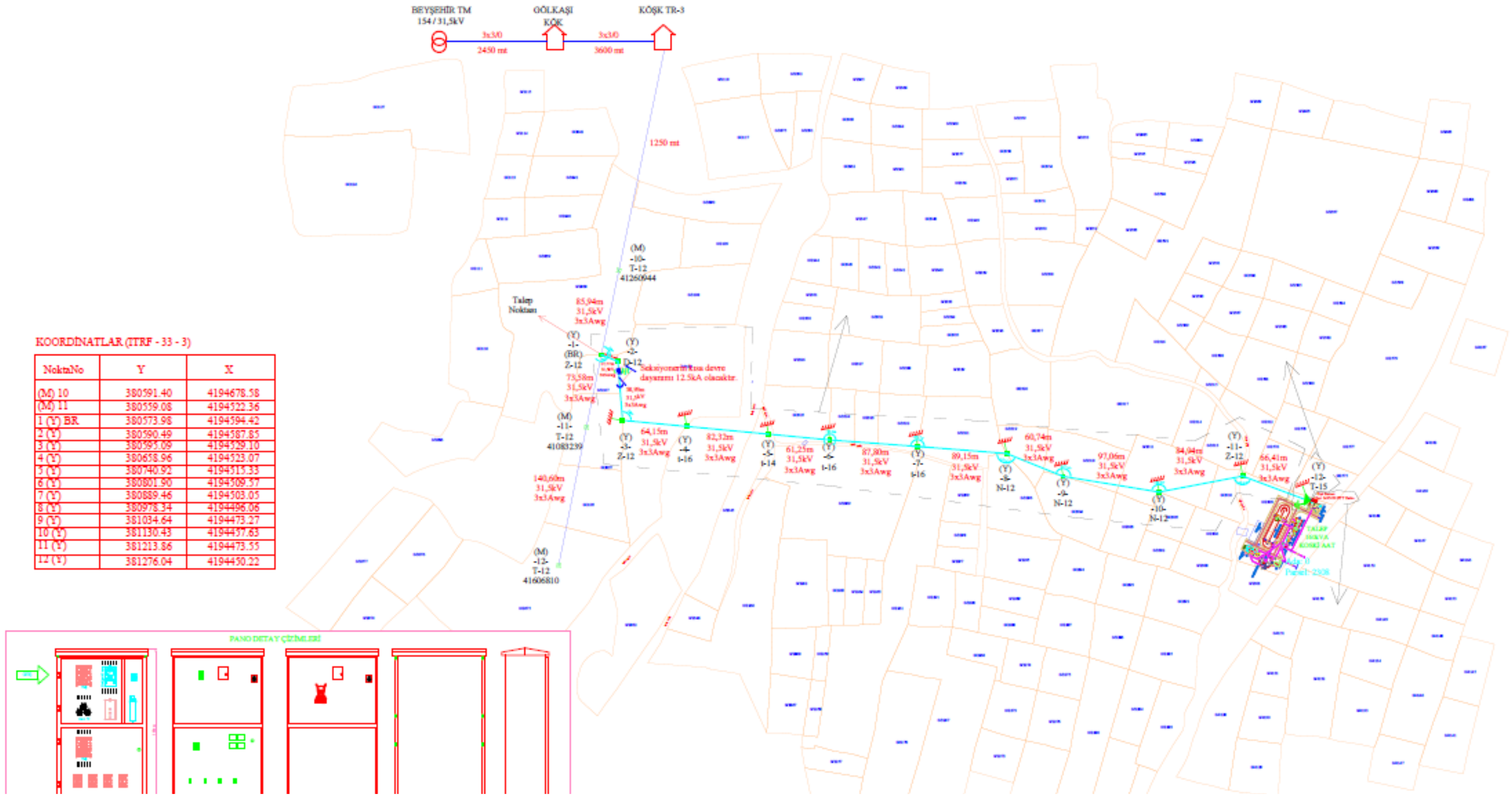


Figure 7 Electricity Transmission Line Drawing Approved by MEDAŞ

As the electricity connection relies entirely on existing grid infrastructure and only entails a capacity upgrade at an existing connection point, it does not constitute the development of a new dedicated or third-party facility.

Table 5 List of Associated Facilities of the Subproject

Associated Facility (AF)	Criteria			Notes/ Remarks
	(a) Is the AF directly and significantly related to the Subproject	(b) Is the AF carried out, or planned to be carried out, contemporaneously with the Subproject	(c) Is the AF necessary for the Subproject to be viable and would not have been constructed, expanded or conducted if the Subproject did not exist.	
Potable Water Supply Line (1 km connection to existing KOSKİ main network)	Yes	Yes	Yes	This infrastructure is considered an Associated Facility and its environmental and social aspects have been assessed within this ESMP.

2.5. Other Institutions' Infrastructure to be Displaced

Within the scope of the Köşk Wastewater Treatment Plant Subproject, potential overlaps with existing infrastructure owned by other institutions are being assessed. For this purpose, Konya Metropolitan Municipality initiated official correspondence on January 15, 2026 with 15 relevant institutions, including MEDAS, TEIAS, BOTAS and DSI, requesting institutional opinions and infrastructure layout plans for the Köşk WWTP and its associated pipelines (see Annex D).

In the event that any infrastructure overlap is detected, such infrastructure will be displaced or managed through necessary protection measures by the Sub-borrower's contractors as part of the construction process. Measures to be taken to minimize the impact of displacement works on local stakeholders are outlined in Chapter 4. The SEP presents the methods to be used to inform local stakeholders.

Although no overlap is foreseen at present, during any potential infrastructure identification and subsequent displacement operations -particularly regarding older water supply pipes or insulation materials in older underground utility conduits- the potential for encountering Asbestos-Containing Materials (ACM) will always be taken into consideration. If existing infrastructure is confirmed to contain asbestos, works will be conducted in strict adherence to National Regulations and the World Bank's EHS Guidelines.

2.6. Subproject Impact Area

Figure 8 and Figure 9 illustrates the spatial distribution of the Subproject components, including the wastewater treatment plant site and the collector line alignments, together with the defined Areas of Influence. These Areas of Influence represent the geographical extent within which the Subproject's potential direct, indirect, and cumulative environmental and social risks and impacts have been identified and assessed in line with the World Bank Environmental and Social Standard 1 (ESS1).

The Subproject Impact Area comprises the wastewater treatment plant site, the collector line routes connecting the beneficiary settlements, and the associated access and transportation corridors used during construction and operation. The delineation of the impact area reflects site-specific characteristics, existing land use patterns, settlement distribution, and infrastructure features.

The Area of Influence of the Subproject includes the wastewater treatment plant site and the surrounding areas where environmental and social impacts may occur during both the construction and operation phases. The Area of Influence is defined as a circular zone with a radius of 500 meters centered on the wastewater treatment plant site, together with the linear alignments of the collector lines and a corridor extending 250 meters on both sides of the planned pipeline routes, as shown in Figure 8.

While no residential areas are located within the immediate surroundings of the wastewater treatment plant site, the facility is located within the administrative boundaries of the relevant neighbourhood, and the population residing in this neighbourhood constitutes the direct beneficiaries of the Subproject. The corridor along the collector lines has been considered within the Area of Influence to

capture areas where temporary construction-phase impacts may occur, including excavation works, material transport, temporary access restrictions, noise and dust generation, and interaction with surrounding land uses. This integrated approach ensures that both direct site-specific impacts associated with the treatment plant and potential temporary or indirect impacts along the collector line alignments are adequately assessed Figure 9.

In addition to the collector line corridor, existing access roads and local transportation routes used for construction activities have been included within the impact area. These routes are relevant for assessing temporary traffic-related impacts, pedestrian movement, community health and safety, and access to agricultural lands and residential areas, particularly in the rural context of the Subproject area.

Within the defined Areas of Influence, existing land uses, settlement patterns, public-use areas, and sensitive receptors have been taken into account for impact assessment purposes. Detailed baseline information related to demographic characteristics, land use, livelihoods, education and health services, infrastructure, and vulnerable groups is presented in Section 2.7.3 and forms the basis for the identification and assessment of potential impacts in subsequent sections of this report.

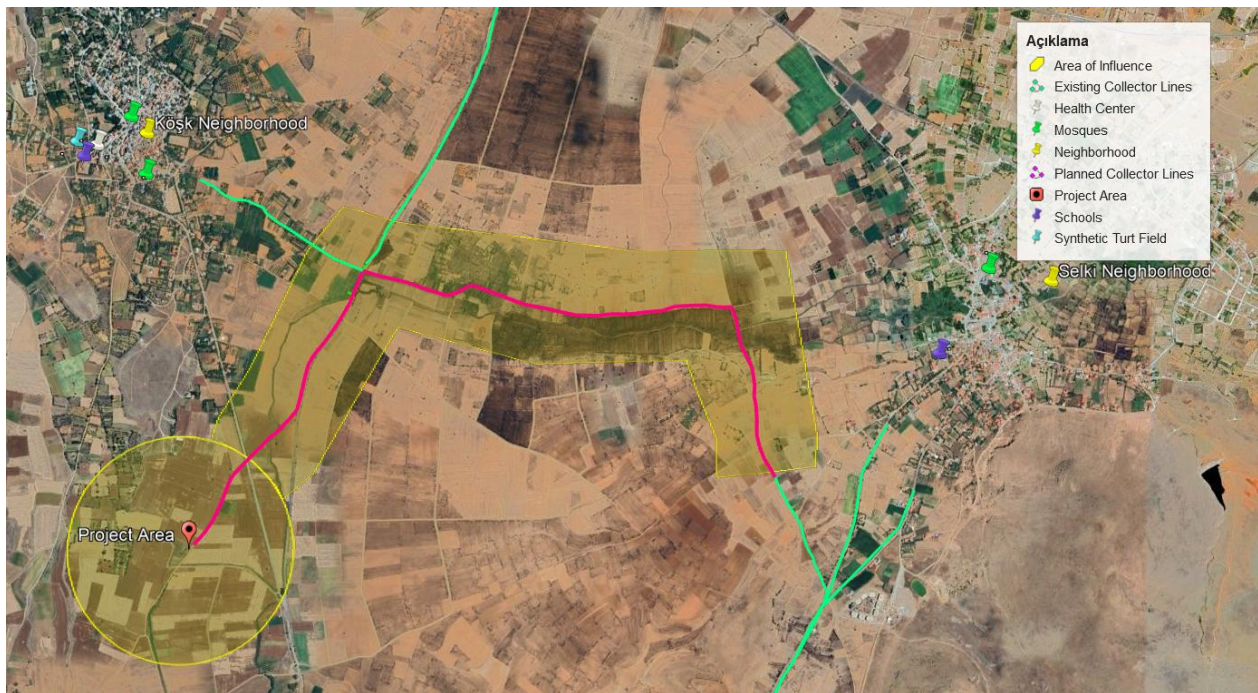


Figure 8 Aol of the Subproject

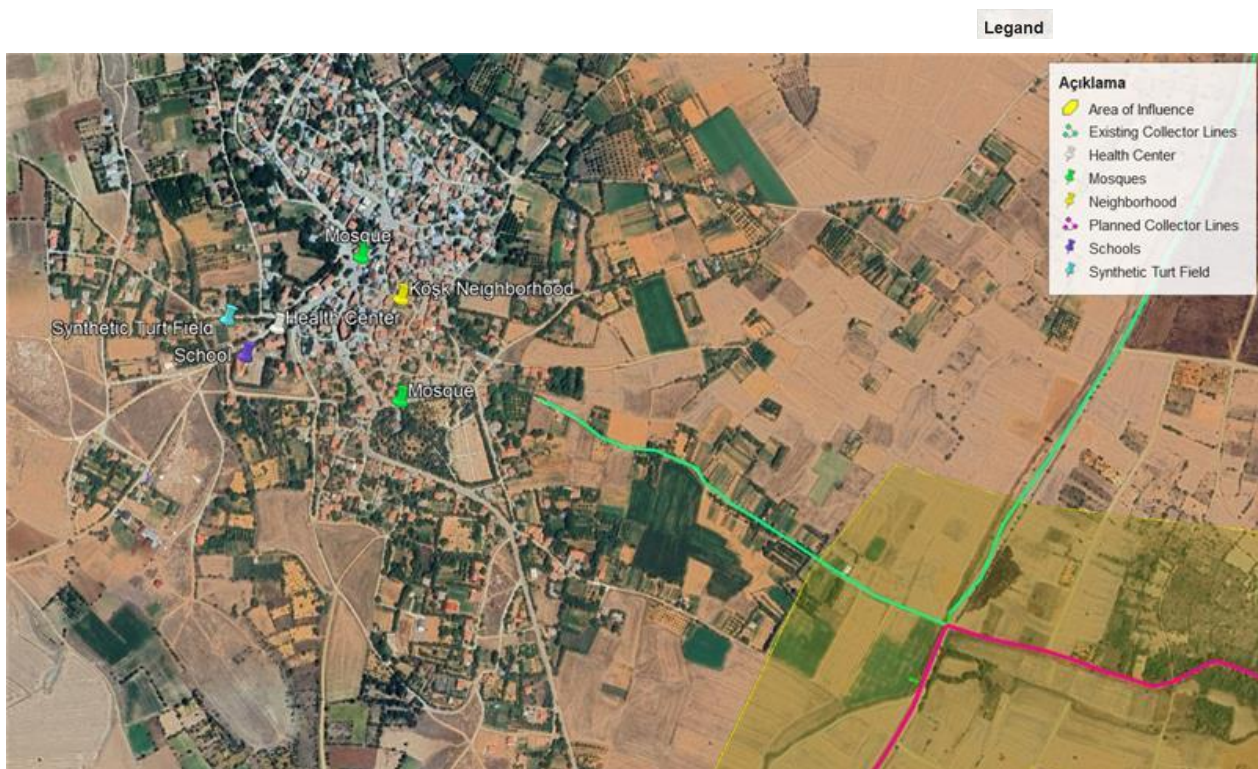


Figure 9 Aol of the Subproject (Closer View)*

*Figure 8 provides a closer view of the Area of Influence to enable clearer identification of stakeholder-sensitive receptors within Köşk Neighborhood, such as the synthetic turf field, which were not clearly distinguishable in the broader-scale map.

The Area of Influence of the Subproject includes not only the spatially defined subproject area but also the beneficiary neighbourhoods connected to the wastewater treatment system. In this context, Selki, Köşk, and İmrenler neighbourhoods have been identified as settlements within the Area of Influence due to their direct functional relationship with the Subproject and their role as service beneficiaries. Accordingly, potential indirect and cumulative environmental and social impacts that may affect these neighbourhoods have also been assessed within the scope of this report.

2.7. Environmental and Social Baseline

This section contains information on the physical, biological, and socioeconomic environment of the Subproject area and its immediate surroundings. Descriptions and information provided in this chapter, regarding current conditions of the Subproject area and its vicinity, are based on data acquired from and reports prepared by related public and private institutions, field studies conducted for the identification of physical, biological, and socio-economic environment, Geographical Information Systems (GIS) studies, and satellite imagery.

Table 6 presents a summary of the baseline field studies conducted as part of the ESMP study.

Table 6 Summary of Baseline Field Studies

Subject	Date of the Field Study	Experts who Participated in the Field Study
Physical, Biological, and Socioeconomic Environment	20 August 2025	Fikret Varol (Environmental Engineer), İrem Ağaçoğlu (Environmental Engineer), Ceyda Terzi (Environmental Engineer), Ali Can Can (Sociologist), and Gözde Yurttaş (Biodiversity Expert)
Physical, Biological, and Socioeconomic Environment	13 November 2025	Fikret Varol (Environmental Engineer), İrem Ağaçoğlu (Environmental Engineer), Ceyda Terzi (Environmental Engineer), Ali Can Can (Sociologist), and Gözde Yurttaş (Biodiversity Expert)

2.7.1. Physical Environment

2.7.1.1. Topography

The Subproject area is located within the boundaries of Köşk Neighborhood in Hüyük District of Konya Province and forms part of a broad inland plateau morphology within the Lake Beyşehir basin. The general topography of the region is characterized by wide, low-slope and relatively flat areas, exhibiting an open land structure suitable for agricultural activities.

Hüyük District and its surroundings are situated within a closed basin located to the east of Lake Beyşehir. The regional topography consists of gently sloping plains descending towards the lake, surrounded by mountainous areas. In the vicinity of the Subproject site and within Köşk Neighborhood, there are no pronounced topographic barriers, steep slopes, or abrupt elevation differences. The terrain is generally homogeneous and does not present topographic constraints that would limit construction activities.

Based on the official opinion of the General Directorate of State Hydraulic Works (DSİ), the Köşk WWTP shall be constructed at least 1.00 m above the natural ground level in order to manage potential flood and surface water risks. In this regard, the planned facility ground elevation of 1,179 m has been considered appropriate by DSİ. Accordingly, the required filling, site grading and drainage arrangements will be incorporated into the Project design. The DSİ official opinion letter is provided in Annex E

The topographic characteristics of the Subproject area may result in limited surface runoff velocities during precipitation events. However, considering the DSİ opinion and the need to manage potential localized flood risk, stormwater drainage, site grading, filling and erosion control measures will be planned during both the construction and operation phases. With the implementation of these measures, flood-related and surface runoff-related risks are expected to remain manageable.

Overall, the topographic structure of the Subproject area is considered suitable for the proposed facility layout, infrastructure installations, and access arrangements, provided that the elevation and drainage requirements specified in the DSİ opinion are implemented. No significant topography-related constraints that would prevent the implementation of the Subproject have been identified.

2.7.1.2. Geology

The Subproject area is located in Köşk Neighborhood of Hüyük District within the Beyşehir Basin. The site geology mainly consists of Quaternary alluvial deposits, composed of loose to semi-compact sediments such as clay, silt, sand, and gravel. At greater depths, carbonate formations, primarily limestone and dolomite, are present and exhibit karstic characteristics at the regional scale. No active landslides, rockfall-prone areas, or geologically unstable formations have been identified within the Subproject footprint.

Based on site investigations and information obtained from relevant authorities, no shallow groundwater table has been encountered within the Subproject area, and groundwater levels are considered to be relatively deep. Accordingly, no significant interaction between construction activities and groundwater is anticipated.

2.7.1.3. Tectonics and Seismicity

The Subproject area is influenced by the regional tectonic framework controlling the Beyşehir Basin. No active fault traces have been identified within the Subproject site itself, and potential seismic effects are associated with regional fault systems rather than direct surface faulting at the site.

According to the Türkiye Earthquake Hazard Map (AFAD, 2018) and the Konya Provincial Disaster Risk Reduction Plan (İRAP), the expected peak ground acceleration (PGA) for Köşk Neighborhood for an earthquake with a 475-year return period is approximately 0.21 g. Due to the predominance of alluvial soil conditions at the site, ground amplification and potential local soil liquefaction have been identified as secondary seismic risk factors.

Accordingly, all structural and engineering designs of the Wastewater Treatment Plant will be carried out in full compliance with the Türkiye Building Earthquake Code and relevant national standards, with site-specific seismic loads and soil conditions duly considered during the design and construction phases.

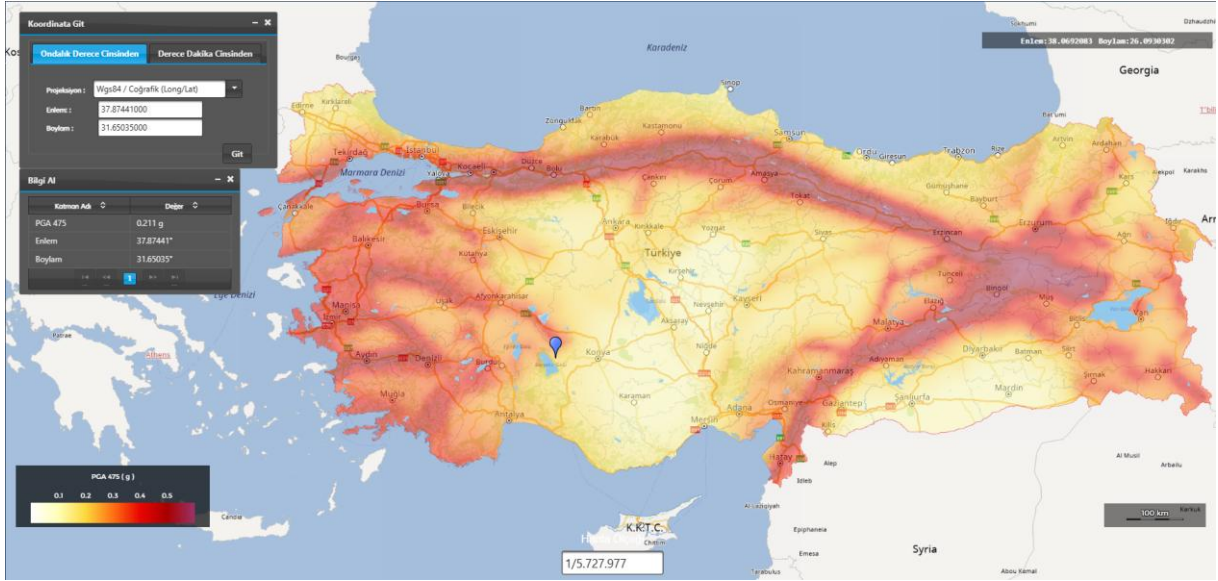


Figure 10 Earthquake Risk Map of Subproject Area

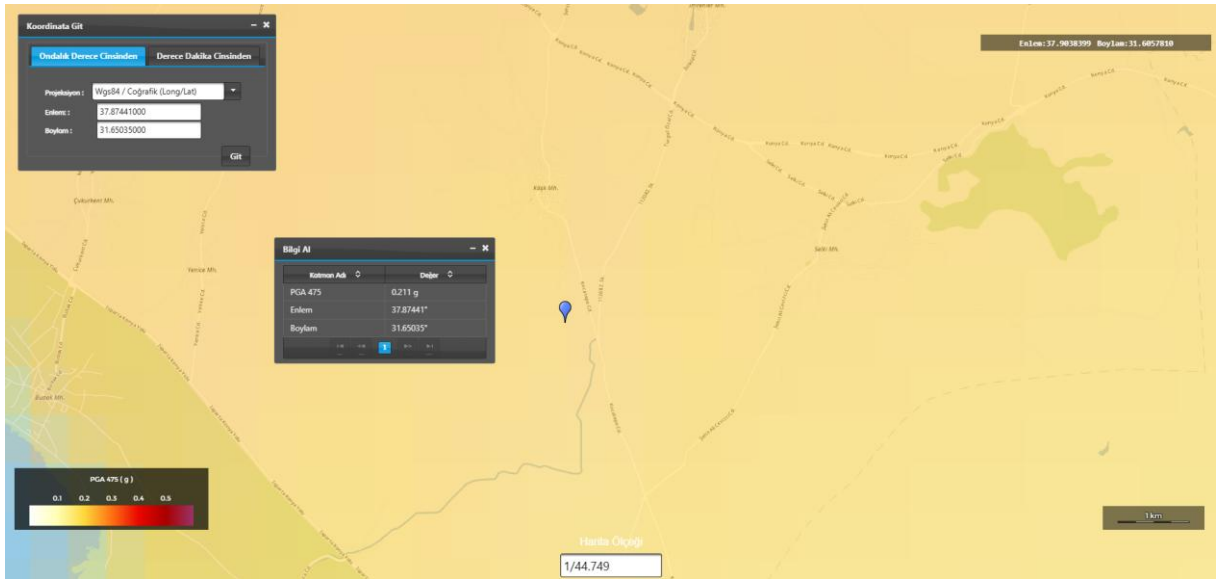


Figure 11 Earthquake Risk Map of Köşk Basin Subproject Area

2.7.1.4. Soil and Land Composition

The Subproject area is located within the Beyşehir Basin, where the prevailing soil structure consists of alluvial-origin soils. These soils generally comprise a mixture of fine-grained materials (clay and silt) and medium-grained components (sand), with locally occurring gravel layers. Soil depth is adequate across the site, and no surface rock outcrops or exposed bedrock have been observed within the Subproject footprint.

Based on current land use characteristics, the Subproject site and its immediate surroundings are situated within areas designated for settlement and infrastructure use and do not constitute actively cultivated agricultural land. The land is under the ownership of KOSKI

Due to the loose to semi-compact nature of the soil, construction activities involving excavation and filling may result in temporary impacts such as soil erosion, surface soil displacement, and short-term dust generation. These impacts will be managed through controlled excavation practices, appropriate soil stockpiling, and surface stabilization measures during the construction phase.

The Subproject is not expected to cause permanent or large-scale degradation of soil and land composition. Upon completion of construction activities, temporarily affected areas will be rehabilitated and the land will be arranged in accordance with the intended use of the Subproject.

2.7.1.5. Meteorology and Climatic Characteristics

Due to its geographical location in the northern part of the Mediterranean Region and within the Lakes Region, the subproject area exhibits a transitional climate characteristic between the Mediterranean and Central Anatolian climates. The region shows the typical climatic features of the Lakes Region, with hot summers and cold, rainy winters. The moderating effect of the lake located in the southern parts of the district gradually diminishes toward higher elevations, where harsher climatic conditions prevail.

According to the Konya Provincial Disaster Risk Reduction Plan (İRAP), the province has an annual average temperature of approximately 11–12°C and an annual total precipitation of around 330 mm, indicating semi-arid conditions and limited water resources in the Subproject area ¹.

Therefore, seasonal drought conditions, water availability, and variability in rainfall should be considered during construction planning and operational activities.

According to the information obtained from KOSKİ, minimum and maximum wastewater temperature values are considered in the process calculations. Within this scope, the wastewater temperature values used for the Kireli Subproject were determined based on the minimum and maximum wastewater temperatures recorded at the Beyşehir and Hüyük Wastewater Treatment Plants operated by KOSKİ.

An evaluation of the meteorological parameters monitored by the Turkish State Meteorological Service (MGM) for the Konya region for the 1991–2020 period² is presented in the table below.

Table 7 Meteorological Data from the Konya Meteorological Observation Station

Meteorological Parameters	January	February	March	April	May	June	July	August	September	October	November	December	Annual
Mean Temperature (°C)	-0.3	1.3	6.0	10.9	15.9	20.5	24.1	24.0	19.4	13.4	6.2	1.5	11.9
Mean Highest Temperature (°C)	4.6	6.9	12.5	17.6	22.8	27.4	31.0	30.9	26.7	20.4	12.7	6.3	18.3
Mean Lowest Temperature (°C)	-3.9	-3.3	0.2	4.4	9.0	13.6	17.1	17.2	12.3	7.0	0.8	-2.2	6.0
Average Sunshine Duration (hours)	3.4	4.9	6.3	7.2	8.7	10.3	11.1	10.8	9.7	7.6	5.3	3.3	7.4
Average Number of Rainy Days	10.53	8.97	9.80	10.83	12.47	8.10	3.00	2.63	4.40	7.27	7.13	10.10	95.2
Average Monthly Total Precipitation (mm)	35.9	23.1	27.4	34.2	38.2	27.8	6.5	6.5	15.9	29.7	34.5	45.6	325.3

¹ Konya Provincial Disaster Risk Reduction Plan (İRAP) – Meteorological and Climatic Characteristics

² Source: <https://www.mgm.gov.tr/veridegerlendirme/il-ve-ilceler>

Temperature

The annual mean temperature in the region is 11.9°C. An analysis of monthly mean temperatures indicates that the highest value, 31.0°C, occurs in July. From a seasonal perspective, the average temperature is 0.83°C in winter and 22.9°C in summer. The mean temperature in autumn is 13.0°C, while the mean temperature in spring is 10.8°C. The annual mean maximum temperature of the region is 18.3°C. An assessment of monthly mean maximum temperatures shows that the highest value, 31.0°C, is recorded in July, whereas the lowest value, 4.6°C, occurs in January. The annual mean minimum temperature is 6.0°C. Based on monthly mean minimum temperatures, the highest value is observed in August at 17.2°C, while the lowest value is recorded in January at –3.9°C

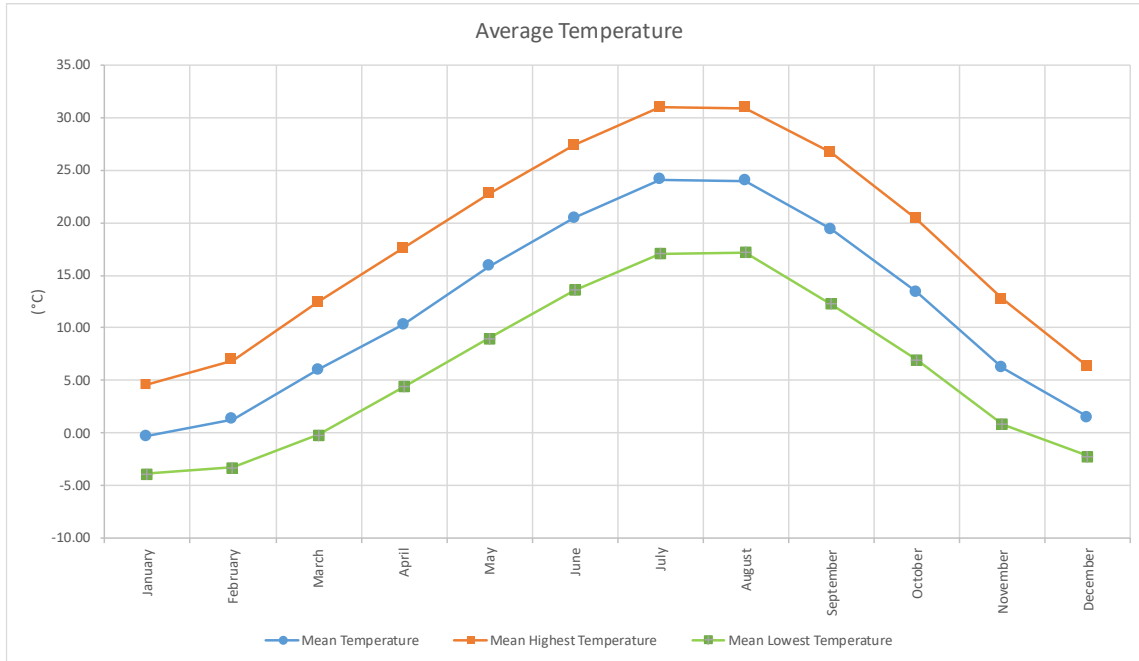


Figure 2-12 Average Temperatures

2.7.1.6. Air Quality

Since no baseline air quality measurements have been conducted directly at the Project site, data from the nearest monitoring station were utilized to represent the background conditions. Accordingly, data from the Konya – Laboratory Air Quality Monitoring Station, located approximately 75 km east of the Project site in Köşk District, were evaluated for the period between 26.07.2024 and 26.07.2025. The results of this assessment are summarized in Table 8. The annual average concentrations were 28.13 µg/m³ for particulate matter (PM10), 8.61 µg/m³ for fine particulate matter (PM2.5), 29.97 µg/m³ for nitrogen dioxide (NO₂), and 8.70 µg/m³ for sulfur dioxide (SO₂). When compared with the annual limit values specified in the Turkish Regulation on Air Quality Assessment and Management as well as the European Union Air Quality Directive, all measured parameters remain below the legal thresholds. However, when evaluated against the updated World Health Organization (WHO) Air Quality Guidelines (2021), it was found that especially PM2.5 and NO₂ concentrations exceed the recommended limits. This indicates that, while current air quality is in compliance with national and regional standards, exposure to pollutants at these levels may pose risks to sensitive groups in terms of public health.

Table 8 Konya - Laboratory Air Quality Monitoring Station Measurement Results

Parameter	Annual Avg. Value (µg/m³)	National Legislation Annual Limit Value (µg/m³)	WHO Guideline Value (µg/m³)
PM10	28,13	40	15
PM2.5	8,61	25	5
NO2	29,97	40	10
SO2	8,7	20	(No annual limit)

If deemed necessary in response to complaints or concerns raised by stakeholders, site-specific baseline air quality measurements may be conducted by the Contractor prior to and during the construction phase.

For public comprehension, the air quality levels have also been evaluated according to the Türkiye Air Quality Index (AQI) classification, as presented in Table 9. The average PM10 concentration measured at the Laboratory Station (28 µg/m³) corresponds to the 'Good' category of the AQI, indicating that the general air quality in the region is considered good. Taking into account the rural characteristics of the Subproject area, the absence of significant traffic or industrial sources in the vicinity, and the fact that the measured concentrations remain below national limits, it can be concluded that the Project site is generally characterized by low background air pollution levels.

Table 9 Air Quality Index Levels

Air Quality Index (AQI)	PM10 (µg/m³)	Description
Good	0-50	Air quality is satisfactory, and air pollution poses little or no risk.
Moderate	51-100	Air quality is acceptable; however, some pollutants may pose a moderate health concern for a very small number of people who are unusually sensitive to air pollution.
Unhealthy for Sensitive Groups	101-150	Members of sensitive groups may experience health effects. The general public is not likely to be affected.
Unhealthy	151-200	Everyone may begin to experience health effects, and members of sensitive groups may experience more serious health effects.
Very Unhealthy	201-300	Health alert conditions may arise. The entire population is more likely to be affected.
Hazardous	301-500	Emergency conditions. The entire population is more likely to be affected with serious health effects.

2.7.1.7. Noise

In Türkiye, the Regulation on Environmental Noise Control, published in the Official Gazette dated 30.11.2022 and numbered 32029, regulates the environmental noise. The regulation sets noise limits applicable to various areas (e.g., industrial areas, residential areas, or a combination of both) for three time periods. Similarly, the WBG General EHS Guidelines sets limits for noise for two types of receptors and two time periods. The guideline requires that noise levels do not exceed the given levels or result in a maximum increase in background levels of 3 dB at the nearest receptor location off-site. The limit values of national and international standards are summarized in Table 10 and Table 11:

Table 10 Environmental Noise Level Limit Values

Noise Source	Measured Parameter	Environmental Noise Level		
		Day (07:00 - 19:00)	Evening (19:00 - 23:00)	Night (23:00 - 07:00)
Industrial facilities, transportation resources	LA_{eq,5min}	65 dB(A)	60 dB(A)	55 dB(A)
Workplaces ⁽²⁾	LA _{eq,5min}	Background + 5 dB(A)		Background + 3 dB(A)
In case of more than one workplace ⁽³⁾	LA _{eq,5min}	Background + 7 dB(A)		Background + 5 dB(A)
All resources	LC _{max}	100 dB(C)		

⁽¹⁾: These limit values are valid as of 31.12.2023. These limit values are provided in every 1/3 octave band of the determined frequency range. In the acoustic reports prepared until this date; environmental noise measurement results and the measures determined as a result of the measurement result are included.

(2): Each workplace that contributes to the background noise level is co-responsible for ensuring this limit value. Each workplace takes the necessary measures according to the contribution rates to noise.

Table 11 Environmental Noise Level Limit Values

Receptor	Daytime (07:00 – 22:00)	Nighttime (22:00 – 07:00)
Residential areas	55	45
Commercial/industrial areas	70	70

No baseline noise measurements have been conducted in the Project area. However, the site is located in a rural setting with no significant industrial or high-traffic noise sources in the vicinity. Existing noise levels are considered to be mainly influenced by agricultural activities, local transportation, and natural background sounds (e.g., wind, birds, animals). Therefore, it is assumed that the current ambient noise levels are low and below the limit values set by the Turkish Regulation on the Assessment and Management of Environmental Noise (2010) and in line with the World Bank Group Environmental, Health, and Safety Guidelines (EHS Guidelines).

2.7.1.8. Water Resources

The Subproject area is part of the closed basin system located in the Central Anatolia Region of Konya Province. Surface waters in Köşk and its immediate surroundings are generally seasonal in character, with flow regimes largely dependent on precipitation and snowmelt. Streams and surface runoff channels in the area tend to dry up during the summer months, while short-duration and intense rainfall events in spring and autumn may lead to sudden increases in flow and surface runoff.

In accordance with the official opinion letter obtained from the General Directorate of Water Management under the Ministry of Agriculture and Forestry (Annex D), the Köşk WWTP is located within the Beyşehir Lake Basin and falls under the Special Environmental Protection Provisions of Lake Beyşehir. The discharge point is situated within a nitrate-sensitive area. Accordingly, the treatment plant design parameters, including total nitrogen (TN) and total phosphorus (TP) concentrations, shall be determined in line with the Urban Wastewater Treatment Regulation and basin-specific provisions. The Subproject has been designed to ensure compliance with sensitive area discharge standards.

Köşk Neighborhood is located in the western part of Konya Province, within the administrative boundaries of Hüyük District, and is hydrologically associated with the Beyşehir Lake basin. Under the Subproject, treated wastewater from the planned Köşk Wastewater Treatment Plant will be discharged into a dry stream bed located to the south of the facility site, ultimately reaching Beyşehir Lake.

The discharge point of the Köşk WWTP is located on Yanbay Stream, which is a seasonal streambed within the Beyşehir Lake Basin. The treated effluent will be conveyed from the WWTP to Yanbay Stream through a discharge line of approximately 251 m. Yanbay Stream forms part of the local drainage network in the area and ultimately contributes to the surface water system of the Beyşehir Lake Basin.

Yanbay Stream has a seasonal flow regime and remains dry for most of the year. Surface flow is generally expected only during wet periods, intense rainfall events or snowmelt. No site-specific wet season flow measurement was available at the time of preparation of this ESMP. If required by the relevant authorities or during the implementation phase, additional flow observations or measurements may be conducted at or near the discharge location.

The location of Yanbay Stream, the discharge point, the WWTP site and the discharge line will be shown on the relevant water resources map together with their distances to the Subproject site. Photographs of Yanbay Stream and the planned discharge location are provided in Figure 3.

Beyşehir Lake is situated on the Konya–Isparta provincial border and represents a strategic water body as Türkiye’s largest freshwater lake. The Project site is located approximately 3 km from the lake. The lake is of high importance both in terms of ecological value and the protection of drinking and domestic water resources. For this reason, surface runoff and stream channels in Köşk and its surroundings that drain into the lake are considered sensitive with respect to water quality.

One of the most important streams feeding Beyşehir Lake is the Çarşamba Stream, which originates from the higher elevations of Bozkır District and contributes to the irrigation systems around the lake. The Apa Dam, constructed on the Çarşamba Stream, is operated for flood control and agricultural irrigation purposes and plays a significant role in maintaining the hydrological balance of the region.

Taking into account the seasonal and irregular flow regime observed in and around the Köşk Subproject area, wastewater management and the design of the treatment plant have been developed with due consideration for the protection of Beyşehir Lake. Within this framework, the primary objective is to prevent uncontrolled discharges of treated wastewater and to minimize potential adverse impacts on the receiving environment.

2.7.1.9. Natural Hazards (such as flooding, landslides, fire, etc.)

The Project area is located within the boundaries of Köşk Neighborhood in Beyşehir District of Konya Province and is characterized by a predominantly rural setting with gently sloping terrain and agricultural land use. Considering the topographical, hydrological, and climatic characteristics of the Project area, no significant natural hazards that could pose a high level of risk to the construction or operation phases of the Project have been identified.

Flood Risk:

The Project area in Köşk Neighborhood is not located within officially designated flood zones and is situated at a relatively higher elevation compared to Lake Beyşehir and the surrounding low-lying areas. There are no large-scale or permanent surface water bodies passing through the Project area. Therefore, the risk of large-scale flooding is considered low. However, localized surface runoff and temporary water ponding may occur during periods of intense and short-duration rainfall.

Based on the official opinion of the General Directorate of State Hydraulic Works (DSİ), provided in Annex E, the Köşk WWTP should be constructed at least 1.00 m above the natural ground level. In this regard, the required filling has been calculated within the subproject design, and the planned subproject ground elevation of 1,179 m has been considered appropriate by DSİ. Accordingly, provided that the specified technical requirements and necessary measures against flood risk and surface waters are implemented, the flood-related risks for the Köşk WWTP are considered manageable.

The same official opinion also states that there is no objection to carrying out zoning plan studies for the Köşk WWTP, provided that the relevant technical considerations and conditions specified by DSİ are taken into account.

Landslides and Soil Stability:

The topography of the Project area and its immediate surroundings is characterized by low slopes, and no steep terrain or geologically unstable formations have been observed. The soil structure in the area generally consists of stable sedimentary materials, and there are no records of significant historical landslide events in Köşk Neighborhood or its vicinity. Accordingly, the risk of landslides and slope instability is assessed as low.

Seismic Risk:

Beyşehir District, where Köşk Neighborhood is located, lies within a region of moderate seismicity according to national seismic hazard maps. The Project area is not situated directly on an active fault line. Seismic risks are expected to be adequately managed through engineering and structural design practices in compliance with applicable national building and earthquake regulations.

Fire Risk:

The Project area and its surroundings are predominantly covered by agricultural lands and sparse rural vegetation, with no extensive forested areas in the immediate vicinity. Therefore, the risk of large-scale forest fires is considered low. Nevertheless, there is a limited risk of stubble or dry grass fires, particularly during hot and dry summer periods. This risk can be mitigated through good site management practices, controlled vegetation management, and the implementation of emergency preparedness plans.

Overall, the natural hazards identified in the Köşk Subproject area are considered to pose a low level of risk during both the construction and operation phases of the Project. With the application of Good International Industry Practices (GIIP) and site-specific preventive and mitigation measures, potential impacts related to natural hazards are expected to be negligible.

2.7.2. Biodiversity

This section has been prepared to assess the current status of ecosystems and biodiversity within the Sub-Project area and its immediate surroundings; to identify flora and fauna components; to determine the presence of endemic, rare, or threatened taxa; and to define the threat categories of identified taxa in accordance with World Bank Environmental and Social Standard 6 (WB ESS6): Biodiversity Conservation and Sustainable Management of Living Natural Resources.

Under ESS6, natural habitats and critical habitats are defined as follows.

Natural habitats are areas composed of viable assemblages of plant and/or animal species of largely native origin, and/or where human activity has not essentially modified an area's primary ecological functions and species composition.

Critical habitats are defined as areas with high biodiversity importance or value that meet one or more of the following criteria:

- (a) Habitat of significant importance to Critically Endangered (CR) or Endangered (EN) species, as listed on the IUCN Red List of Threatened Species or under equivalent national approaches;
- (b) Habitat of significant importance to endemic or restricted-range species;
- (c) Habitat supporting globally or nationally significant concentrations of migratory or congregatory species;
- (d) Highly threatened or unique ecosystems; and
- (e) Ecological functions or characteristics that are necessary to maintain the viability of the biodiversity values described in (a)–(d).

The objectives of ESS6 are to:

- protect and conserve biodiversity and natural habitats;
- apply the mitigation hierarchy and the precautionary approach in the design and implementation of projects that may affect biodiversity;
- promote the sustainable management of living natural resources; and
- support livelihoods of local communities, including Indigenous Peoples, and inclusive economic development through the adoption of practices that integrate conservation needs with development priorities.

The biodiversity and ecosystem assessment for the Sub-Project has been carried out within a pre-defined Area of Influence (AoI) established prior to site-specific field investigations. According to the World Bank Environmental and Social Standards, where a subproject includes physical elements, aspects, and facilities that may generate impacts, environmental and social risks and impacts shall be identified in the context of the subproject's Area of Influence (AoI). Accordingly, the assessment has not been limited solely to the subproject footprint but has also encompassed adjacent areas that may be environmentally affected. The term "Sub-Project area and its immediate surroundings" refers to the primary Area of Influence defined as a 500-m buffer zone surrounding the subproject area, based on the potential intensity of environmental impacts such as dust, noise, habitat disturbance, and traffic.

Based on the field surveys conducted by biodiversity specialists and desktop reviews of national biodiversity databases and IUCN resources, it has been determined that the Sub-Project area and the defined Area of Influence (AoI) consist predominantly of fragmented steppe- and pasture-character habitats that have been subjected to agricultural activities, infrastructure elements, and historical land-use practices. Due to long-term human influence, natural habitat continuity within the area has been largely disrupted, and the AoI exhibits a mosaic structure shaped by anthropogenic disturbance, which is considered to be substantially modified in terms of ecological integrity.

During the field surveys, a limited number of individual tree specimens and a concrete structure reported by local residents to belong to the municipality were observed within the Sub-Project area. The structure and its immediate surroundings have been under the influence of human activities for a prolonged period and are therefore evaluated as artificial and modified environmental elements that do not possess natural habitat characteristics. It has been determined that this area does not provide natural ecosystem functions or habitat continuity.

The individual tree specimens observed within the subproject area do not form a dense, multi-layered, or continuous tree formation or a natural forest ecosystem and do not provide ecological integrity, habitat continuity, or critical ecological functions. These trees are considered to represent secondary vegetation elements that have developed under agricultural use and human influence. The observed tree specimens have limited trunk diameters, do not exhibit mature woody vegetation characteristics, and therefore do not meet the definition of natural or critical habitat under ESS6.

Within the framework of ESS6, the evaluations with respect to criteria (a) to (e) are presented below:

- (a) No habitat of significant importance for species classified as Critically Endangered (CR) or Endangered (EN) under the IUCN Red List has been identified within the Area of Influence. This conclusion is supported by field surveys and literature sources.
- (b) No habitat of known significance for endemic or restricted-range species has been observed. The flora within the AoI is predominantly composed of widespread, non-endemic species adapted to regional steppe conditions.
- (c) The AoI does not support migration corridors, stopover sites, or aggregation areas for migratory or congregatory species. This has been confirmed through field observations and available data sources.
- (d) No highly threatened or unique ecosystems are present within the AoI. Existing habitat types are common in the region and are characterized by low ecological value.
- (e) No ecological functions or features critical to maintaining the viability of the biodiversity values described under criteria (a)–(d) have been identified within the AoI. These findings are supported by field investigations and secondary data sources.

During the field surveys, no direct or indirect evidence was identified indicating that the observed individual tree specimens or the area surrounding the concrete structure are used as breeding, feeding, or permanent shelter habitats by protected, endemic, rare, or threatened species. Accordingly, these elements are not considered to play a critical role in terms of habitat integrity or ecological functionality within the Area of Influence.

In conclusion, although certain biotic elements (individual tree specimens) are present within the Sub-Project area and the Area of Influence, the area as a whole does not meet the criteria for natural or critical habitat as defined under ESS6. The flora and fauna components within the AoI are predominantly composed of widespread species tolerant to human disturbance and adapted to degraded habitat conditions, and it is not expected that the Sub-Project activities will result in significant or irreversible impacts on biodiversity.

2.7.2.1. Legally Protected and Internationally Recognized Areas

The assessment of the presence of legally protected areas and nationally and internationally recognized areas within the Sub-Project area and the defined Area of Influence (AoI) was conducted based on official databases of relevant public authorities, up-to-date spatial datasets, available literature sources, and supporting desktop analyses. In this context, findings obtained during field surveys were evaluated together with satellite imagery and existing environmental conditions.

As a result of the assessments, it was determined that the Sub-Project area is located within the Beyşehir Lake Wetland Buffer Zone boundary. Buffer zones are defined as transition areas surrounding core wetland ecosystems and are intended to limit external pressures on these ecosystems, rather than constituting core wetland areas themselves. Although buffer zones contribute to the protection of the ecological integrity of wetlands, they do not necessarily exhibit the same ecological characteristics as core wetland ecosystems.

Field surveys conducted within the buffer zone where the Sub-Project area is located indicate that the area has been under the influence of human activities for a long period, has largely lost its natural character, and exhibits a significantly degraded ecological structure. Due to agricultural activities, infrastructure interventions, and the presence of existing man-made elements such as concrete structures, the area has diverged substantially from natural habitat conditions. In this regard, no wetland-specific habitat structures, natural hydrological regimes, natural vegetation communities, or sensitive ecological functions were identified within the Sub-Project area or the AoI.

The nearest area recognized at both international and national levels is the Beyşehir Lake Key Biodiversity Area (KBA), located approximately 3,90 km west of the subproject area in straight-line distance. Although Beyşehir Lake KBA is of high biodiversity importance, there is no direct habitat continuity, ecological corridor, or hydrological connection between the Sub-Project area and the KBA. Existing land use patterns, topographic conditions, and anthropogenic interventions constitute limiting factors that restrict ecological interaction between the subproject area and the KBA.

Within the framework of ESS6, it is concluded that no critical habitat is present within the Sub-Project area or the defined Area of Influence. In accordance with the criteria set out under ESS6, the subproject area does not qualify as:

- Habitat Of Significant Importance For Critically Endangered (CR) Or Endangered (EN) Species,
- Habitat Of Significance For Endemic Or Restricted-Range Species,
- Migration, Breeding, Or Aggregation Areas, Or
- Highly Threatened Or Unique Ecosystems.

It is not anticipated that subproject activities will result in significant indirect impacts on the core Beyşehir Lake Wetland area or the Beyşehir Lake KBA through mechanisms such as dust, noise, surface runoff, or traffic. Considering the distance, topographic conditions, and existing land use patterns, any potential impacts are expected to remain localized and limited within the buffer zone.

In conclusion, although the Sub-Project area is located within the Beyşehir Lake Wetland Buffer Zone, based on the existing environmental conditions, habitat characteristics, and level of anthropogenic disturbance, the area does not meet the definition of natural habitat or critical habitat under ESS6. The Sub-Project is therefore not expected to result in any significant direct or indirect adverse impacts on legally protected areas or internationally and nationally recognized ecological areas. The resulting raw sludge from the Köşk WWTP, approximately 17.8 tons/day, will be thickened and dewatered, and the sludge cake (1.6 tons/day 22% dry solid content) will then be transported to Konya WWTP to be reused or disposed, subject to compliance with national regulations and quality standards.



Figure 13 Image of the Nearest Legally Protected Area to the Subproject Area

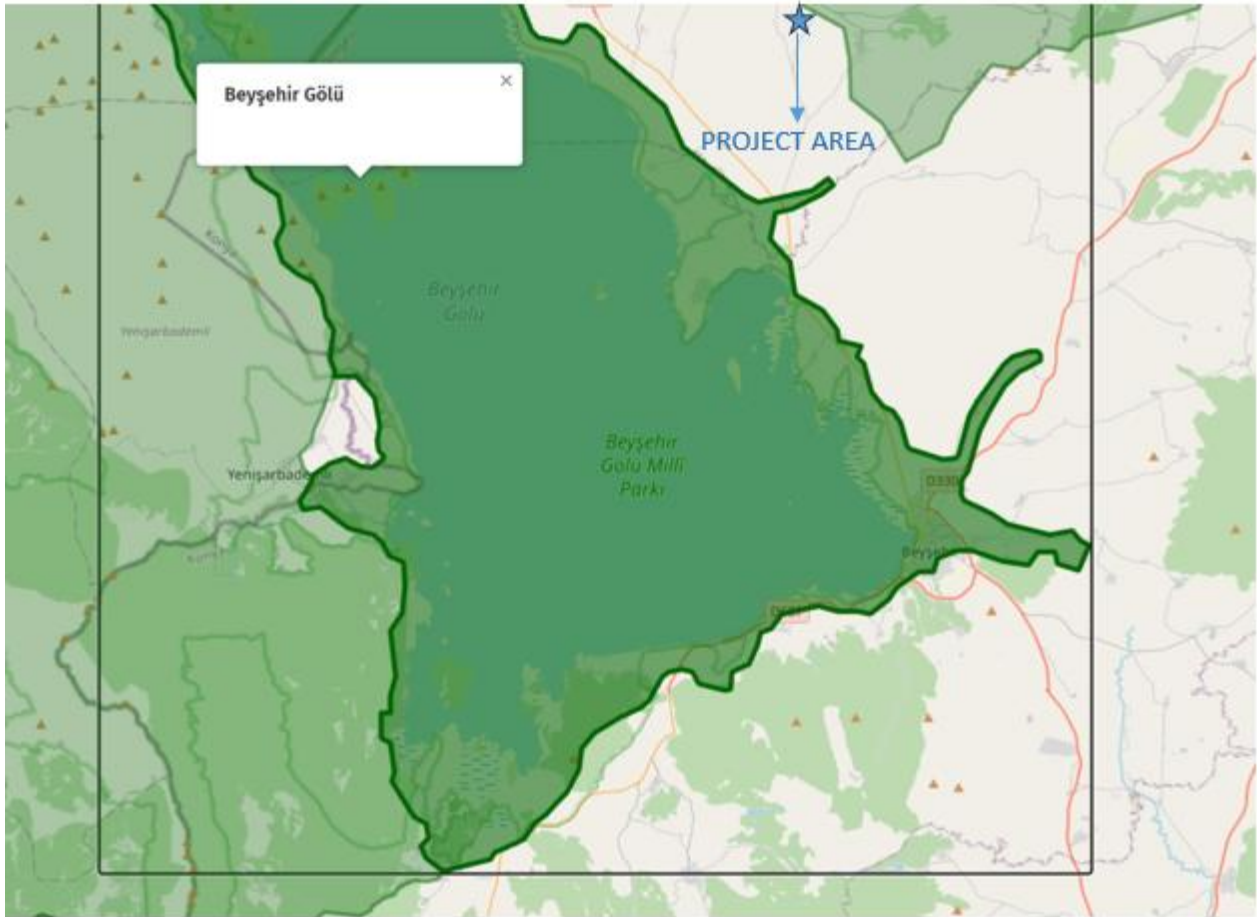


Figure 14 Image of the Nearest Internationally and Nationally Recognized Key Biodiversity Area to the Subproject Area

2.7.2.2. Habitats

Based on the field surveys conducted, current condition assessments, and the evaluation of supporting satellite imagery, it has been determined that the Area of Influence (AoI) of the Köşk Wastewater Treatment Plant Sub-Project predominantly consists of habitats that have been shaped by human activities, with significantly degraded ecological integrity and a landscape that has largely lost its natural character.

The subproject area and its immediate surroundings exhibit characteristics of a semi-arid steppe ecosystem and have been subject to long-term impacts from agricultural practices, infrastructure works, and existing structural elements. Overall vegetation cover within the area is low, locally degraded, and fragmented. Large portions of the soil surface are either bare or covered by sparse vegetation, and erosion-prone areas are widespread.

Field observations indicate that no ecological corridors, high structural diversity, or habitat heterogeneity capable of supporting natural habitat continuity are present within the Area of Influence. The habitats exhibit a mosaic structure shaped primarily by prolonged anthropogenic pressures rather than natural ecological processes.

The main habitat components observed within the Area of Influence are summarized below:

- Open areas degraded as a result of agricultural activities and infrastructure works,
- Degraded steppe patches locally covered by sparse and ruderal herbaceous vegetation with limited ecological functionality,
- Temporary microhabitats that may occasionally retain surface water but do not qualify as natural wetlands,
- Areas surrounding existing concrete structures and infrastructure elements that lack natural ecosystem functions.

Although a limited number of tree and shrub-form vegetation elements were observed within the Area of Influence, these individuals do not form a natural forest ecosystem or a continuous woody vegetation structure. The trees are generally present as isolated individuals or small clusters resulting from past land use practices and human activities, and they do not provide ecological integrity or habitat continuity. Accordingly, these vegetation elements do not qualify as natural habitats or critical habitats under ESS6.

Based on these characteristics, the habitats within the Area of Influence are classified as “Modified Habitats” in accordance with the World Bank Environmental and Social Standard 6 (ESS6). No areas meeting the criteria for natural habitats or critical habitats as defined under ESS6 are present within the AoI.

Field surveys and literature reviews indicate that the flora and fauna species within the Area of Influence are predominantly composed of widely distributed, generalist species that are tolerant of human disturbance and adapted to degraded habitat conditions. The existing habitat conditions are not suitable for the presence or establishment of endemic, rare, or threatened species or for the development of sustainable populations.

Furthermore, no highly threatened or unique ecosystems, migration corridors, breeding areas, or aggregation sites were identified within the Area of Influence. Due to the homogeneous, fragmented, and low ecological value characteristics of the habitat conditions, it is concluded that the area does not possess features requiring additional or special habitat conservation measures under ESS6.

In conclusion, the Area of Influence of the Köşk Wastewater Treatment Plant Sub-Project consists of ecologically degraded, low-quality, and modified habitats, and the subproject activities are not expected to impose any additional pressure on natural or critical habitats. This assessment is consistent with field investigations, expert evaluations, and secondary data sources.

2.7.2.3. Species

2.7.2.3.1. Flora

Based on the field observations conducted, current condition assessments, and the evaluation of supporting satellite imagery, it has been determined that the Sub-Project area has been under the influence of human activities for a long period and has therefore largely lost its natural floristic structure, exhibiting a degraded character. The vegetation observed across the area consists of species adapted to semi-arid climatic conditions, with sparse distribution, low vegetation cover, and predominantly characteristic of disturbed habitats.

The dominant floristic structure within the subproject area is composed of ruderal, widely distributed, and herbaceous species tolerant to human disturbance. These species are resilient to pressures such as soil degradation, surface erosion, past and existing infrastructure activities, and long-term land-use impacts, and they do not represent high ecological continuity or floristic diversity. The area does not exhibit ecologically sensitive characteristics in terms of floristic diversity, species richness, or the presence of rare or endemic species.

The main herbaceous and semi-herbaceous plant species identified during the field surveys are presented below:

- *Artemisia vulgaris*
- *Thymus spp.*
- *Bromus spp.*
- *Avena sterilis*
- *Hordeum murinum*
- *Capsella bursa-pastoris*
- *Chenopodium album*
- *Eryngium campestre*
- *Verbascum spp.*
- *Centaurea spp.*

These species are widely distributed across Türkiye, non-endemic, not listed as threatened under the IUCN Red List, and commonly observed in disturbed areas. No dense, multi-layered, or natural plant community structure is present within the subproject area.

Within the Sub-Project area, a limited number of tree- and shrub-form individuals were observed. These individuals do not form a natural forest ecosystem or a continuous woody vegetation structure and are evaluated as isolated, low-density secondary vegetation elements associated with past land use. During the field surveys, the observed tree individuals were mainly identified as *Salix* spp. (willow species). These taxa are widespread and ecologically tolerant species that typically develop in agricultural areas, drainage lines, and moist microhabitats under human influence.

The aforementioned tree individuals are located within an anthropogenically modified environmental context, having been disconnected from natural development processes due to the presence of an existing concrete structure within the subproject area and the surrounding long-term human intervention. The concrete structure and associated land modifications have significantly altered the natural habitat functions of the area, resulting in substantial degradation of ecological integrity, habitat continuity, and natural species composition. Therefore, the existing tree individuals do not possess the characteristics of natural habitats, sensitive ecosystems, or critical biological elements.

As a result of the field surveys, no areas representing a natural forest ecosystem, dense tree formation, or mature and continuous woody vegetation were identified within the Sub-Project area or the Area of Influence (AoI). The existing tree individuals, due to their limited number, isolated distribution, and low ecological functionality, do not meet the criteria for natural or critical habitats as defined under the World Bank Environmental and Social Standard 6 (ESS6).

Within this scope, the cutting of the identified *Salix* spp. individuals is required as part of the Sub-Project activities, and this action is not expected to result in natural habitat loss, degradation of ecological integrity, or adverse impacts on sensitive plant species. Tree cutting activities will be carried out in accordance with the relevant national legislation and good practice principles.

The existing floristic structure does not meet the criteria for natural habitat or critical habitat as defined under ESS6, and no evidence indicating the presence of endemic, rare, or threatened plant species has been identified. In addition, no sensitive plant communities or special floristic areas requiring conservation measures were observed during the field surveys.

In conclusion, the Sub-Project area exhibits a floristic structure characterized by low diversity, degradation, and herbaceous and secondary woody species adapted to human disturbance, and the subproject activities are not expected to result in significant or irreversible impacts on vegetation. Accordingly, no additional conservation measures, species relocation, or special mitigation requirements are necessary with respect to flora.

2.7.2.3.2. Fauna

The assessment of fauna presence within the Sub-Project area and the defined Area of Influence (AoI) was conducted based on field surveys carried out by biodiversity specialists, baseline condition analyses, and the review of supporting secondary data sources.

During the field surveys, not only direct observations of wildlife were recorded, but indirect indicators of presence such as hair, feathers, feces, footprints, nest remains, soil burrows, and similar signs were also systematically assessed. These indicators were used to interpret species presence or potential habitat use within the area in an ecological context.

As a result of the assessments, no direct or indirect evidence indicating a significant fauna presence or active nesting, breeding, or long-term sheltering activity was identified within the Sub-Project area and the AoI. The long-term exposure of the area to human activities, the fragmented structure of habitats, and the weak ecological continuity significantly limit faunal diversity.

There are no densely wooded areas, multi-layered vegetation structures, or vertical habitat complexity within the subproject area. This significantly reduces the suitability of the area, particularly for tree-dependent bird species, species requiring nesting habitats, and habitat-specialist fauna groups. The sparse and low-growing character of the existing vegetation further limits sheltering and concealment opportunities for fauna.

The soil surface burrows and cavities observed during the field surveys were evaluated as having potentially been used temporarily by small mammals (e.g., certain rodent species) or reptiles for shelter or movement purposes. However, no evidence was identified indicating that these structures function as active nests, breeding sites, or areas of continuous use. The distribution and density of these burrows do not indicate high population densities or biologically significant fauna use within the area.

The existing concrete structure located within the Sub-Project area and its immediate surroundings have been exposed to long-term human influence and are therefore evaluated as artificial environmental elements lacking natural habitat functions. This area does not constitute a critical fauna usage area or a sensitive habitat.

Although no natural wetland ecosystems are present within the Area of Influence, surface water accumulations and modified aquatic features may be used on a limited basis by some common and human-tolerant bird species for temporary feeding or resting purposes. However, such use is irregular and temporary, and no habitat structure providing permanent nesting, breeding, or colonization functions is present within the area.

As a result of field observations and literature review, no direct or indirect records were obtained indicating the presence of any protected, endemic, rare, or IUCN Red List-listed threatened fauna species within the Sub-Project area and the AoI. Observed or potentially occurring fauna species are limited to those that are widely distributed across Türkiye, tolerant of human disturbance, and capable of adapting to degraded habitat conditions.

Furthermore, no fauna use areas considered sensitive under ESS6 such as migration corridors, aggregation areas, breeding sites, or nursery areas were identified within the Area of Influence.

In conclusion, the Sub-Project area is characterized by limited species diversity, temporary and low-intensity fauna use, and degraded habitat conditions, and it is not expected that the subproject activities will result in significant or irreversible impacts on fauna. Therefore, no additional fauna-related conservation measures, species-specific monitoring programs, or special interventions are required.

2.7.2.4. Invasive Alien Species

The assessment of invasive alien species (IAS) within the Sub-Project area and the defined Area of Influence (AoI) was carried out based on site-specific field surveys conducted by biodiversity specialists, a review of national biodiversity databases, available scientific literature, and supporting desktop analyses. In this context, literature screening and spatial data review were performed using the Türkiye Invasive Alien Species Information System (TURİST) operated by the Ministry of Agriculture and Forestry (<https://turist.tarimorman.gov.tr/Map>).

The field surveys included the evaluation of both direct observations and indirect indicators of invasive species presence such as tracks, nests, remains, and other signs. As a result of these assessments, no direct or indirect evidence indicating the presence of any flora or fauna species classified as Invasive Alien Species (IAS) was identified within the Sub-Project area or the AoI.

Although national databases indicate that certain invasive alien species—particularly aquatic species such as non-native fish—may occur at regional scale, there is no hydrological connectivity, habitat continuity, or ecological corridor linking such species to the Sub-Project area. The Sub-Project site does not contain natural, permanent aquatic ecosystems, and the existing surface water accumulations are limited, modified, and temporary in nature. These conditions do not provide suitable habitat for the establishment, survival, or spread of invasive aquatic species.

Considering the highly modified land use, degraded habitat characteristics, and lack of ecological pathways, no direct or indirect interaction, spread risk, or adverse impact mechanism between the Sub-Project activities and invasive alien species is anticipated. Therefore, under the current conditions, no additional monitoring, control, or management measures related to invasive alien species are required for the Sub-Project.

2.7.2.5. Ecosystem Services

World Bank Environmental and Social Standard 1 (ESS1) emphasizes the importance of identifying and evaluating biodiversity and ecosystem services within the scope of environmental and social risk and impact assessments. Accordingly, ecosystem services potentially present within the Sub-Project area and the defined Area of Influence (AoI) were assessed as part of the biodiversity evaluation carried out for the Köşk Wastewater Treatment Plant Project.

The assessment of ecosystem services was conducted in accordance with the classification outlined under World Bank Environmental and Social Standard 6 (ESS6), which includes provisioning, regulating, cultural, and supporting ecosystem services. The evaluation was based on site-specific field observations, analysis of satellite imagery, review of national biodiversity data sources, and relevant literature.

Provisioning Ecosystem Services

No provisioning ecosystem services related to natural resources directly used by local communities—such as fuelwood, drinking or domestic water abstraction, fisheries, grazing, or collection of medicinal and aromatic plants—were identified within the AoI. The existing land use pattern, presence of artificial structures, degraded habitat conditions, and limited biological productivity of the area do not support the provision of such services.

Regulating Ecosystem Services

No natural systems capable of providing regulating ecosystem services such as flood control, natural water filtration, carbon sequestration, microclimate regulation, or air quality improvement were identified within the AoI. The existing surface water accumulations and modified aquatic features do not function as natural wetlands and therefore lack regulating capacity. The topographic, hydrological, and land use characteristics of the area further limit the potential for regulating ecosystem services.

Cultural Ecosystem Services

No evidence was identified indicating that the Sub-Project area or the AoI is used for recreational, tourism, aesthetic, spiritual, or cultural purposes at local or regional scale. The presence of existing infrastructure, artificial elements, and limited landscape value indicates that the area does not provide cultural ecosystem services.

Supporting Ecosystem Services

Due to the degraded, fragmented, and highly modified habitat structure, low floristic and faunal diversity, and absence of continuous ecological processes, no functional supporting ecosystem services—such as pollination, natural breeding or nesting habitats, nutrient cycling, or biological productivity—were identified. Field observations confirm that the AoI does not possess the ecological capacity required to sustain such services.

In conclusion, no ecosystem services as defined under ESS6 that could be directly or indirectly affected by the Sub-Project activities were identified within the Area of Influence. Therefore, the Köşk Wastewater Treatment Plant Project is not expected to result in significant impacts on ecosystem services, and no additional ecosystem service-specific mitigation or management measures are required.

2.7.3. Socio-Economic Environment

This section presents an overview of the socio-economic conditions within the Area of Influence of the Subproject, based on desk-based reviews, site visits, and stakeholder consultations conducted during the preparation of the ESMP. The assessment covers demographic characteristics, land ownership and land use patterns, livelihoods and employment, access to education, health and infrastructure services, transportation, cultural heritage, and the presence of disadvantaged or vulnerable groups. The information provided in this section establishes the baseline socio-economic context against which potential construction and operation phase impacts of the Subproject have been identified and assessed in subsequent sections.

2.7.3.1. Demography and Population

Hüyük District

Hüyük is a district and municipality of Konya Province, located in the southwestern part of the province within the Lakes Region of Türkiye. As of 2024, the district has an estimated population of approximately 15,000 people, with a relatively balanced gender distribution.

The district is characterized by a predominantly rural settlement pattern, consisting of dispersed neighbourhoods and extensive agricultural lands. Agriculture, animal husbandry, and small-scale local trade constitute the main economic activities and sources of livelihood for the local population. Industrial activities are limited, and the local economy largely depends on land-based production.

The demographic structure of Hüyük reflects common rural trends observed across the region, including gradual population decline and an aging population profile. Younger residents tend to migrate to larger urban centres for education and employment opportunities, while older age groups and households dependent on agriculture remain dominant within the district. Seasonal agricultural activities also influence population dynamics throughout the year.

Overall, Hüyük District exhibits a rural socio-economic profile shaped by agriculture-based livelihoods, limited employment diversification, and demographic trends consistent with other rural districts of Konya Province.

Table 12 2024 Populations of the Neighborhoods

Location	Female	Male	Total
Köşk Neighborhood*	297	279	576
İmrenler Neighborhood	583	535	1118
Selki Neighborhood	648	705	1353
Hüyük District	7682	7351	15033
Konya Province	1172944	1157080	2330024

According to the latest data from the Turkish Statistical Institute (TurkStat, 2024), Köşk Neighborhood has a total population of 576 residents. Population data indicate a gradual declining trend over recent years, reflecting rural-to-urban migration patterns and limited local employment opportunities. However, stakeholder consultations revealed that the population significantly increases during the summer months, as seasonal residents, children, and extended family members return to the neighborhood.

In addition to Köşk, the Subproject will serve the wastewater generated from İmrenler and Selki neighborhoods. Although these settlements are located outside the defined primary AoI, they are considered secondary areas of influence due to their direct functional connection to the WWTP service area. The combined population of these beneficiary neighborhoods approximately 3,000 residents, with livelihoods largely dependent on agriculture and animal husbandry.

Stakeholder consultations confirmed that demographic structures in all beneficiary neighborhoods are characterized by an aging population, a notable number of female-headed households, and limited youth retention due to out-migration for education and employment. These demographic characteristics were taken into consideration in assessing potential social impacts and in designing stakeholder engagement activities.

2.7.3.2. Land Ownership Status and Land Use by Affected People

The land allocated for the construction of the Köşk Wastewater Treatment Plant is owned by the Konya Water and Sewerage Administration (KOSKİ). The Project site is located on Parcel No. 2308, Block No. 0. Although the parcel was previously classified as agricultural land, a land-use classification change has been completed in the title deed records, and the parcel has been registered as a “Wastewater Treatment Plant Area”. Therefore, there is no need to obtain an additional Marginal Agricultural Land Certificate for the Köşk WWTP. Nevertheless, a Marginal Agricultural Land Certificate had already been obtained for the parcel previously. (See Annex D for more details). The updated title deed document has been included in (See Annex C for title deeds). The land is publicly owned and does not require land acquisition, expropriation, or physical displacement of private landowners. The land-use classification change procedures are also ongoing for parcels numbered 6569 and 6564.

The collector and discharge lines associated with the Subproject are routed along existing road corridors and public lands. Neither the WWTP site nor the associated infrastructure passes through privately owned parcels, and no loss of private land, structures, crops, or economic assets is anticipated.

Land use in the surrounding areas is predominantly agricultural, with crop production and small-scale livestock activities forming the primary means of land-based livelihoods. Stakeholder consultations, particularly with farming households in İmrenler neighborhoods, confirmed that no permanent restriction on access to agricultural land is expected. Temporary and localized disturbances during construction, such as dust or traffic disruptions along access roads, were identified as the main concerns rather than land ownership or land take.

Based on these findings, the Subproject does not result in involuntary land acquisition, physical displacement, or economic displacement, and therefore does not trigger resettlement-related impacts under ESS5.

Electricity supply for the Köşk WWTP will be provided through connection to the existing 31.5 kV medium-voltage distribution network. The power supply will be sourced from the Beyşehir Transformer Center via the Hüyük feeder, using the existing distribution infrastructure. The works required for the electricity connection will be limited to a capacity upgrade at the existing connection point and replacement of the existing transformer with a 160 kVA transformer. No new dedicated energy transmission line, distribution line or off-site electrical infrastructure requiring additional land is planned within the scope of the Subproject. Therefore, no land acquisition, expropriation, easement right, physical displacement, economic displacement or livelihood impact is anticipated for the electricity connection under ESS5. If any change to the electricity connection design or route occurs during implementation, the land acquisition assessment will be updated in accordance with ESS5 and applicable national legislation.

During field work, it was observed that agricultural activities on parcels adjacent to the Project area had encroached onto the Project site. Following this observation, KOSKİ personnel contacted the relevant landowners and reached an agreement to ensure the withdrawal of agricultural activities from the Project area without causing any damage to existing crops. Documentation related to this agreement is provided in Annex M.

2.7.3.3. Employment and Means of Livelihood

The primary sources of livelihood in Köşk, İmrenler and Selki neighborhoods are agriculture, animal husbandry, and pension-based income. Crop cultivation and livestock breeding constitute the main economic activities, particularly in İmrenler, Selki where agricultural productivity remains a key determinant of household income.

Stakeholder consultations indicated that average income levels vary across neighborhoods, with Köşk generally reporting income levels slightly above the minimum wage, while incomes in other beneficiary settlements are closer to or below the minimum wage threshold. Seasonal employment and informal labor are common, particularly during agricultural peak periods.

The construction phase of the Subproject is expected to generate limited short-term employment opportunities, particularly for unskilled and semi-skilled labor. Local stakeholders expressed interest in benefiting from employment opportunities during construction, especially for manual labor and support services. During the operation phase, employment opportunities will be limited and largely restricted to skilled technical personnel employed by KOSKİ.

Stakeholders emphasized that the most significant long-term livelihood benefit is expected to arise indirectly through improved environmental conditions, reduced pollution of surface waters, and potential reuse of treated wastewater for agricultural irrigation, which could enhance agricultural productivity and reduce environmental health risks.

2.7.3.4. Education and Health Services

Access to education and health services for communities within the Subproject service area is provided through existing facilities located within Hüyük District and its neighbourhoods. Based on desk-based reviews, site observations, and consultations conducted during the subproject preparation process, no education or health facilities are located within the immediate vicinity of the subproject site or along the planned collector line routes.

As illustrated in Figure 15, the green alignment represents the existing infrastructure, while the red alignment indicates the collector line to be constructed under the Subproject. According to site-specific measurements, the nearest mosque to the Project area is located approximately 1,534 meters away. The closest school is situated at a distance of approximately 1,713 meters, and the nearest Family Health Center is located approximately 1,700 meters from the Project site. In addition, the nearest residential unit to the planned collector line alignment is approximately 330 meters away.

These distances demonstrate that education and health facilities, as well as residential areas, are spatially separated from construction activities associated with the wastewater treatment plant and the collector system. Therefore, no direct physical impacts on schools, health centers, or other social service facilities are anticipated during either the construction or operation phases of the Subproject.

During the construction phase, temporary and indirect effects such as increased noise, dust generation, or traffic movements may occur along existing roads used for access to the Project site. However, given the separation distances and the routing of the collector line within existing road corridors, such effects are expected to be limited in magnitude, localized, and temporary. No disruption to access to education or health services is anticipated.

During the operation phase, the Subproject is not expected to result in any adverse impacts on education or health services. On the contrary, improved wastewater management and the prevention of untreated wastewater discharge are expected to contribute positively to environmental conditions and public health at the district level.

Accordingly, the Subproject is assessed as having no significant adverse impacts on access to education and health services during either the construction or operation phases.



Figure 15 Areas of Influence and Identified Receptors

2.7.3.5. Infrastructure Services

The existing infrastructure of other institutions that overlaps with the Subproject corridor is in the process of being identified through official correspondence initiated by Konya Metropolitan Municipality on January 15, 2026 (see Annex D). Official letters were sent to 15 relevant institutions (including MEDAS, TEIAS, BOTAS, and DSI) to request institutional opinions and layout plans regarding the planned Kireli, Köşk, and Karaali Wastewater Treatment Plants. As a result of preliminary examinations, it is foreseen that there is no overlapping infrastructure within the subproject area. However, confirmation of this status is awaited via official responses from the relevant institutions.

The beneficiary neighborhoods are currently served by basic infrastructure services, including water supply, sewerage systems, electricity distribution, and solid waste management. Water supply and sewerage services are provided by KOSKİ, while electricity distribution services are delivered by the regional electricity distribution company. Solid waste collection is carried out by the relevant municipalities.

Although sewerage infrastructure exists, wastewater treatment capacity has been insufficient, resulting in the discharge of untreated wastewater into receiving water bodies. Stakeholders repeatedly highlighted this issue during consultations, particularly emphasizing pollution risks to Beyşehir Lake and local streams.

The Subproject is designed to address these infrastructure gaps by providing adequate wastewater treatment capacity, thereby improving the overall efficiency and environmental performance of existing infrastructure systems. No additional off-site infrastructure development, such as new access roads or energy transmission lines, is required for the operation of the WWTP.

This situation will not require any construction work. This will be achieved through the treatment and controlled discharge of sewage water.

2.7.3.6. Transportation and Traffic

The subproject area is accessible through existing local roads, and no new road construction is required for the implementation of the Subproject. During the construction phase, temporary increases in traffic are expected due to the movement of construction vehicles, delivery of materials, and workforce transportation.

Stakeholder consultations indicated concerns related to temporary traffic congestion, dust generation, and road safety, particularly along routes passing through residential areas and agricultural lands. These concerns were more pronounced for periods of peak agricultural activity and for roads shared by pedestrians, livestock, and farm vehicles.

Traffic-related impacts are expected to be temporary and localized. Traffic management measures, including scheduling of vehicle movements, installation of warning signage, coordination with local authorities, and communication with mukhtars and residents, will be implemented to minimize disruptions and ensure community safety.

With regard to electricity supply, the Köşk WWTP will be connected to the existing 31.5 kV medium-voltage distribution network through the Beyşehir Transformer Center and Hüyük feeder. No new dedicated energy transmission line requiring a separate access route or major linear construction corridor is planned. Therefore, traffic impacts related to the electricity connection are expected to be limited to short-term and low-intensity vehicle movements associated with the transport of electrical equipment, transformer replacement/capacity upgrade works, and installation activities at the existing connection point.

These activities are expected to use the existing local road network and are not anticipated to generate significant additional traffic, road closures, or long-term restrictions on local access. Any temporary vehicle movements related to electrical connection works will be coordinated with the main construction traffic of the WWTP and collector line works.

2.7.3.7. Cultural Heritage (Tangible³ and Intangible⁴)

No registered tangible cultural heritage sites are located within the subproject site or along the routes of the collector and discharge lines. According to available records and field observations, the Subproject area does not overlap with known archaeological, historical, or cultural assets.

Intangible cultural heritage in the beneficiary neighborhoods is closely linked to rural lifestyles, agricultural practices, traditional social relations, and community-based activities. Stakeholder consultations did not identify any potential adverse impacts of the Subproject on local traditions, social cohesion, or cultural practices.

Nevertheless, a chance finds procedure will be applied during construction in accordance with national legislation and ESMP requirements. In the event of unexpected discoveries, works will be suspended and relevant authorities will be notified immediately.

Intangible Cultural Heritage

Türkiye is a Party to UNESCO's Convention for the Safeguarding of the Intangible Cultural Heritage, and therefore hosts various elements inscribed on the international lists established under this framework. Konya Province is particularly notable for internationally recognized intangible cultural heritage practices, such as the Mevlevi Sema Ceremonies.

Based on field observations and consultations conducted with local mukhtars during the ESMP preparation process, it was determined that the subproject area of influence does not have a spatial or functional association with locations where intangible cultural heritage elements are practiced, including ritual areas, event spaces, or culturally significant focal points. Due to its nature as a rural infrastructure investment, the subproject site and associated pipeline routes are not used as venues for the regular conduct of cultural events or practices.

2.7.3.8. Disadvantaged or Vulnerable Individuals or Groups

In accordance with the World Bank Environmental and Social Standards ESS1 and ESS10, disadvantaged or vulnerable individuals and groups are defined as those who, due to their socioeconomic conditions, gender, age, health status, disability, household structure, or similar contextual characteristics, may face greater difficulties than the general population in accessing information, participating in stakeholder engagement processes, or benefiting from subproject-related activities.

³ According to WBG ESF (2018), tangible cultural heritage includes movable or immovable objects, sites, structures, groups of structures, and natural features and landscapes that have archaeological, paleontological, historical, architectural, religious, aesthetic, or other cultural significance. Tangible cultural heritage may be located in urban or rural settings, and may be above or below land or under the water.

⁴ According to WBG ESF (2018), intangible cultural heritage includes practices, representations, expressions, knowledge, skills—as well as the instruments, objects, artifacts and cultural spaces associated therewith—that communities and groups recognize as part of their cultural heritage, as transmitted from generation to generation and constantly recreated by them in response to their environment, their interaction with nature and their history.

Based on desk-based reviews, stakeholder consultations, and site-specific assessments carried out within the scope of the Subproject, disadvantaged or vulnerable individuals and groups have been identified within the beneficiary neighbourhoods of the Köşk Wastewater Treatment Plant Subproject, namely Köşk, İmrenler and Selki. Among these settlements, Köşk Neighbourhood constitutes the primary Area of Influence (AoI) due to its proximity to the subproject site, while the other neighbourhoods are considered secondary areas of influence as they directly benefit from the wastewater treatment services provided by the Subproject.

The available data indicate that different forms of vulnerability are present across all beneficiary neighbourhoods. Identified groups include low-income households dependent on state or external support mechanisms, female-headed households, elderly individuals aged 65 and above, persons with disabilities, and unemployed individuals. These groups may experience increased sensitivity to temporary construction-related impacts, such as noise, dust, and traffic disturbances, and may face barriers in accessing subproject-related information and consultation processes if specific measures are not implemented.

Stakeholder consultations further indicated that all beneficiary neighbourhoods experience seasonal population fluctuations, particularly during the summer months, due to the return of children, young people, and extended family members. This seasonal dynamic has been taken into consideration in the planning of stakeholder engagement and outreach activities, especially those targeting disadvantaged or vulnerable individuals and groups.

In this context, the following vulnerable groups have been identified in AoI Neighborhoods:

- Low-income households dependent on state or external support mechanisms (55 households);
- Female-headed households (90 households);
- Elderly individuals aged 65 and above (120 individuals);
- Persons with Disabilities (31 individuals).

The information presented in this section reflects the existing social conditions within the Subproject service area and provides a baseline overview of disadvantaged or vulnerable individuals and groups, based on the quantitative and qualitative data summarized in Table 13.

Table 13 Disadvantaged or Vulnerable Individuals or Groups

Neighborhood	Poor Households	Female-Headed Households	Elderly Population (65+)	Persons with Disabilities
Köşk	30	50	50	10
İmrenler	10	20	30	6
Selki	15	40	40	15

3. SUBPROJECT ACTIVITIES

3.1. Construction Phase

3.1.1. Construction Activities

Construction activities will be completed in 12 months. Detailed implementation schedule envisaged for the construction phase activities (including provisional acceptance) is presented in Chapter 6.

Construction phase activities are briefly described below:

- Pre-construction activities:

Mobilization works will include establishment of temporary site arrangements, site access organization, setting out/survey works, and preparation of working areas. Site preparation activities will include topsoil stripping, land leveling, excavation and fill works, and compaction activities required for construction of the WWTP units, internal roads and general site arrangement.

Within the scope of the construction works, approximately 2,500 m³ of excavation will be carried out. The amount of topsoil to be stripped is approximately 1,250 m³. Topsoil will be stripped to a sufficient depth (minimum 30 cm) prior to commencement of works and stockpiled appropriately to prevent soil compaction and erosion, and will be reused for landscaping and reinstatement purposes where feasible.

Dust emissions may occur during site preparation, excavation, filling and compaction works; therefore, regular irrigation by water tankers will be applied to control dust.

An existing reinforced concrete structure currently covering an area of approximately 300 m² is located within the Project site. This structure will be demolished prior to construction activities. Demolition waste will be transported to the Hüyük or Beyşehir Municipal Solid Waste Disposal Site in accordance with the relevant national legislation.

Asbestos-containing materials (ACM) are not expected to be encountered as the Subproject is planned as a new construction on a designated area; however, if any suspect material is identified during site preparation, works will be stopped in the relevant area and appropriate assessment and handling procedures will be followed in accordance with national legislation and GIIP.

- Construction activities:

Construction activities will consist of civil works for the main treatment units, including inlet structure, grit chamber, biological treatment units (e.g., Bio-P and aeration tanks), secondary settling tank, disinfection (chlorine contact tank), sludge dewatering building, and auxiliary structures such as operation building, internal roads and general site arrangement. Mechanical, electrical and instrumentation works (including SCADA automation, cabling, grounding and lightning protection, fire/gas detection and alarm system, and camera system) will be installed as part of the Subproject.

Construction-related impacts are expected to be short-term and localized, mainly associated with traffic, noise, vibration, air quality, soil disturbance and contamination, and waste generation.

- Construction machinery and equipment:

The construction machinery and equipment to be used will typically include excavators, loaders, dump trucks, graders, compactors/rollers, concrete mixers/pumps, cranes, welding and cutting equipment, generators, and water tankers for dust suppression. Machinery and equipment will be regularly maintained, and leakages of oil/fuel will be prevented through routine checks. Construction machinery and equipment to be used during the construction phase are presented in Table 14 below

Table 14 Construction Machinery and Equipment

Equipment Type	Quantity	Remarks
Excavator	1	To be used for excavation and trenching works
Compactor / Roller	1	To be used for soil compaction and backfilling works
JCB (Backhoe Loader)	1	To be used for light excavation and material handling

- Water use and wastewater management:

Water will be used during construction mainly for dust suppression (irrigation of the site) and general site needs. Dust control will be ensured through regular irrigation by water tankers, especially during excavation, filling and compaction activities.

Portable toilets will be provided at construction sites. Wastewater generated at construction sites will be collected in impermeable septic tanks where connection is not possible, and will be transported to the Konya WWTP by vacuum trucks.

- Waste and hazardous materials management:

A Temporary Waste Storage Area will be established on site, and wastes will be segregated and stored according to their types. Domestic wastes will be delivered to the Municipality, and packaging wastes and hazardous wastes will be delivered to licensed companies. Hazardous wastes will be stored in designated leak-proof areas. Waste containers will be labeled indicating waste type, waste code, amount, and storage date, and measures will be taken to prevent incompatible wastes from reacting with each other.

During construction, the Regulation on the Control of Excavation Materials, Construction and Demolition Waste will be complied with. Demolition waste from the existing reinforced concrete structure and excess excavation materials will be reused where feasible or disposed of at licensed facilities.

Fuel and oils will be used for construction machinery; leakages and spills will be prevented through regular maintenance and inspections. There will be no planned fuel storage on site.

- Supply and use of other resources and materials:

Construction materials will mainly include concrete, steel, piping and mechanical/electrical components. Excavation and fill works will be carried out for unit foundations, internal roads, and site arrangement. Topsoil will be stripped and stored for later reuse, and excess excavated material will be reused if possible or disposed of at licensed sites.

- Supply of materials and equipment:

Construction materials and equipment will be supplied through licensed and authorized suppliers in compliance with applicable procurement procedures. Priority will be given to durable and locally sourced materials where feasible to reduce resource use and waste generation.

- Decommissioning of temporary construction facilities:

Upon completion of construction, temporary facilities and work areas (e.g., temporary storage areas, temporary sanitary units, and other auxiliary arrangements) will be dismantled and removed. The site will be reinstated to ensure no residual waste remains, and all wastes generated during dismantling will be managed and disposed of through licensed waste management companies.

3.1.2. Construction Facilities

Construction facilities to be used during construction activities are listed in Table 15. Information on AFs is separately provided in Section 2.4.

Table 15 Construction Facilities

Type	On-site or Off-site	Temporary or Permanent	List of Facilities
Administrative Building	On-site	Permanent	• A permanent administrative building will be constructed within the WWTP site for use during the operation phase. This facility will remain after completion of construction works and will serve operational and management purposes.
Temporary Site Facility	On-site	Temporary	• A 21 m² container will be installed within the WWTP construction site to be used as a temporary site facility during the construction phase. The container will serve purposes such as site management, coordination, and basic welfare needs, and will be removed upon completion of construction works.

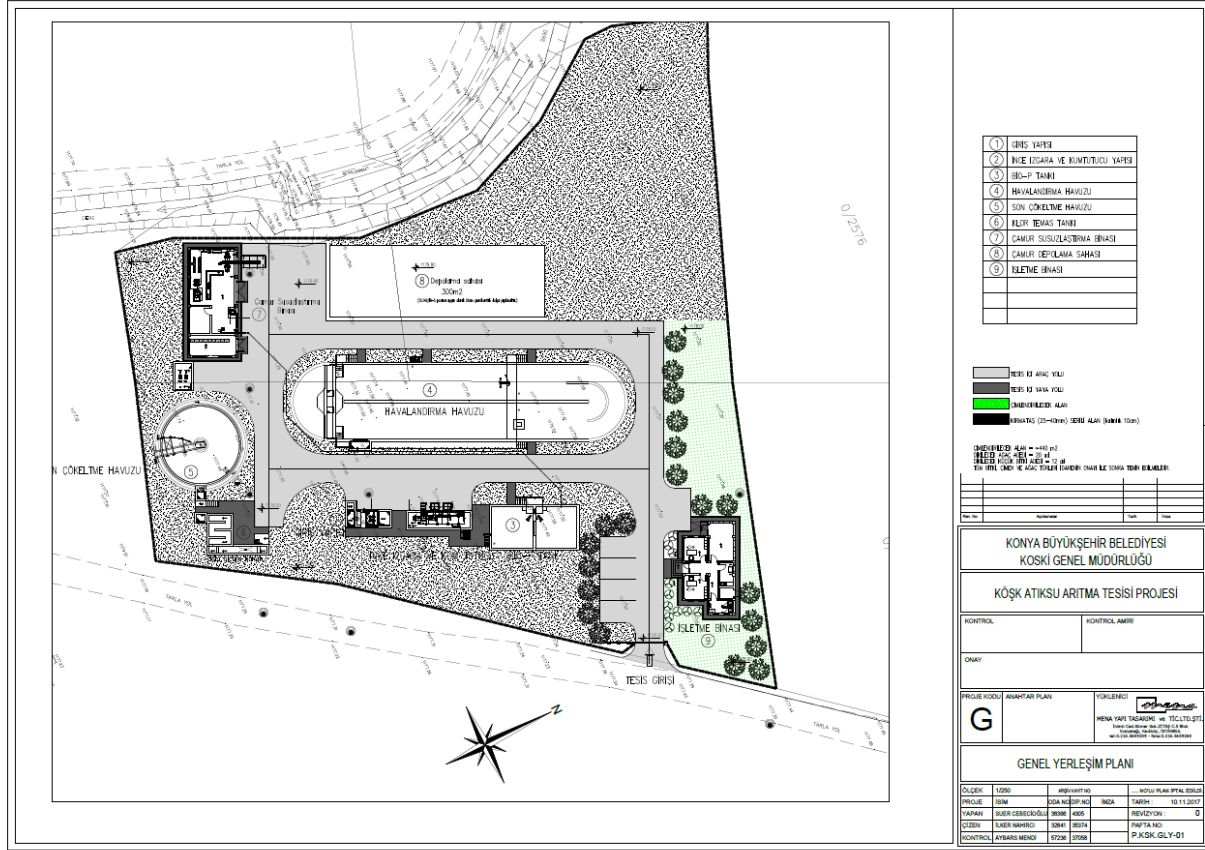


Figure 16 Construction Camp Site Layout

3.2. Operation Phase

3.2.1. Operation Activities

During the operation phase, the Kışık Wastewater Treatment Plant (WWTP) will treat domestic wastewater generated within the Project service area in compliance with applicable national discharge standards and with the aim of protecting receiving water bodies. Operational activities will include continuous wastewater treatment processes, sludge management, routine maintenance, monitoring, and control activities.

The overall treatment process consists of preliminary treatment, biological treatment, secondary clarification, disinfection, and sludge handling units. Wastewater entering the facility is first directed to preliminary treatment units such as screening and grit removal, where coarse materials and inorganic solids are removed in order to protect downstream equipment and enhance treatment efficiency. Following preliminary treatment, wastewater is conveyed to the biological treatment units, where organic matter and nutrients are removed through biological processes.

After biological treatment, wastewater is transferred to secondary settling tanks, where treated effluent is separated from biological sludge. The clarified effluent is then conveyed to the disinfection unit (chlorine contact tank) prior to discharge. The quality of the treated effluent is designed to comply with the relevant discharge criteria set out under Turkish legislation.

Approximately 17.8 tons/day raw sludge generated during the biological treatment and settling processes will be transferred to the sludge handling line. Sludge management activities will include thickening and dewatering operations, which will be carried out within the sludge dewatering building. Dewatered sludge, namely sludge cake with 22 % dry solid content, will be temporarily stored on site and subsequently transported to the Konya Wastewater Treatment Plant for sludge storage and further management in accordance with applicable regulations.

Operational activities also include regular inspection, cleaning, calibration, and maintenance of mechanical, electrical, and instrumentation systems, including pumps, blowers, valves, electrical panels, the SCADA automation system, fire and gas detection systems, and auxiliary units. Preventive maintenance activities will be implemented to ensure uninterrupted operation and sustained system efficiency.

Influent wastewater characteristics are typical of domestic wastewater generated within the service area, while effluent characteristics are controlled through the treatment processes to ensure compliance with regulatory discharge limits. Sludge characteristics depend on influent loading and treatment efficiency and are managed through dewatering in order to minimize volume prior to off-site disposal.

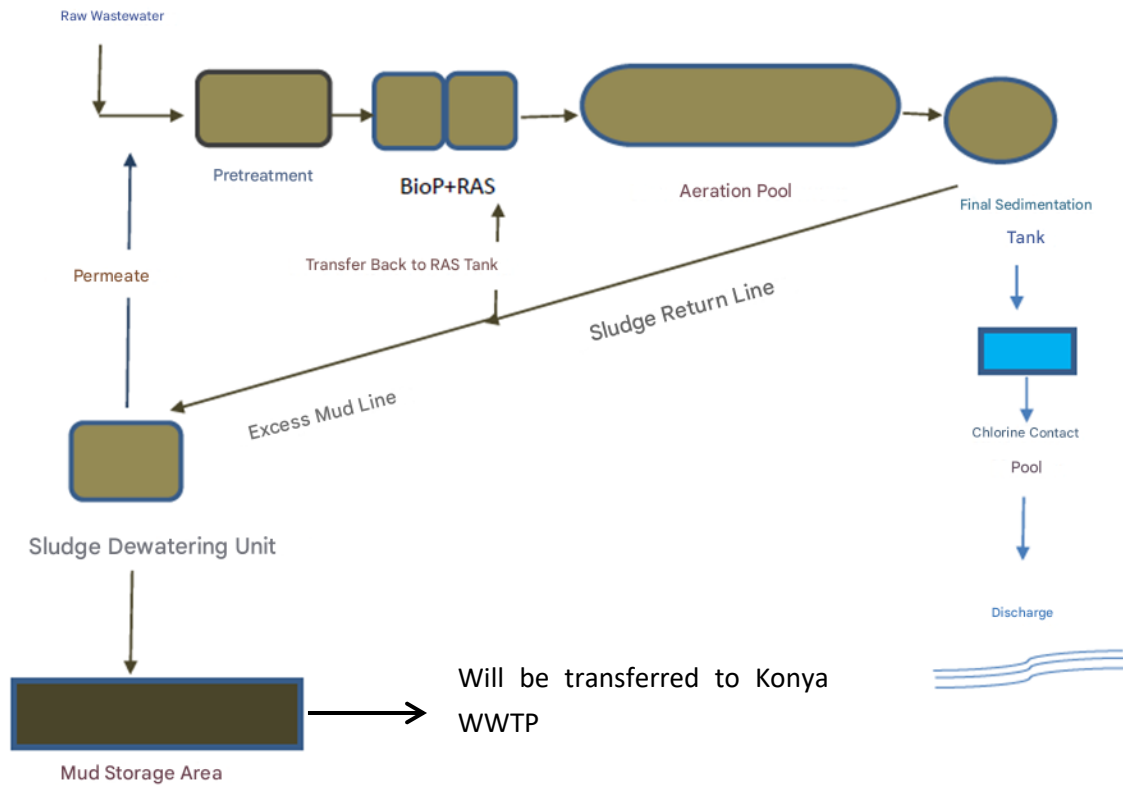


Figure 17 Flow chart of the operation phase activities

3.2.2. Operation Facilities

The operational facilities and components of the Subproject are described below. The principal operational components of the Köşk WWTP are listed as follows.

The main units to be included in the Köşk WWTP are summarized below:

- o Inlet structure and inlet pumping station,
- o Coarse screen (basket screen),
- o Packaged grit removal and fine screen unit,
- o Biological phosphorus removal (Bio-P) tanks and RAS-denitrification (RAS-DN) tank,
- o Aeration tanks,
- o Final sedimentation tank (secondary clarifier),
- o Disinfection unit (chlorine contact tank),
- o Effluent flow measurement structure,
- o Sludge dewatering unit (centrifuge-decanter with polyelectrolyte preparation/dosing),
- o Operation/control building and auxiliary facilities.
- Electrical, mechanical, and automation systems (including SCADA automation system, grounding and lightning protection system, fire and gas detection and alarm system, and camera system)

Information on associated facilities (AFs) is separately provided in Section 2.4.

In the context of selecting the design pollution values, the concentrations were evaluated taking into account regional characteristics, water consumption profile, wastewater generation tendencies, and the analyses conducted.

Based on literature reviews, wastewater analysis results, and subproject meetings, the concentrations to be used as the basis for the design of the Köşk Wastewater Treatment Plant are presented in the table below;

Table 16 Design Pollution Values of Köşk Wastewater Treatment Plant

Parameters (mg/L)	Suspended Solid	COD	BOD	Total Nitrogen	Total Phosphorus
Values	400	600	350	70	15

Table 17 Accepted Influent and Effluent Water Quality Criteria and Expected Removal Rates for the Project

Parameter	Inlet (mg/L)	Outlet (mg/L)	Treatment Efficiency (%)
BOD5	350	25	93%
COD	600	125	79%
Suspended Solids	400	35	91%
Total Nitrogen (TN)	70	15	79%
Total Phosphorus (TP)	15	2	87%

Table 18 Köşk WWTP Pollution Load Calculation Table

Parameter	Unit Pollution Load (g/person·day)	Domestic Pollution Load (kg/day)	Total Influent Pollution Load (kg/day)	Concentration (mg/L)	Total Influent Load (ton/year)	Removed Pollution Load (ton/year)	Effluent Pollution Load (ton/year)
BOD₅	46	167.8	225.5	301	82.29	76.53	5.76
COD	80	287.3	373.8	498	136.43	107.78	28.65
TSS	53	191.5	249.2	332	90.95	82.76	8.19
TN	9	33.9	44.1	59	16.09	12.71	3.38
TP	2	6.8	9.3	12	3.40	2.96	0.44

Screening Unit

One coarse screen will be provided for the facility. One basket screen with a 25 mm screen gap will be provided as coarse screening equipment, and the swing crane to be provided for the pumping station will enable the basket screen to be removed and emptied. Grating waste will be transferred to containers placed near the gratings. The grating and pump station can be isolated with a cover located on the upstream side.

Entry Pump Station

After the coarse screen, the wastewater reaches the inlet pump station. The inlet pumps transfer the wastewater to the packaged sand trap unit.

Package Sand Trap and Fine Screen Unit

Preventing material buildup in pipes and channels and protecting mechanical equipment from wear by removing sand and oil/grease. Simultaneously separating unwanted materials such as paper and plastic passing through the coarse screen before biological treatment.

Biological Treatment

The biological treatment design complies with the ATV-A131 standard and the Technical Procedures for Wastewater Treatment Plants Regulation. In addition to the simultaneous nitrification-denitrification system defined in ATV-131, the Johannesburg process has been used. The biological treatment units defined below have been designed for carbon and nutrient removal in this subproject. In the sizing, return loads from sludge filtrate waters (5%) have also been taken into account.

Biological Phosphorus Removal Tanks

Bio-P Tank

The flow from the Sand and Oil Traps reaches the Bio-P Anaerobic Tanks. Biological Phosphorus Removal Tanks are anaerobic ponds that provide an environment suitable for the growth of phosphorus-removing bacteria (asimotobacteria) in an oxygen-free environment. Anaerobic bacteria consume volatile organic acids (VFA) in wastewater and release polyphosphate in their bodies as orthophosphate into the wastewater. Immediately after the anaerobic tank, in the Aeration Ponds, where an aerobic/anoxic environment is provided, orthophosphates in the water phase are reabsorbed into the bacteria as polyphosphate. In the Aeration Basins, which follow immediately after the anaerobic tank and provide an aerobic/anoxic environment, the orthophosphates in the water phase are converted back into polyphosphate within the bacteria and are removed along with the excess sludge discharged from the plant. Thus, biological phosphorus removal consists of two stages: phosphorus release in an electron acceptor-free (anaerobic) environment and the storage of excess phosphorus released in the presence of an electron acceptor (anoxic and oxic tanks). For phosphorus release to occur, the easily degradable dissolved organic carbon in the influent water must be stored within the cell; when an electron acceptor is present, the stored carbon will be used for continued microorganism activity, and excess phosphorus storage will occur for ATP production. An ORP meter will be placed inside the Bio-P tank to monitor the formation of the anaerobic zone.

RAS-DN Tank (Can be used when the Johannesburg Process is desired)

The Johannesburg process was used to increase biological phosphorus removal and reduce chemical consumption. For this purpose, a RAS-Denitrification tank was used, where the return sludge is held and the oxygen and nitrate remaining in the activated sludge are reduced. This prevents the dissolved, easily degradable organic carbon from the raw wastewater from being consumed by the nitrate in the return sludge, allowing all of it to be used in biological phosphorus removal. The aim is to prevent the anaerobic tank process and, consequently, biological phosphorus removal from being adversely affected. The activated sludge transferred to the GDC Denitrification Tank, which will be constructed next to the anaerobic tanks, using return pumps, is continuously mixed with submersible mixers during its time in this tank, preventing settling while ensuring that the activated sludge consumes the nitrate and oxygen. The activated sludge then passes to the anaerobic tanks for biological phosphorus removal. Thanks to two valves left on the sludge recirculation line, the recirculated sludge can also be taken to the anaerobic Bio-P tank when desired. To prevent sludge settling, the Bio-P Anaerobic Tanks and RAS-DN tanks will be equipped with submersible mixers.

Chemical Dosing

As can be seen in the process calculations, since the phosphorus value given at the inlet cannot be reduced to 2 mg/L even with biological treatment, it is necessary to additionally use metal salts such as FeCl₃ (40% solution) or FeSO₄. For this purpose, a chemical storage tank and two dosing pumps were used.

Aeration Tanks

The biological treatment system is designed in accordance with the requirements of the administration and the process calculations, and complies with ATV-A-131. It is based on simultaneous denitrification, providing carbon and nutrient removal as well as sludge stabilization. Full nitrogen and phosphorus removal will be achieved through the nitrification/denitrification method, while ensuring that the excess sludge generated is stabilized in a manner that prevents odor formation.

In calculating the anaerobic sludge age, the minimum required Safety Factor (SF) of 1.45 has been taken into consideration. Subsequently, the sludge age has been used as a basis for sizing, taking into account the ratio between the denitrification volume and the bioreactor volume. This ratio has been selected as a function of the denitrification capacity in accordance with ATV-DVWK-A-131E. Based on the nitrogen balance within the treatment process, the amounts of inorganic nitrogen, nitrate nitrogen to be denitrified, and the denitrification capacity have been calculated. The required internal nitrogen recirculation flow rate has been determined in line with ATV-DVWK-A-131E, based on the ratio between inorganic nitrogen and the nitrate nitrogen leaving the biological treatment system.

Sludge production has been calculated by considering the daily sludge generated through carbon removal, as well as the daily sludge generated through biological and chemical phosphorus removal. Wastewater temperatures have been selected as 12 °C for the winter season and 25 °C for the summer season. Accordingly, a sludge age of 25 days has been calculated as necessary to ensure sludge stabilization at 12 °C.

The biological activated sludge system consists of the conversion of biologically degradable dissolved and particulate matter into acceptable end products, and the retention of suspended or non-settleable solids within biological flocs, also referred to as biomass. The aeration tanks will be equipped with a surface mechanical aeration system to supply the required oxygen. The oxygen concentration in the aeration tank will be automatically controlled by an oxygen measurement instrument installed in the tank.

In order to enable the denitrification process and achieve biological nitrogen removal, anoxic zones will be created within the aeration tanks. These anoxic zones will be monitored and controlled by the SCADA system through dissolved oxygen (DO) meters and oxidation–reduction potential (ORP) meters. Mechanical aerators will be provided in the aeration basins to meet the oxygen demand required for the biological process. The mechanical aerators will be operated with variable speed control depending on the oxygen concentration in the basins. The basin depth has been selected as 3.5 m to be compatible with the mechanical aerators.

The actual oxygen transfer requirement (AOTR) has been calculated under worst-case conditions based on carbon removal demand, nitrification demand, and oxygen recovery achieved through denitrification, considering peak carbon and ammonia loads. To prevent sludge settling, the activated sludge tanks will also be equipped with submersible mixers. The mixer power will be selected to provide an average velocity of approximately 0.3 m/s within the basin. During periods of low oxygen demand, when the mechanical aerators operate at reduced speed, mixing within the basin will be ensured by the submersible mixers.

In addition to the dissolved oxygen concentration measured in the aeration tanks, the oxidation–reduction potential (ORP) will also be monitored to control and optimize the biological treatment process.

Final Settling Tanks

The activated sludge–water mixture coming from the aeration tanks will be conveyed to the Final Sedimentation Tank by gravity. For the year 2045, one tank with a diameter of 12.5 m will be provided.

The Final Sedimentation Tank will be constructed as a cylindrical tank equipped with mechanical sludge removal. The activated sludge–water mixture will be directed to the sludge hopper located at the center of the tank by means of a scraper mechanism. The treated effluent will pass by gravity over the effluent weirs and will be conveyed by gravity through the outlet channel to the outlet structures.

The bottom scraper, connected to the rotating bridge, will sweep the settled sludge into the sludge cone located at the center of the tank. From the sludge cones, the sludge will be returned to the anaerobic Bio-P tank, which is the inlet of the biological treatment unit, by Return Activated Sludge (RAS) and Waste Activated Sludge (WAS) pumps in order to maintain the activated sludge concentration in the biological treatment process. The capacities of the return sludge pumps will be sufficient to allow a return ratio of up to 100%. The return sludge and waste sludge flow rates will be measurable by flow meters installed on the pipelines. Since the pumps will be equipped with variable speed drives, the operator will be able to adjust both the return and waste sludge flow rates. The return sludge pumps will operate continuously (24 hours a day). The waste sludge pumps (sludge dewatering feed pumps) will operate only when sludge is to be dewatered for disposal. Based on the operational experience of KOSKİ personnel, it has also been noted that, from time to time, a return ratio of 1.00 may be required in order to achieve better effluent quality and to balance the F/M ratio and MLSS concentration.

The waste sludge will be separated from the return sludge line by a valve and will be transferred to the sludge dewatering equipment under the operator's control via a flow meter.

Foam and floating materials that may form on the surface of the tank will be collected by the foam collection hopper installed in the tank and transferred to the Final Sedimentation Foam Manhole. After the floating materials retained on the screen at the inlet of the manhole are separated, the filtrate will be returned to the inlet pumping chamber. Materials retained on the screens will be cleaned periodically by the operator.

For further details, please refer to the process and hydraulic calculations, drawings, and equipment data sheets.

Disinfection Unit

The disinfection unit will be controlled by a PLC. The operation will be adjusted in accordance with the disinfection requirements and the flow rates.

Any additional disinfection units to be installed in a future stage, if required, are outside the scope of this subproject.

Outlet Flow Measurement Structure

The flow rate of the treated effluent will be measured using an ultrasonic flow measurement instrument installed at the Parshall flume. After the flow measurement unit, the treated effluent will pass into the effluent discharge chamber and will then be discharged into the stream. Within the effluent discharge chamber, an automatic sampling device will continuously and automatically collect samples of the treated effluent, enabling laboratory monitoring of effluent water quality parameters.

Sludge Dewatering

One sludge dewatering system will be provided. The centrifuge–decanter is suitable for dewatering activated sludge after conditioning with a cationic polyelectrolyte.

For sludge conditioning, the polyelectrolyte solution is injected together with the sludge to be dewatered at the inlet of the centrifuge–decanter type dewatering units. The sludge flow rate fed to the dewatering equipment will be measured on the pipeline.

The polyelectrolyte will be prepared as a 0.1% solution by automatic units consisting of a dry polyelectrolyte storage hopper, screw conveyor, wetting device, and preparation and maturation tanks equipped with mixers. The prepared polyelectrolyte solution will be supplied to the sludge dewatering units via dosing pumps.

The dewatered sludge cake will be transferred to sludge containers for removal from the facility by means of a screw conveyor.

The filtrate generated in the centrifuge–decanter type dewatering units will be conveyed by gravity to the internal pumping station of the plant.

The sludge discharged from the facility will be disposed of by KOSKI General Directorate in accordance with the relevant regulations.

Internal Filtrate Waters

The supernatant waters generated from mechanical dewatering will be collected by gravity in the inlet pumping station and will then be pumped into the plant together with the influent wastewater.

Temporary Sludge Cake Storage Area

A sludge cake temporary storage area with a storage capacity of 145 days will be provided. The total surface area of the sludge cake storage area will be 150 m².

The wastewater treatment plant will be controlled using a Programmable Logic Controller (PLC) and a SCADA system. A computer-based advanced SCADA system will be provided for supervision, control, and data acquisition, and it will be installed in the Central Control Room.

PLC systems will be located at various sub-stations within the wastewater treatment plant. The PLC system installed in the control room of the administration building will automatically control the process and process equipment. Centralized control as well as local control will be provided through MCC panels located at appropriate distances from the process structures. Equipment and instruments that are required to operate in a synchronized manner during process operation are interconnected in terms of signaling, as detailed in the P&ID diagrams. The main instruments proposed for the plant, along with the parameters to be measured automatically and the processes to be controlled automatically, are summarized below:

• Inlet Pumping Station Level Measurement:

The pumps in the inlet pumping chamber will operate with direct-on-line starting based on the level measurement instruments installed in the pumping station and, consequently, the incoming flow rate. The number of pumps in operation will be automatically adjusted according to the level, and the wastewater will be pumped or transferred to the subsequent units shown in the wastewater P&ID diagrams. At LL level, the pumps will stop to prevent dry running.

• Inlet Flow Measurements:

The influent flow conveyed to the plant by the inlet pumps will be continuously and automatically measured on the pressurized pipeline and recorded. The collected data will enable operators to adjust flow rates when necessary.

• Hazardous Gas Measurements In The Pumping Chamber:

Methane and hydrogen sulfide gases present in the inlet pumping structure will be continuously monitored. When hazardous gas concentrations inside the building reach dangerous levels, the alarm system will be activated to warn personnel.

• Motorized Jib Crane:

The motorized jib crane will be operated locally in on–off mode.

• Packaged Grit Removal Unit:

Internal controls of the packaged grit removal unit will be provided through a local control panel supplied by the manufacturer. The system will operate as a package in on–off mode; however, the operational status of all equipment will be monitored via SCADA.

• Packaged Grit Removal Blowers:

The air blowers will operate in on–off mode, while pressure gauges on the discharge lines will be used for monitoring purposes.

• ORP Measurement In Bio-P Tank And RAS-DN Denitrification Tank:

Oxidation–reduction potential (ORP) in the anaerobic tanks and anoxic zones will be continuously measured and recorded, providing feedback to the operating personnel on the process status.

• Submersible Mixers In Bio-P And RAS-DN Tanks:

Submersible mixers will operate in on–off mode.

• FeSO₄ Solution Tank Level Measurement:

The vertical shaft mixer in the FeSO₄ solution tank will operate in on–off mode and will automatically stop when the tank level reaches “L”. The FeSO₄ dosing pump will operate as long as the tank level is above “L” and the inlet pumps are running. The stroke rate of these pumps will be adjusted by the operator via a mechanical variator. When the tank level reaches “HH”, an alarm will be generated in the SCADA system.

• Dissolved Oxygen Measurement In The Aeration Basin:

The desired dissolved oxygen concentration range in the basin will be set by the operator via SCADA. The mechanical aerator will receive signals from the DO probe. After a change in aerator speed, a minimum waiting period will be allowed to enable stabilization of the oxygen level before the next adjustment. If the minimum speed achievable by the frequency converter is reached and the oxygen level remains high, the aerator will stop and wait for a predefined minimum period. After this period, the aerator will be ready to restart under instrument control. During aerator stoppage, the submersible mixer will operate continuously.

A second DO probe installed in the tank will be used for monitoring purposes; it will be continuously recorded in SCADA and will provide feedback to the operating personnel on the process condition.

• ORP Measurement In The Aeration Basin:

Oxidation–reduction potential in the anoxic zones of the aeration basins will be continuously measured and recorded to provide feedback on the biological treatment process

• Submersible Mixer In The Aeration Basin:

The submersible mixer in the aeration basin will automatically start when the mechanical aerator stops or operates below a specified speed. When the aerator resumes operation, the submersible mixer will stop.

• Clarifier Scraper:

The clarifier scraper and weir cleaning brush will operate in on–off mode. A torque switch will be installed on the main scraper motor.

• Return Sludge Flow Measurements:

Return activated sludge flow rates withdrawn from the clarifier will be continuously and automatically measured and recorded on the sludge pipelines, providing data for operator adjustments when required.

• Return Sludge Pumps:

Return sludge pumps will be operated via frequency converters, allowing the operator to adjust the return flow rate. Pressure gauges on the pipelines will be used for monitoring purposes.

• Sampling Unit:

The sampling device installed downstream of the flow measurement structure will operate in on–off mode.

• Treated Effluent Flow Measurement:

The treated effluent flow rate will be continuously and automatically measured and recorded at the plant outlet using a flow measurement device installed at the Parshall flume.

• Potable Water Booster System And Pressure Measurement:

The booster unit will operate with a frequency converter, receiving signals from the pressure sensor installed on the pipeline. It will stop at the preset maximum pressure and start at the minimum pressure. The pump will start at maximum speed and slow down as the pressure increases. To prevent dry running, the pump will stop when the tank level reaches “LL”.

• Packaged Polyelectrolyte Solution Preparation Unit:

Internal controls of the packaged polyelectrolyte preparation unit will be provided by a local control panel supplied by the manufacturer. The system will operate as a package in on–off mode, while the status of all equipment will be monitored via SCADA. The package will include level measurement and influent potable water flow measurement.

• Sludge Dewatering Decanter And Associated Equipment:

The centrifuge decanter will have its own automation and control panel and will operate in on–off mode, while its status will be monitored via SCADA.

• Polyelectrolyte Dosing Pumps:

Polyelectrolyte dosing pumps will operate in coordination with the centrifuge decanter. When the decanter or the packaged polyelectrolyte unit stops, the dosing pumps will also stop. Pump speeds will be adjusted via frequency converters. The dosed polyelectrolyte flow will be continuously measured and recorded by a flow meter on the discharge line, allowing operator adjustments when necessary. Pressure gauges installed on the discharge lines of each pump will be used both for monitoring and for stopping the pump in case of line blockage.

• Polyelectrolyte Dosing Flow Measurements:

The polyelectrolyte solution flow rates drawn from the packaged preparation unit will be continuously and automatically measured and recorded on the dosing line, providing data for operational control.

• Sludge Feed Pumps:

Sludge feed pumps will operate in coordination with the centrifuge decanter. When the decanter or the packaged polyelectrolyte unit stops, the sludge feed pumps will also stop. Pump speeds will be adjusted by the operator via frequency converters. The sludge flow rate will be continuously measured and recorded by a flow meter on the sludge discharge line, enabling operator control. Pressure gauges on the discharge lines will be used for monitoring and for stopping the pumps in case of blockage.

• Sludge Feed Flow Measurements:

Excess sludge flow withdrawn from the return sludge line will be continuously and automatically measured and recorded on the sludge feed line, providing data for operator adjustments.

• Inclined Sludge Conveyor:

The inclined sludge conveyor will operate in coordination with the centrifuge decanter. When the decanter stops, the sludge cake conveyor will also stop. A torque switch will be installed on the conveyor.

• Sludge Building Equipment:

The overhead traveling crane and ventilation fans in the sludge building will operate in on–off mode.

• Hazardous Gas Measurements In The Sludge Dewatering Building:

Methane and hydrogen sulfide gases will be continuously monitored within the sludge dewatering building. When hazardous gas concentrations reach dangerous levels, the alarm system will be activated to warn personnel.

3.3. Labor Requirements

Number of workers (at peak) that will work on site during the construction and operation phases of the Subproject are provided in Table 19.

Table 19 Labor Requirements of the Subproject

Phase	Number of Workers (including contractors and subcontractors)	Planned Accommodation Arrangement
Construction Workers (at peak)	15	Off-site (Hotels if necessary)
Operation Workers (at peak)	5	Off-site (Hotels if necessary)

3.4. Land Acquisition Status

The wastewater treatment plant subproject area for the Köşk Subproject is located on parcels owned by the Konya Water and Sewerage Administration (KOSKİ). The ownership status of the subproject parcels has been verified through official land registry records, and all land required for the Subproject is currently available for subproject use under KOSKİ ownership. An overview of land ownership, parcel characteristics, and land acquisition status for the Subproject is provided in 2.2, while supporting documentation is included in Annex C and Annex M.

The wastewater treatment plant site is surrounded by privately owned parcels that are predominantly used for agricultural activities, reflecting the general land use characteristics of the area. However, these parcels are located outside the boundaries of the subproject parcel. Accordingly, the Subproject does not require permanent or temporary acquisition of private land, restriction of land use, or physical displacement of households.

All collector pipelines to be constructed under the Köşk Subproject will be located entirely within existing road alignments and publicly owned road corridors, as described in Section 2.6. The collector system does not pass through privately owned agricultural land, residential plots, or other livelihood-related assets. Therefore, the construction of the collector lines will not result in land take, loss of crops, restriction of access to land, or economic and displacement.

All planned Subproject activities are located within the defined Primary and Secondary Areas of Influence. Based on the current design and site-specific assessments, no permanent or temporary land acquisition, expropriation, negotiated settlement, or use of privately owned land is envisaged under the Subproject.

Nevertheless, considering that agricultural activities are carried out on privately owned parcels adjacent to the subproject area, it is acknowledged that unforeseen and temporary economic disturbances, such as short-term access limitations or minor disturbances to agricultural activities, could theoretically occur during the construction phase. During field surveys, limited instances of agricultural activities encroaching onto the subproject boundary were identified and were resolved through direct engagement with the relevant land users, ensuring withdrawal without damage to standing crops. Should any similar situation arise, appropriate mitigation and management measures will be implemented in line with Section 4.1.2 (Loss of Land and Livelihoods), the Project Grievance Mechanism, and applicable national legislation.

Furthermore, in the unlikely event that any unforeseen need for land acquisition or land use restriction arises during subproject implementation, all related processes will be carried out in accordance with the World Bank Environmental and Social Standards, particularly ESS5 (Land Acquisition, Restrictions on Land Use and Involuntary Resettlement), as well as applicable national legislation. In such a case:

- Affected persons and groups will be identified and a socio-economic impact assessment will be conducted;
- Where physical or economic displacement occurs, an appropriate Resettlement Plan (RP) or, if required, an Ex-post RP will be prepared;

- Measures will be implemented to ensure that affected persons do not experience loss of rights, including compensation and livelihood restoration support, as necessary; and
- Stakeholder engagement activities and the grievance mechanism will be implemented effectively throughout the process.

At present, as the Köşk Subproject is not expected to result in physical or economic displacement or loss of livelihoods, no additional land acquisition–related environmental or social instruments are required.

Table 20 Land Acquisition Status for the Subproject

District	Neighborhood/Village	Lot/ Parcel No.	Current Land Ownership (e.g. Applicant Sub-borrower, Private Person, Legal Entity), Treasury, Non-registered, Other)	Type of Parcel (according to Title Deed) (e.g. Agricultural, Pasture, Raw Soil, etc.)	Title Deed Area of the Parcel (m ²)	Area to be Acquired and Used by the Subproject (m ²)	Properties before Acquisition (Structures, Houses, Trees, Crops etc.)	Land Acquisition Method (e.g. Purchase, Lease, Allocation, Easement Rights, etc.)	Status of Land Acquisition
Köşk Wastewater Treatment Plant									
Beyşehir	Köşk Neighborhood	2308	Treasury	Raw soil	2.440	2.440	None. The parcel was vacant land with no structures, buildings, or permanent agricultural assets at the time of allocation.	Parcel under KOSKİ ownership prior to the Subproject (acquired on 03.03.2016)	No land acquisition is required under the Subproject. The parcel is currently owned by KOSKİ and available for subproject use.
Beyşehir	Köşk Neighborhood	6564	KOSKİ	Agricultural land	402	402	Limited informal agricultural use extending into the subproject boundary was identified. No structures, buildings, or permanent agricultural assets were present on the parcel.	Parcel under KOSKİ ownership prior to the Subproject (acquired on 24.10.2016)	No land acquisition is required. The informal use was voluntarily withdrawn by the relevant land users based on written declarations, without coercion or any economic loss (see Annex M).
Beyşehir	Köşk Neighborhood	6569	KOSKİ	Agricultural Land	1.338	1.338	Limited informal agricultural use	Parcel under KOSKİ ownership	No land acquisition is

District	Neighborhood/Village	Lot/ Parcel No.	Current Land Ownership (e.g. Applicant Sub-borrower, Private Person, Legal Entity), Treasury, Non-registered, Other)	Type of Parcel (according to Title Deed) (e.g. Agricultural, Pasture, Raw Soil, etc.)	Title Deed Area of the Parcel (m ²)	Area to be Acquired and Used by the Subproject (m ²)	Properties before Acquisition (Structures, Houses, Trees, Crops etc.)	Land Acquisition Method (e.g. Purchase, Lease, Allocation, Easement Rights, etc.)	Status of Land Acquisition
							extending into the subproject boundary was identified. No structures, buildings, or permanent agricultural assets were present on the parcel.	prior to the Subproject (acquired on 24.10.2016).	required under the Subproject. The parcel has been owned by KOSKİ since 2016. Informal agricultural use was voluntarily withdrawn by the relevant land users without coercion or any economic loss, as documented in Annex M.
Collector Lines									
Beyşehir	Köşk and Selki Neighborhoods	-	Public	Road	-	-	None.	Expropriation.	Completed.
Energy Transmission Line									
Beyşehir	Köşk Neighborhoods	-	Public	Road	-	-	None.	Expropriation.	Completed.
Portable Water Line									
Beyşehir	Köşk Neighborhoods	-	Public	Road	-	-	None.	Expropriation.	Completed.

- * There are no seasonal shepherds using pastureland within the project area of the Karaali WWTP. Pasture use is predominantly carried out by the residents of Karaali Neighborhood.

3.5. Permitting Status

Status of permits, licenses, and approvals required to be in place before start construction is presented in Table 21.

Table 21 Status of Permits for the Construction Phase

Permit, License, Approval	Status (In place, Not in place)	Remarks/ Notes
EIA Decision	In place	The Environmental Impact Assessment (EIA) process for the Köşk Wastewater Treatment Plant was first evaluated on 07 December 2017, and the Konya Governorship Provincial Directorate of Environment and Urbanization concluded that the subproject, with a design capacity of 750 m ³ /day and planned to serve approximately 5,652 people, remained below the 30,000 m ³ /day threshold defined in the applicable EIA Regulation and was therefore out of scope of the EIA process. In subsequent years, the subproject was re-evaluated due to administrative and technical updates, and following the application submitted by the Konya Water and Sewerage Administration, a second assessment was conducted on 09 January 2026. This reassessment confirmed that no capacity increase exceeding the EIA threshold had occurred and reaffirmed that the subproject does not require an EIA. Both decisions emphasize that exemption from the EIA process does not relieve the subproject from complying with the provisions of Environmental Law No. 2872 and other relevant environmental legislation, including the obligation to obtain all necessary permits and implement appropriate environmental protection measures.
Project approval	In place	The Köşk Wastewater Treatment Plant Subproject has been developed based on an approved implementation design prepared in accordance with the Wastewater Treatment Plant Deep Sea Discharge Project Approval Technical Procedures. The implementation subproject for the Köşk Wastewater Treatment Plant, with a design capacity of 750 m ³ /day, was reviewed by the Konya Provincial Directorate of Environment and Urbanization and officially approved on 15 September 2017. The approval process covered the technical design, process configuration, hydraulic calculations, and compliance with the applicable national standards and regulations governing wastewater treatment facilities
Zoning Plan Approval	Not in place (process ongoing)	The official letter dated 27.11.2025 and numbered E-20824400-220.04.02-115784 has been sent to Konya Metropolitan Municipality, Department of Zoning and Urban Planning. The letter requests the institutional opinion regarding zoning status and planning compliance for the Köşk Wastewater Treatment Plant investment. The relevant correspondence has been included in – Existing Permitting Documentation Annex D156, and the process is currently ongoing.
Permit for non-agricultural land use	In place	In the letter dated February 3, 2023, numbered 92623187-220.01.99-45590, from the General Directorate of Konya Water and Sewerage Administration, the request for non-agricultural use for the purpose of “Drilling-Water Reservoir-Wastewater Treatment Plant” has been deemed appropriate. In the area numbered 0 island 2308 parcel, the land classification was changed to "Wastewater Treatment Plant Area" in the land registry, therefore obtaining an Agricultural Marginal Certificate is no longer necessary. An Agricultural Marginal Certificate already existed. Land classification change procedures are also ongoing for parcels numbered 6569 and 6564.

Permit, License, Approval	Status (In place, Not in place)	Remarks/ Notes
Discharge into the Drainage Canal	In place	In the letter dated 30.08.2018 and numbered 42193254-110.03.01-E.49823, issued by the General Directorate of Environmental Management of the Ministry of Environment and Urbanization, it is stated that “for discharges to irrigation canals, the approval of the State Hydraulic Works (DSİ) must be obtained. For discharges to drainage channels, the provisions applicable to direct discharges to the receiving environment shall be applied in the same manner.”
EIA Decision for the ETL	Not in Place (not provided)	No separate EIA decision/application for the Energy Transmission Line (ETL) is included in the current document package.
Opinion Letter of the General Directorate of Nature Conservation and National Parks, 8th Regional Directorate	In place	The application letter dated 19.12.2025 and numbered E-20823400-220.04.02-117643 has been submitted to the relevant institutions. This letter was prepared to obtain the required institutional opinions and formally initiate the permitting processes within the scope of the Köşk Wastewater Treatment Plant investment. The institutional opinion letter dated referenced E-98572095-622.02-22670323 has been received from the 8th Regional Directorate of the General Directorate of Nature Conservation and National Parks (subject: “Wastewater Treatment Plants”). The letter states that there is no objection to the Köşk Advanced Biological Wastewater Treatment Plant Project planned to be constructed in Köşk Neighborhood, Beyşehir District, in accordance with Law No. 2873 on National Parks, Law No. 4915 on Land Hunting, and the Regulation on the Protection of Wetlands. The letter also notes that the final discharge point of the wastewater treatment plants is Beyşehir Lake and emphasizes that compliance with the relevant environmental legislation provisions must be ensured.
DSİ Official Opinion on Flood Risk, Surface Water Drainage and Irrigation Infrastructure Constraints	In place	In the official opinion issued by the General Directorate of State Hydraulic Works (DSİ), it is stated that the Köşk WWTP should be constructed at least 1.00 m above the natural ground level. The required filling has been calculated within the subproject design, and the planned subproject ground elevation of 1,179 m has been considered appropriate. The same opinion also states that there is no objection to carrying out zoning plan studies for the Köşk WWTP, provided that the technical requirements specified by DSİ are taken into account. The relevant official opinion is provided in Annex E

4. ESMP MATRIX: RISK AND IMPACTS, MITIGATION AND MONITORING

As the Subproject involves both construction and operation activities, the ESMP comprises two components as follows:

- Construction ESMP Matrix
- Operation ESMP Matrix

The roles and responsibilities for implementing this ESMP are defined in Chapter 5.

Implementation arrangements for the ESMP are outlined in Section 1.5.

The Contractor's E&S management plans and procedures, which support the implementation of the E&S assessment documents, are listed in Section 4.5.

4.1. E&S Risk and Impacts of the Subproject

This section provides a concise, site-specific summary of the anticipated environmental and social risks and impacts of the Köşk Wastewater Treatment Plant (WWTP) Subproject during the construction, defect liability, and operation phases. The assessment is structured in line with the baseline topics presented in Section 2.7 and focuses on the key receptors within and around the Subproject footprint, including nearby settlements and community assets, local access routes, agricultural land use, surface water resources (including the receiving environment), and relevant biodiversity features within the area of influence.

The Köşk WWTP, Karaali WWTP, and Kireli WWTP projects are located approximately 16 km (Köşk–Karaali), 10 km (Kireli–Köşk), and 24 km (Kireli–Karaali) apart in straight-line distance. Each facility is accessible through different transportation routes and does not rely on a shared high-density traffic corridor during construction or operation. Accordingly, potential cumulative environmental, social, and occupational health and safety (OHS) impacts related to heavy vehicle traffic, dust emissions, noise, and road safety are not expected to spatially overlap to a significant extent. Given the physical separation of the sites and their location within different settlement contexts, cumulative social risks associated with workforce mobility and community interaction are anticipated to remain limited.

However, since the treated effluents of all three WWTPs are planned to ultimately discharge into the Beyşehir Lake basin, a cumulative assessment is required in relation to the receiving environment. Considering the current risk of untreated or insufficiently treated domestic wastewater reaching the lake or its tributaries, the implementation of these WWTP investments will significantly reduce organic load, suspended solids, and nutrient loads (particularly nitrogen and phosphorus). In this respect, the simultaneous operation of the facilities is expected to create a cumulative positive environmental impact by improving the water quality of Beyşehir Lake, reducing eutrophication risks, and contributing to the protection of the lake ecosystem. Provided that proper operational standards, regular monitoring, and full compliance with discharge criteria are ensured, the overall long-term cumulative impact of the projects on Beyşehir Lake is expected to be positive.

The main anticipated construction-phase impacts are temporary and localized, primarily related to dust and exhaust emissions, noise, increased traffic and road safety risks, soil disturbance, waste generation, and temporary resource use. During operation, the key potential impacts are associated with treated effluent discharge performance, sludge handling and transport, odor nuisance, and continuous energy and chemical use, while the Subproject is expected to deliver a long-term environmental benefit by improving domestic wastewater treatment in the Beyşehir Lake Basin. Mitigation and monitoring measures are provided separately in the ESMP matrices (Sections 4.2 and 4.3) and are not repeated in this section.

This section outlines the potential E&S impacts and risks that may arise from Subproject activities during the construction and operation phases.

The typical Subproject activities are broadly categorized as follows:

- Construction phase
- Operation phase

General, cross-cutting potential environmental impacts that are anticipated to occur across all aspects of the Subproject are summarized below.

4.1.1. Environmental Risks and Impacts

During the construction and operation phases of the Project, environmental and social impacts caused by subproject activities may arise. Any potential impacts of the Project during the construction phase would be generally short-term with low to medium magnitude that would be locally significant. These impacts would mostly be related to traffic, noise, vibration, air quality, soil disturbance and contamination, waste management, community health and safety, and labor and working conditions (including occupational health and safety). Operation of the Project might create noise, concentrated wastewater, storage and transportation of chemicals, and soil contamination-related impacts on sensitive receptors, and occupational health and safety risks, which could be considered as significant if not properly managed, particularly during maintenance and repair works. Maintenance and repair work of the Project components might have minor environmental impacts, such as soil contamination and increased levels of noise and waste. These impacts will be local and short-term with low significance.

As presented in Section 2.7.3.4 and illustrated in Figure 15, the nearest residential settlement is located approximately 330 meters from the Subproject site. In addition, the nearest mosque is approximately 1534 meters away, the Family Health Center is approximately 1700 meters away, and the nearest school is located at a distance of approximately 1713 meters. These residential and social infrastructure elements have been identified as potential sensitive receptors in relation to construction-related dust, noise, and vibration.

As indicated in Section 2.7.3.4 and shown in Figure 15, no education or health facilities are located within the immediate vicinity of the Subproject site. Therefore, considering the separation distances and the rural, low-density settlement pattern, potential temporary and indirect impacts related to dust, noise, and vibration are expected to remain limited and manageable through standard construction-phase mitigation measures.

4.1.1.1. Soil Erosion, Loss and Contamination

Construction Phase

It should be noted that the impacts of the pre-construction phase are also assessed in the land preparation and construction phase in the following section.

Within the scope of the construction works, approximately 2,500 m³ of excavation will be carried out. The amount of topsoil to be stripped is approximately 1,250 m³. Topsoil will be stripped to a sufficient depth (minimum 30 cm) prior to commencement of works and stockpiled appropriately to prevent soil compaction and erosion. The facility, including internal access roads and the sludge storage area, will be established within an area of approximately 3,450 m². According to information provided by KOSKİ, upon the request of the General Directorate of State Hydraulic Works (DSİ), the WWTP platform will be elevated by approximately 1 meter in order to ensure hydraulic safety and appropriate site grading. The stripped soil will be used as fill material for the base elevation of the treatment plant. Following its use for elevation purposes, suitable soil will be reused for landscaping and reinstatement works where feasible.

There will be some minor impacts on the soil environment and land use during the construction of the subproject. However, these impacts are on the subproject footprint and are restricted to the construction sites. The potential impacts will consist of:

- Leakage and spill of fuels and oils to be used for the construction machinery and equipment can create soil contamination risk.
- Soil erosion during construction works.
- Soil contamination because of oil or fuel leaks or spillage that may result from incidents and unexpected events.
- Alterations of the natural soil and land structure because of soil stripping, levelling, excavation, and filling activities, work of construction machinery.
- Uncontrolled storage or disposal of solid and/or liquid waste can cause soil pollution.
- Piling of soil along public routes and improper reinstatement of soil to its original position

There will not be a planned fuel storage on-site. For any spill risks, there will be spill kits. As the vegetation on site is very limited and the soil property is stony and rocky, the topsoil clearance and ground leveling works will be limited. No impact is expected during the operation phase of the Project. No vegetation management is foreseen for the operation stage. The site and the works conducted during the construction phase will be monitored and reported regularly, including the vegetation, and in case of any requirement, assessed for the operation phase. In the areas where construction activities are completed on the site, land arrangement works will be carried out. Areas that have been damaged during these activities will be reorganized by reducing them to the appropriate slope. Thus, the excavation gaps that will occur in the topography during the activity will be eliminated. Vegetative soil stored to be used for rehabilitation purposes will be used as top cover in necessary areas.

4.1.1.2. Dust and Exhaust Gases Emission

Construction Phase:

During construction of the Köşk WWTP, temporary and localized air quality impacts are expected due to material handling, earthworks, and the movement of construction equipment within the Subproject area. Fugitive dust emissions may occur during site preparation and civil works, particularly during topsoil stripping, excavation and filling, land leveling, compaction, stockpiling, loading/unloading of materials, and truck movements on unpaved surfaces. In addition, exhaust emissions will be generated from heavy construction machinery and vehicles operating at the site and along transportation routes. Primary exhaust pollutants may include NO₂, CO, HC, SO₂, and particulate matter (PM).

For a screening-level estimate, the main machinery is expected to include 1 excavator, 1 compactor, and 1 JCB. Assuming 264 working days, and an average active operation time of 6 hours/day per equipment unit, the total engine operating time is estimated at 4,752 equipment-hours. Using typical diesel consumption rates for this type of equipment (excavator ~12 L/h, compactor ~10 L/h, JCB ~8 L/h), total diesel consumption is estimated at approximately 47,520 liters over the construction period. Based on standard diesel combustion factors, this corresponds to approximately 127 tCO₂ of total exhaust emissions (47,520 L × 2.68 kg CO₂/L). For criteria pollutants, and in the absence of confirmed engine tier/standards and detailed activity data, a conservative screening range is assumed for off-road diesel equipment: total NO_x on the order of approximately 0.9–1.8 tonnes and total diesel PM on the order of approximately 0.03–0.06 tonnes over the full construction period.

Dust generation is expected to be driven primarily by earthworks and movements on unpaved. In the absence of confirmed haulage/truck numbers and travel distances, a conservative unpaved-road dust estimate is presented for screening purposes assuming combined daily movements of construction machinery and associated vehicles of approximately 5 km/day on unpaved surfaces. Over 264 working days, this corresponds to approximately 1,320 vehicle-km. Using typical screening emission factors for unpaved surface travel, fugitive dust generation is estimated on the order of approximately 0.1–0.3 tonnes of PM₁₀ over the construction period, with the upper end reflecting dry-season conditions and increased traffic intensity.

The impacts are expected to be short-term and confined to the construction footprint and the immediate surroundings, and can be effectively managed through implementation of mitigation measures defined in the ESMP, including regular water spraying for dust suppression, good housekeeping practices (e.g., covering transported materials and minimizing dust generation from stockpiles), and ensuring that construction machinery and vehicles are properly maintained to minimize exhaust emissions.

Operation Phase:

During the operation phase, significant dust emissions are not anticipated as the main wastewater treatment activities will take place within the controlled boundaries of the WWTP. Potential air quality impacts may arise intermittently from vehicle movements, routine maintenance activities, and limited use of standby power equipment, resulting in minor exhaust emissions. Compared to the construction phase, these emissions are expected to be low and localized.

Bio-aerosols and odors are not expected to constitute a dominant air quality issue under normal operation conditions, since wastewater conveyance and handling will occur within designated treatment units. Nevertheless, good operational practices, proper housekeeping, and timely maintenance of the facility and related equipment will minimize any potential nuisance effects and ensure that air quality impacts remain negligible.

4.1.1.3. Odor

Construction Phase:

Odor generation during the construction phase is not expected to have a significant impact, as wastewater treatment processes will not be in operation. However, minor and temporary odor nuisance may occur intermittently due to disturbance of wet soils during excavation works and the collection and transport of domestic wastewater generated at the construction site (e.g., from portable toilets and septic tanks, if used). Any such odors would be localized, short-term, and limited to the immediate vicinity of the work areas and along the transportation routes.

To minimize potential odor nuisance, good housekeeping practices will be implemented, and sanitary facilities will be properly managed. Where domestic wastewater is generated on site, it will be collected in impermeable septic tanks (if connection is not available) and transported by licensed vacuum trucks to the Konya WWTP on time without leakage or uncontrolled discharge. If odor complaints occur, additional control measures will be applied, such as increasing the frequency of wastewater removal, limiting on-site retention time, and avoiding storage of odorous materials in open areas.

Operation Phase:

Odor generation is a potential impact during the operation of the WWTP, mainly associated with the inlet works and preliminary treatment units (e.g., screening and grit removal), biological treatment processes, sludge handling, and temporary storage and transport of dewatered sludge. If not adequately managed, odors may cause nuisance to workers within the facility and may potentially affect nearby receptors depending on site-specific conditions and meteorological factors.

Odor impacts will be controlled through appropriate operational measures, including maintaining clean conditions in process areas, preventing accumulation of wastewater and sludge in open areas, and avoiding prolonged retention that may cause septic conditions. Sludge handling will be managed to minimize odor formation, and dewatered sludge will be stored for the shortest possible duration and transported off-site in a timely manner using covered/secure transport arrangements. Routine inspection and maintenance of treatment units will be conducted to ensure proper process performance, and any abnormal odor conditions will be investigated and corrected immediately. In addition, landscaping and tree planting around the facility boundary will be considered as a supplementary buffer measure to reduce potential odor dispersion and provide visual screening. Furthermore, the grievance mechanism will be used to record and respond to any odor-related complaints, and corrective measures will be implemented where needed.

4.1.1.4. Climate Change and Greenhouse Gas (GHG) Emissions

The impacts of the Subproject on climate change are twofold: first, the direct adverse effect caused by greenhouse gas (GHG) emissions generated during construction and operation activities; and second, and more importantly, the Subproject's function as a wastewater treatment plant, which will protect the region's water resources and enhance the region's resilience against the adverse effects of climate change.

Construction Phase:

During the construction phase of the KOSKİ Köşk Wastewater Treatment Plant (WWTP) Construction Subproject, the impact on climate change will result from greenhouse gas (GHG) emissions. The majority of these emissions will stem from the use of construction machinery/equipment and material transportation. The main GHG emitted will be CO₂, originating from the combustion of fossil fuels in internal combustion engines. In addition, relatively small amounts of methane (CH₄) and nitrous oxide (N₂O) will also be released during fuel combustion.

For a screening-level calculation, the construction phase is assumed to last 12 months, with 1 excavator, 1 compactor, and 1 JCB operating on average 6 hours/day. Based on typical diesel consumption rates, the total diesel consumption during construction is estimated at approximately 47,520 liters. Using a standard emission factor of 2.68 kg CO₂ per liter of diesel, total direct CO₂ emissions from on-site machinery are estimated at approximately 127 tonnes of CO₂ over the entire construction period. When minor contributions of CH₄ and N₂O from diesel combustion are included, total construction-phase emissions are estimated at approximately 130–135 tCO₂e. Additional emissions from material transportation are expected but remain limited due to the small scale of the Subproject; these will be refined once final haulage distances and trip numbers are confirmed.

The impact of the Subproject on climate change through GHG emissions has been assessed as a direct, adverse impact. Since the scope is regional and limited to the construction period, the impact is considered short-term. Although the sensitivity of the receptor (the atmosphere) has been assessed as moderate, due to the scale of the Subproject and the limited number of construction machines/equipment to be used, the significance of the impact has been considered low.

During the operation phase, GHG emissions will arise from the energy consumption required to operate the facility (pumps, aerators, etc.) and from methane (CH₄) and nitrous oxide (N₂O) emissions that may occur during the treatment processes. However, since the Subproject will be designed with modern and energy-efficient technologies, the significance of this impact will also remain low.

Operation Phase:

In contrast to the low-level adverse impact caused by GHG emissions, once operational, the Subproject is expected to create a significant indirect positive impact by enhancing the region's resilience against the adverse effects of climate change. Wastewater treatment plants are critical infrastructure that protect water resources from pollution. Extreme weather events caused by climate change (sudden and heavy rainfall, prolonged droughts) place significant pressure on the quality and quantity of water resources.

With the commissioning of the Köşk WWTP Subproject:

- Domestic and industrial wastewater in the region will be treated and discharged into the environment, thereby protecting sensitive water resources such as Lake Beyşehir and groundwater from pollution.

- The damage to aquatic ecosystems caused by increased pollutant concentrations during drought periods and pollutant loads carried by sudden rainfall events will be prevented.
- In this way, the resilience of local water ecosystems and, consequently, of the local population against problems such as water stress resulting from climate change will be strengthened.

In conclusion, the greenhouse gas emissions generated during the land preparation, construction, and operation phases of the KOSKİ Kôşk WWTP Subproject are assessed as short-term and low-significance adverse impacts. However, the Subproject's core function wastewater management will reduce the pressure of climate change on water resources, thereby creating a long-term, permanent, and highly significant positive impact by strengthening the resilience of the region. Therefore, in the context of climate change, the net impact of the Subproject is considered positive, as it will protect water resources and enhance ecosystem resilience.

4.1.1.5. Environmental Noise

Construction Phase:

The construction phase of the Subproject will involve a range of activities that are expected to generate noise, primarily associated with material handling, vehicle movement, excavation and backfilling works, compaction activities, and the operation of heavy construction machinery such as trucks, excavators, loaders, concrete mixers, and other construction equipment. During this phase, intensive use of construction machinery and equipment such as excavators, loaders, dump trucks, compactors/rollers, cranes, concrete mixers/pumps, and generators, as well as vehicle movements and material loading and unloading activities, may temporarily increase noise levels within and near the Subproject area.

During the construction phase, noise levels expected to be generated by large vehicles and construction equipment were estimated using an estimation method. For a screening-level assessment, typical sound power/sound pressure levels for construction equipment are generally in the range of approximately 80–90 dB(A) at a distance of 10 m under normal operating conditions. For a conservative assessment, a source level of 85 dB(A) at 10 m was assumed for each unit. Noise calculations were carried out for distances ranging between 200 m and 1,000 m, assuming the simultaneous operation of 3 trucks, 1 loader, 1 concrete mixer (transmixer), 1 compactor (cylinder), and 1 all-terrain water tanker. The estimated equivalent noise levels (Leq, dBA) at different distances are summarized below:

200 m: 60.83 dB

420 m: 54.81 dBA

600 m: 51.29 dBA

800 m: 48.79 dBA

1,000 m: 46.85 dBA

According to the noise estimation results, World Bank Group Environmental, Health and Safety (EHS) Guidelines and national noise limit values are not exceeded at distances beyond 200 m from the construction activities. Exceedance of guideline values is limited to the immediate vicinity of the construction area (200 m), where noise impacts are expected to be temporary and localized in nature. Considering the attenuation of noise with distance, noise levels are expected to decrease significantly as distance from the construction site increases, and at the nearest settlements construction noise is expected to approach typical daytime background levels.

In cases where national regulatory requirements differ from the levels and measures presented in the World Bank Group EHS Guidelines, the more stringent requirement will be applied within the Subproject specifications.

Noise impacts during construction are expected to be short-term and limited in spatial extent, as construction activities will be carried out progressively and the number of operating machinery and vehicles at any given time will remain limited. Potential receptors are therefore expected to be confined to areas located close to active construction zones. **Short-term noise peaks may** occur along access roads when construction vehicles pass near sensitive receptors; however, these impacts are expected to remain intermittent and localized.

Noise impacts will be managed through the implementation of standard mitigation measures, including regular maintenance of machinery to prevent excessive noise, switching off idling equipment when not in use, restricting noisy activities to daytime working hours where feasible, applying traffic management measures to minimize unnecessary vehicle movements, and using warning signs and controlled access to maintain safe distances. Workers exposed to high noise levels will be provided with appropriate personal protective equipment (PPE) and will receive training on occupational health risks associated with noise exposure.

No blasting activities are planned within the scope of the Subproject; therefore, noise-induced vibration impacts affecting nearby structures or people are not anticipated.

Operation Phase:

During the operation phase of the Subproject, no significant noise impacts are expected. Operational noise will mainly be associated with the routine operation of mechanical equipment such as pumps, blowers, and other electromechanical units, as well as periodic maintenance activities and occasional vehicle movements within the WWTP site. Operational noise impacts are expected to be lower than those during the construction phase and generally confined within the WWTP boundaries due to the controlled nature of operational activities.

To minimize operational noise, regular preventive maintenance will be conducted to ensure that equipment operates efficiently and without abnormal noise. Where required, engineering controls such as acoustic enclosures, silencers, or vibration isolation measures will be applied for noise-generating equipment. With these measures in place, operational noise impacts are anticipated to be manageable and not result in significant nuisance to off-site receptors.

In addition, a noise exemption letter will be obtained for the facility in accordance with the Environmental Permit and License Regulation published in the Official Gazette dated 10.09.2014 and numbered 29115.

4.1.1.6. Impacts Associated with Water, Energy and Raw Materials Use

Construction Phase:

During the construction phase, water will be required mainly for dust suppression (irrigation of working areas), concrete works, and general site needs. Raw materials and resources will be consumed for civil works and installation activities, including aggregates, concrete, gravel, reinforcement steel, piping, and other mechanical/electrical components. These resource demands may lead to temporary pressure on local supply chains, increased traffic due to material transport, and indirect environmental impacts associated with the extraction, production, and transportation of construction materials.

According to TÜİK data, the per capita wastewater generation rate in Türkiye is 210 liters per person per day (l/cap/day). Based on an estimated workforce of 15 personnel during the construction phase, the total domestic wastewater generation is calculated as approximately 3.15 m³/day. This quantity represents domestic wastewater generated solely from workforce-related activities and will be managed in accordance with the ESMP and national regulations to prevent any uncontrolled discharge to soil or surface water bodies.

Based on TÜİK data indicating a per capita daily water consumption rate of 255 liters per person (l/cap/day), the estimated potable water demand during the construction phase, assuming 15 workers, is approximately 3.825 m³/day. This water demand corresponds to domestic use (e.g., sanitation and hygiene) and will be supplied and managed in a controlled manner to avoid unnecessary resource consumption.

Energy use during construction will be mainly related to fuel consumption by heavy machinery and vehicles, and electricity use for temporary site facilities, lighting, and small equipment. Overall impacts are expected to be temporary and manageable, provided that good construction practices are applied.

Mitigation measures will include minimizing unnecessary water use, applying controlled and efficient dust suppression practices, maintaining machinery to reduce fuel consumption, and optimizing logistics to reduce excessive vehicle trips. Materials will be procured from licensed and authorized suppliers, and excess excavated materials will be reused where feasible to reduce raw material demand and waste generation.

Operation Phase:

During the operation phase, continuous water and energy use will be required for the treatment processes and auxiliary systems. Energy consumption will primarily be associated with electromechanical equipment such as pumps, blowers, mixers, sludge dewatering units, and automation systems. Operational raw material use will mainly involve chemicals required for treatment processes (e.g., disinfectants) and consumables used for routine maintenance.

These resource demands may result in ongoing operating costs and indirect environmental impacts related to electricity generation and chemical supply. However, the Subproject is designed to provide long-term environmental benefits by improving wastewater treatment performance and reducing pollutant loads to receiving environments.

During the operation phase, assuming 5 personnel on site, and based on the same per capita wastewater generation rate of 210 l/cap/day, the total domestic wastewater generation is estimated at approximately 1.05 m³/day. This amount is limited in scale and will be managed through the operational wastewater management arrangements of the facility, ensuring no adverse impact on the receiving environment.

During the operation phase, with 5 personnel on site, the daily potable water demand is estimated at approximately 1.275 m³/day based on the same per capita consumption rate. Given the limited number of operational staff, this demand is not expected to create significant pressure on local water resources and will be managed in line with good resource efficiency practices.

Mitigation measures will focus on efficient operation and preventive maintenance to reduce energy consumption and optimize process performance, good housekeeping and inventory control for chemicals and materials, and implementation of operational monitoring to detect inefficiencies and losses. Procurement and storage of chemicals and consumables will be managed in accordance with applicable regulations and GIIP to prevent spills, minimize waste, and ensure occupational and environmental safety.

4.1.1.7. Waste

Construction Phase:

During the construction phase, various types of waste will be generated as a result of excavation, filling, building, and related activities. These include excavated soil, construction and demolition debris, small quantities of hazardous waste such as oils, lubricants, filters, and chemical containers, as well as domestic solid waste produced by construction workers. If not properly managed, these wastes could lead to multiple environmental and social impacts. Excavated soil and debris could cause soil erosion, water contamination, and changes in the local landscape. Hazardous wastes may pose risks to soil and groundwater quality and potential health hazards to workers and nearby communities. Domestic waste, if left unmanaged, could attract pests, create odors, and negatively affect the visual quality of the area. Collectively, inadequate waste management during construction may also have indirect impacts on local biodiversity, drainage systems, and overall site safety.

According to TÜİK statistics, the per capita municipal solid waste generation rate is 1.09 kg per person per day. Based on 15 personnel during the construction phase, the total domestic solid waste generation is estimated at approximately 16.35 kg/day. This quantity reflects only workforce-related domestic waste and will be segregated and disposed of through the municipal waste management system in line with the Waste Management Plan and national legislation.

The impact resulting from the generation of construction waste is assessed as direct and negative, with short-term duration, localized extent, and low significance, provided that appropriate mitigation measures are implemented.

Mitigation Measures:

- Segregate and stockpile excavated soil and construction debris; reuse or recycle materials where feasible.
- Collect hazardous waste in labeled, impermeable containers; store safely on-site; transfer to licensed disposal facilities.
- Provide sufficient waste bins for domestic waste; ensure regular collection and disposal through municipal waste systems.
- Implement training for workers on proper waste handling practices.
- Conduct periodic monitoring of waste management practices and adjust measures as needed.

Operation Phase:

During the operation phase, the main waste streams will include sewage sludge, screenings, grit, small amounts of hazardous waste (including waste oils, spent chemicals, and contaminated containers), and domestic solid waste generated by plant personnel. Improper handling of these wastes could result in odor nuisance, attraction of vectors, contamination of soil or groundwater, visual impacts, and potential health risks for plant staff and surrounding communities. In addition, sludge and screenings that are not managed properly could affect the efficiency of the treatment process and may contribute to environmental hazards.

During the operation phase, with 5 personnel, the daily domestic solid waste generation is calculated at approximately 5.45 kg/day based on the same TÜİK per capita value. This limited quantity will be managed through regular municipal waste collection services and in compliance with the operational Waste Management Plan.

The impact resulting from the generation of operational waste (including sludge, screenings, grit, and small amounts of hazardous waste) is assessed as direct and negative, with medium-term to long-term duration if unmanaged, localized extent, and low significance, assuming proper waste management practices are in place.

Mitigation Measures:

- Stabilize, store, and safely dispose of sewage sludge in accordance with national standards and recognized good practice.
- Collect screenings and grit in covered containers; dispose of them through authorized facilities.
- Securely store and handle hazardous waste; transfer to licensed contractors.
- Provide sufficient waste bins for domestic waste; ensure regular collection and disposal through municipal waste management systems.
- Train operational staff on safe waste handling and monitoring procedures.

Periodically review and improve waste management practices to ensure compliance and minimize environmental impacts.

4.1.1.8. Impacts Associated with Asbestos Containing Materials

Asbestos-containing materials (ACM) are not expected to be encountered as the Subproject is planned as a new construction on a designated area; however, if any suspect material is identified during site preparation, work will be stopped in the relevant area, and appropriate assessment and handling procedures will be followed in accordance with national legislation and GIIP.

4.1.1.9. Biodiversity Risks and Impacts

During the construction phase of the Subproject, some impacts on the biological environment and natural assets are expected. The planned Subproject will be implemented in an area that already contains a previously built but currently unused reinforced concrete structure and has been largely altered and degraded.

According to the assessment carried out under WB ESS-6: Biodiversity Conservation and Sustainable Management of Living Natural Resources, no endemic or critically endangered flora species have been identified in the vicinity of the Subproject site. Since the Subproject will be carried out on an existing concrete surface, no direct loss of vegetation cover or habitat is anticipated.

Construction Phase:

The main impacts during the construction phase will be noise, dust emissions, and human presence resulting from the demolition of the existing structure and new construction activities. These impacts may temporarily disturb wildlife species that could potentially use the Subproject site as shelter. To minimize these adverse effects, the following measures will be carefully implemented:

Flora Protection Measure: Since the Subproject will be carried out on an existing concrete surface, no direct loss of vegetation is expected. However, to prevent dust generated during construction activities from adversely affecting the surrounding vegetation, the work area and access roads will be regularly watered by sprinklers.

Fauna Protection Measures:

- Prior to demolition activities, an expert will inspect the existing unused structure to detect species that may use it as shelter (particularly reptiles such as the Common Tortoise, listed as “Vulnerable” under the IUCN).
- In the event that a protected species is encountered, activities will be immediately halted and the situation will be reported to the Regional Directorate of Nature Conservation and National Parks (DKMP), with further actions to be taken according to the instructions received.
- High-noise activities will, as far as possible, be limited to daytime hours. To prevent vehicle collisions with wildlife within the construction site, a speed limit of 30 km/h will be enforced.
- All personnel will receive awareness training on local wildlife and the measures to be implemented. Hunting by personnel will be strictly prohibited.
- Construction and domestic waste will be collected in closed and leak-proof containers to avoid attracting wildlife and will be disposed of by licensed companies.

In light of these measures, the impacts of construction activities on fauna species are assessed as direct and adverse, but temporary, manageable, and of low significance.

Operation Phase:

The operational activities of the Subproject are not expected to have any permanent adverse impacts on terrestrial flora and fauna. The environmental approach during the operation phase will focus on the ecological enhancement of the site:

Ecological Landscaping and Rehabilitation

Following the commissioning of the facility, landscaping will be carried out around the facility using local, non-invasive plant species adapted to the region's natural vegetation.

4.1.2. Social Risks and Impacts

4.1.2.1. Labor and Working Conditions

This section identifies and assesses subproject-specific risks and impacts related to labor and working conditions in accordance with national legislation and the World Bank Environmental and Social Standard ESS2 (Labor and Working Conditions).

Construction Phase

During the construction phase of the Köşk WWTP, the workforce will be employed by the Contractor and, where relevant, subcontractors. The estimated workforce is expected to consist primarily of skilled and semi-skilled workers, including civil construction workers, mechanical and electrical technicians, equipment operators, and support staff. The workforce will be predominantly sourced from the regional labor market to the extent feasible, while specialized technical personnel may be mobilized from outside the district.

In line with ESS2 requirements, all workers engaged under the Subproject will be employed based on written contracts clearly defining terms and conditions of employment, including wages, working hours, overtime arrangements, leave entitlements, and social security coverage. All employment practices will comply with the Turkish Labor Law No. 4857 and relevant occupational health and safety legislation (Law No. 6331).

Occupational health and safety (OHS) risks during construction may include excavation works, operation of heavy machinery, lifting operations, electrical works, working at height, confined space entry (if applicable), and traffic-related risks due to material transport. These risks will be managed through the implementation of a site-specific OHS Plan, risk assessments prior to critical activities, toolbox talks, and mandatory use of personal protective equipment (PPE). Workers will receive induction training prior to mobilization and periodic refresher trainings throughout the construction phase.

Training and awareness activities on SEA/SH and communicable diseases (such as HIV/AIDS) will be provided to all workers as part of induction training prior to site mobilization and through regular refresher trainings throughout the construction period. These trainings will aim to raise awareness on acceptable behavior, prevention of SEA/SH risks, transmission routes of communicable diseases, and protective measures.

A Worker Grievance Mechanism prepared under the scope of the SEP will be implemented at the subproject site level to also cover subproject workers and will be communicated to all workers in a language they understand. The mechanism will allow workers to raise concerns related to working conditions, OHS, discrimination, harassment, or any other workplace issue without fear of retaliation. Grievances will be recorded, assessed, and resolved within defined timeframes.

The Subproject strictly prohibits child labor and forced labor. The minimum working age will be verified during recruitment processes, and no person under the age of 18 will be employed in hazardous construction activities. Equal opportunity principles will be applied in recruitment and employment practices, and discrimination based on gender, ethnicity, religion, disability, or other protected characteristics will not be permitted.

Given the rural setting of Köşk Neighborhood and the limited subproject footprint, no significant labor influx is anticipated. However, the Contractor will implement a Code of Conduct for all workers, addressing respectful behavior toward local communities, prevention of gender-based violence (GBV) and sexual harassment (SH), and compliance with community health and safety rules.

The Contractor will ensure that all workers are informed about the Code of Conduct, which includes explicit provisions on SEA/SH prevention, respectful interaction with local communities, and a zero-tolerance approach to any form of harassment or exploitation. Training materials will be delivered in a language understood by the workforce, and participation will be documented.

These measures will be implemented as part of the labor and working conditions framework in line with ESS2 requirements and will be monitored throughout the construction phase.

Operation Phase

During the operation phase, labor-related risks and impacts are expected to be significantly lower in scale and intensity compared to the construction phase. The WWTP will be operated by a limited number of skilled personnel employed by KOSKİ, including operators, technicians, and maintenance staff.

Operational phase risks are mainly associated with routine occupational health and safety issues, such as exposure to wastewater, sludge handling, use of chemicals for treatment and disinfection, confined space entry, electrical systems, and mechanical equipment maintenance. If not adequately controlled, these activities may pose health and safety risks to workers.

Employment conditions during the operation phase are expected to be formal, stable, and regulated under KOSKİ's internal procedures and national labor legislation. No significant risks related to child labor, forced labor, or informal employment are anticipated.

The presence of an established institutional structure within KOSKİ, combined with existing OHS management systems, regular training programs, and internal grievance mechanisms, is expected to ensure compliance with ESS2 requirements and minimize labor-related risks during operation.

Overall, labor and working condition risks associated with the Subproject are considered manageable and localized, provided that the identified mitigation measures are effectively implemented and monitored throughout both construction and operation phases.

4.1.2.2. Occupational Health and Safety (OHS)

This section identifies and assesses Subproject-specific occupational health and safety (OHS) risks and impacts associated with the Kışk Wastewater Treatment Plant (WWTP) Subproject during the construction and operation phases.

OHS risks may arise from exposure to physical, chemical, biological, and ergonomic hazards, as well as from occupational accidents and work-related illnesses. If not properly managed, these risks could result in significant adverse impacts. Therefore, OHS risks will be managed through the implementation of mitigation measures defined under the ESMP and supporting Contractor management plans, in line with ESS2 and ESS4.

Construction Phase:

During the construction phase, occupational health and safety risks are mainly associated with construction site activities, use of heavy machinery and equipment, excavation and earthworks, and structural construction works.

The main Subproject-specific OHS risks anticipated during the construction phase include:

- Cave-ins, slips, trips, falls, and struck-by accidents during excavation, earthworks, and civil works,
- Collision, crushing, and overturning risks related to the operation and movement of heavy machinery and construction vehicles,
- Fall hazards during working at heights (e.g., scaffolding, formwork, and structural works),
- Exposure to noise, dust, and vibration, potentially leading to occupational health impacts,
- Fire, burn, and eye injury risks during welding, cutting, and other hot works,
- Exposure to fuels, oils, and construction-related chemicals, posing risks to skin and respiratory health,
- Electrical hazards associated with temporary electrical installations,
- Ergonomic risks related to manual handling and repetitive tasks.
- Hot works (cutting, welding, grinding, etc.)
- Slip, trip, and fall hazards
- Ergonomic risks (manual handling, repetitive movements, improper postures)
- Confined space entry
- Excavation and potential collapse hazards
- Poor hygiene and inadequate sanitation conditions
- Exposure to dust and noise

Construction-phase OHS impacts are assessed as direct and adverse, temporary and localized in nature. However, if not adequately controlled, these risks may result in serious accidents and injuries.

OHS risks during construction will be managed through measures including mandatory use of personal protective equipment (PPE), regular OHS training and toolbox talks, permit-to-work systems for high-risk activities, site traffic management, emergency preparedness and response procedures, and routine site inspections and supervision.

Operation Phase:

During the operation phase, occupational health and safety risks will be associated with the routine operation of the WWTP, maintenance and repair activities, and handling of wastewater, sludge, and chemicals.

The main Subproject-specific OHS risks anticipated during the operation phase include:

- Confined space entry risks (e.g., pumping stations, tanks, sludge handling units), including suffocation and toxic gas exposure,
- Exposure to hazardous gases, such as methane (CH₄) and hydrogen sulfide (H₂S),
- Chemical handling, storage, and dosing risks, including spills, leaks, and accidental exposure,
- Mechanical hazards associated with rotating equipment and electromechanical systems,
- Noise exposure during operation of pumps, blowers, and other equipment,
- Increased accident risks during maintenance and repair works,
- Biological hazards related to contact with wastewater and sludge.

Operational phase OHS impacts are assessed as direct and adverse and may be of moderate significance if not properly managed. However, due to the controlled operational environment, use of automation systems, gas detection and alarm systems, established emergency procedures, and regular staff training, these risks are expected to remain at acceptable levels.

Operational OHS management will be supported by site-specific OHS procedures, confined space entry permit systems, chemical management and safe storage practices, periodic health surveillance, emergency drills, and continuous monitoring and reporting.

Overall, the occupational health and safety risks associated with the Subproject are considered manageable, provided that the mitigation measures defined under the ESMP and the Occupational Health and Safety Management Plan (OHSMP) are effectively implemented.

Effective management of OHS risks will ensure the protection of workers' health and safety and support the safe, compliant, and sustainable implementation of the Subproject.

4.1.2.3. Community Health and Safety

This section assesses subproject-specific risks and impacts on community health and safety in accordance with ESS4, taking into account baseline socio-economic conditions and site-specific characteristics of the Köşk Wastewater Treatment Plant Subproject.

Construction Phase

During the construction phase, community health and safety risks are primarily associated with temporary construction activities within the Area of Influence, particularly in Köşk Neighborhood, and indirectly in the beneficiary neighborhoods of İmrenler and Selki. Given the rural and agricultural character of the area, nearby residents may be exposed to temporary increases in noise, dust, and vibration generated by excavation works, material handling, concrete works, and vehicle movements.

Site-specific observations indicate that agricultural activities and livestock breeding are carried out in close proximity to the Project area. Elderly residents, households engaged in farming, and vulnerable groups identified in the baseline may be more sensitive to temporary disturbances. Seasonal population increases during summer months, including children and young people returning to the neighborhoods, may further increase sensitivity to construction-related risks.

In addition, potential disruptions to water and energy supply during the construction period may result in temporary inconvenience to local communities, including interruptions to daily household activities and local services. Such disruptions will be minimized through advance planning and coordination with relevant service providers. In the event of unavoidable interruptions, affected communities will be informed in advance, and appropriate mitigation measures will be implemented to reduce the duration and associated impacts. Access to active construction areas will be physically restricted through barriers, fencing, and clearly visible warning signs in order to prevent unauthorized entry and reduce community exposure to construction-related hazards.

Community health and safety risks may also arise from unauthorized access to construction areas, interaction between residents and construction machinery, improper storage of materials or wastes, and accidental spills. These risks are mainly localized around the WWTP site, construction access points, and sections of local roads used for material transport.

Unlike the generic risks identified at the İLBANK's ESMS level, the Subproject does not involve the construction of new access roads, construction camps, or new energy transmission lines. Therefore, large-scale land scarring, vegetation loss, or long-term exposure of communities to construction hazards is not anticipated. Construction-related community health and safety impacts are expected to be temporary, localized, and manageable through standard mitigation measures defined in the ESMP.

Operation Phase

During the operation phase, community health and safety risks are expected to be low. The wastewater treatment plant will operate within a fenced and controlled area, with restricted public access and limited interaction between the facility and surrounding communities.

The primary operational-phase effect on community health is expected to be positive, as the Subproject will eliminate the discharge of untreated wastewater into receiving water bodies. Stakeholder consultations identified existing pollution of surface waters as a concern, particularly regarding potential environmental and health risks. Centralized wastewater treatment is therefore expected to improve environmental quality and public health conditions in the long term.

No significant risks related to odor, vector attraction, or accidental releases are anticipated during normal operations, provided that the plant is operated in compliance with applicable standards and monitoring requirements. Operational impacts on community health and safety are assessed as not significant.

4.1.2.4. Traffic Safety

This section assesses subproject-specific traffic safety risks in accordance with ESS4, based on existing transportation patterns and anticipated construction and operation activities.

Construction Phase

Traffic safety risks during the construction phase are associated with temporary increases in vehicle movements along existing local roads used by residents of Köşk Neighborhood and surrounding agricultural areas. These roads are currently characterized by low traffic volumes and are shared by pedestrians, agricultural machinery, livestock, and private vehicles.

Construction traffic, including trucks transporting materials and equipment, may temporarily increase the risk of traffic incidents, particularly along routes passing through agricultural lands and near residential areas. Risks are higher during peak agricultural periods and in locations where road users include vulnerable groups such as elderly residents and children during summer months.

These impacts will affect areas that are already used for traffic under baseline conditions, rather than introducing traffic impacts to previously unaffected locations. No new permanent traffic routes will be created. Traffic safety risks are therefore considered temporary and reversible, and will be managed through traffic management measures, coordination with local authorities, speed controls, warning signage, and advance communication with residents and mukhtars.

Operation Phase

During the operation phase, traffic volumes are expected to return to baseline levels. Operational traffic will be limited to routine staff access, maintenance activities, and occasional sludge transport vehicles.

Given the low frequency of operational vehicle movements and continued use of existing road infrastructure, no long-term adverse impacts on traffic safety are anticipated. Operational-phase traffic safety risks are assessed as negligible

4.1.2.5. Pedestrian Safety

This section evaluates pedestrian safety risks in line with ESS4, taking into account daily movement patterns and vulnerable users.

Construction Phase

Pedestrian movement within the Area of Influence primarily occurs along existing local roads and informal paths used for access to agricultural lands, livestock areas, and neighborhood facilities. These routes are already shared with vehicles under baseline conditions.

For a screening-level estimate, the main machinery is expected to include 1 excavator, 1 compactor, and 1 JCB. Assuming 264 working days, and an average active operation time of 6 hours/day per equipment unit, the total engine operating time is estimated at 4,752 equipment-hours. Using typical diesel consumption rates for this type of equipment (excavator ~12 L/h, compactor ~10 L/h, JCB ~8 L/h), total diesel consumption is estimated at approximately 47,520 liters over the construction period. Based on standard diesel combustion factors, this corresponds to approximately 127 tCO₂ of total exhaust emissions (47,520 L × 2.68 kg CO₂/L). For criteria pollutants, and in the absence of confirmed engine tier/standards and detailed activity data, a conservative screening range is assumed for off-road diesel equipment: total NO_x on the order of approximately 0.9–1.8 tonnes and total diesel PM on the order of approximately 0.03–0.06 tonnes over the full construction period.

Dust generation is expected to be driven primarily by earthworks and movements on unpaved. In the absence of confirmed haulage/truck numbers and travel distances, a conservative unpaved-road dust estimate is presented for screening purposes assuming combined daily movements of construction machinery and associated vehicles of approximately 5 km/day on unpaved surfaces. Over 264 working days, this corresponds to approximately 1,320 vehicle-km. Using typical screening emission factors for unpaved surface travel, fugitive dust generation is estimated on the order of approximately 0.1–0.3 tonnes of PM₁₀ over the construction period, with the upper end reflecting dry-season conditions and increased traffic intensity.

During construction, pedestrian safety risks may increase temporarily due to construction vehicle movements, excavation works near road edges, and temporary obstruction of informal paths used by farmers and residents. Certain pedestrian routes used to access fields and grazing areas may be temporarily restricted or diverted during specific construction activities, such as trenching or material placement. These restrictions are expected to last for short periods (days to weeks) depending on the activity.

Pedestrians potentially affected include elderly residents, farmers, and children during summer months. Interaction points between pedestrians and construction activities are expected mainly near the WWTP site entrance, access roads, and sections of local roads used for material transport.

The Subproject does not involve the construction of pedestrian underpasses, overpasses, or tunnels, and does not introduce new permanent pedestrian barriers. With appropriate signage, physical separation where necessary, controlled vehicle speeds, and communication on access restrictions, pedestrian safety risks during construction are assessed as manageable.

Operation Phase

During operation, pedestrian safety risks are expected to be minimal. The facility will be fenced, and routine operational activities will not interfere with pedestrian routes or daily movement patterns.

No permanent restrictions on pedestrian or bicycle access are anticipated during the operation phase, and areas temporarily affected during construction will revert to baseline conditions. Operational impacts on pedestrian safety are assessed as not significant.

4.1.2.6. Loss of Land and Livelihoods

This section assesses subproject-specific risks and impacts related to land acquisition, land use restrictions, and livelihoods in accordance with the World Bank Environmental and Social Standard ESS5, taking into account the İLBANK's ESMS-level assessment and the specific design characteristics of the Subproject.

Construction Phase

The Köşk Wastewater Treatment Plant Subproject does not require acquisition of private land, physical displacement of households, or permanent restriction of access to land or livelihood-related assets. The wastewater treatment plant is located on land owned by the Konya Water and Sewerage Administration (KOSKİ).

All collector lines to be constructed within the scope of the Subproject are planned entirely within existing road corridors and publicly owned rights-of-way. The collector system does not pass through privately owned agricultural parcels, grazing lands, or residential plots. As a result, the construction of the collector lines will not result in loss of farmland, restriction of access to livelihood areas, or displacement of formal or informal land users.

During site investigations, limited instances of agricultural activities extending into the boundaries of the Project area were identified on two parcels adjacent to the wastewater treatment plant site. Following identification of this issue, KOSKİ personnel engaged directly with the relevant land users and reached agreements to withdraw agricultural activities from the Project area without causing any damage to standing crops. This process ensured that no economic loss occurred. Documentation related to these agreements is provided in the relevant Annex M.

Temporary and indirect livelihood-related impacts during construction may arise from short-term disturbances such as dust generation, noise, and temporary access limitations along local roads and field paths used for agricultural purposes. These impacts may affect households engaged in farming and livestock breeding, particularly those located in close proximity to the Project site. However, such impacts are expected to be localized, short-term, and reversible, and they do not constitute economic displacement under ESS5.

The Subproject does not involve the construction of new access roads, construction camps, or energy transmission lines. Therefore, large-scale land scarring, vegetation loss, permanent loss of agricultural land, or long-term disruption of livelihoods is not anticipated.

Operation Phase

During the operation phase, no impacts related to land acquisition, land use restriction, or loss of livelihoods are anticipated. The wastewater treatment plant will operate entirely within its designated boundaries, and no additional land take will be required.

Operation of the facility will not interfere with surrounding agricultural activities, grazing practices, or access routes used by local communities. Land uses temporarily influenced during the construction phase will revert to baseline conditions once construction activities are completed.

From a livelihoods perspective, the operation phase is expected to have neutral to positive indirect effects. Improved wastewater management and the elimination of untreated wastewater discharges are expected to contribute to improved environmental quality, which may support agricultural productivity and reduce environmental health risks in the long term.

Accordingly, the Subproject does not trigger involuntary resettlement or economic displacement under ESS5. Impacts related to loss of land and livelihoods during both construction and operation phases are assessed as not significant

4.1.2.7. Disadvantaged and Vulnerable Individuals or Groups

This section assesses subproject-specific risks and impacts on disadvantaged and vulnerable individuals or groups in accordance with the World Bank Environmental and Social Standards ESS1 and ESS10, taking into account baseline socio-economic conditions and site-specific characteristics of the Subproject area.

Construction Phase

During the construction phase, disadvantaged and vulnerable individuals or groups within the Subproject service area may be more sensitive to temporary construction-related disturbances compared to the general population. Baseline assessments identified vulnerable groups in Köşk, İmrenler and Selki neighborhoods, including low-income households, female-headed households, elderly individuals aged 75 and above, persons with disabilities, and households dependent on agriculture and livestock breeding.

Construction activities may generate temporary impacts such as noise, dust, increased vehicle movements, and temporary access restrictions along local roads and informal paths used for daily activities. Elderly residents and persons with limited mobility may experience greater difficulty in avoiding construction zones or adjusting to temporary changes in access routes. Children and young people, particularly during summer months when seasonal population increases occur, may also face elevated safety risks if construction activities coincide with periods of increased outdoor activity.

Households whose livelihoods depend on proximity to agricultural lands may be temporarily affected by construction-related disturbances, such as dust deposition on crops or limited access to field paths. While these impacts are not expected to result in economic displacement, vulnerable households may have reduced coping capacity for short-term disruptions.

These risks are expected to be localized, temporary, and manageable. The Subproject-specific ESMP and SEP include measures to ensure targeted communication, accessible grievance mechanisms, and proactive engagement with vulnerable groups to minimize adverse impacts during construction.

Operation Phase

During the operation phase, impacts on disadvantaged and vulnerable individuals or groups are expected to be minimal. The wastewater treatment plant will operate within a fenced and controlled area, and routine operational activities will not interfere with daily living patterns, access routes, or livelihood activities of surrounding communities.

The primary operational-phase effect for vulnerable groups is expected to be positive and indirect, through improved environmental quality and reduced exposure to untreated wastewater and associated health risks. No new risks specific to vulnerable groups are anticipated during normal operation.

Accordingly, operational phase impacts on disadvantaged and vulnerable individuals or groups are assessed as not significant, provided that stakeholder engagement and grievance mechanisms remain accessible and responsive.

4.1.2.8. Cultural Heritage

This section assesses subproject-specific risks and impacts related to cultural heritage in accordance with the World Bank Environmental and Social Standard ESS8.

Tangible Cultural Heritage

Construction Phase:

Based on desk-based reviews, available cultural heritage inventories, and site-specific field observations, no registered or known tangible cultural heritage assets are located within the Project site or along the routes of the collector and discharge lines. The Subproject does not overlap with areas of archaeological, historical, or architectural significance

The closest known cultural heritage site to the Subproject area is the Beyşehir / Yunuslar Inn, which is located approximately 10 km from the Project site and is included in the UNESCO World Heritage Tentative List. Considering this distance and the nature of the planned construction activities, no direct or indirect impacts on this site are anticipated.

Nevertheless, there remains a low probability of encountering previously unknown subsurface archaeological remains during excavation works. Therefore, in accordance with national legislation and the requirements of ESS8, a Chance Finds Procedure

(Annex J) has been prepared and will be implemented during the construction phase. In the event of an unexpected discovery, construction activities will be suspended immediately and the relevant authorities will be notified.

Operation Phase:

No impacts on tangible cultural heritage are expected during the operation phase, as the operation of the wastewater treatment plant will not involve ground-disturbing activities or interventions that could affect cultural heritage assets.

Intangible Cultural Heritage

Construction Phase:

Intangible cultural heritage in the Subproject area is primarily associated with rural lifestyles, agricultural practices, and community-based social relations. Although Konya Province is internationally recognized for intangible cultural heritage elements such as the Mevlevi Sema Ceremonies, these practices are not spatially or functionally linked to the Subproject area.

Field observations and consultations with local mukhtars confirmed that the Project site and associated infrastructure corridors are not used for rituals, ceremonies, festivals, or other culturally significant activities. Therefore, the construction activities of the Subproject are not expected to interfere with local traditions, cultural expressions, or community-based practices.

Operation Phase:

No impacts on intangible cultural heritage are anticipated during the operation phase, as the wastewater treatment facility will operate within a controlled infrastructure area and will not affect community life, cultural practices, or traditional activities in the surrounding settlements.

4.2. Construction ESMP Matrix

No	Risk and Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
ESS2 - Labor and Working Conditions					
1	Risks associated with labor and working conditions	Subproject construction workers Contractor and subcontractor personnel On-site technical and supervisory staff Other Subproject-related personnel present at the construction site	<u>General Measures</u> • Ensure that the Subproject workers are provided with information and documentation that is clear and understandable regarding their terms and conditions of employment. The information and documentation will set out their rights under national labor and employment law (which will include any applicable collective agreements), including their rights related to hours of work, wages, overtime, compensation and benefits, as well as those arising from the requirements of ESS2. • Ensure that information and documentation regarding employees' terms and conditions of employment is provided at the beginning of the working relationship and when any material changes to the terms or conditions of employment occur. • Ensure that the Subproject workers are paid on a regular basis as required by national legislation and the Subproject-specific LMP. • Ensure that the Subproject workers are provided with adequate periods of rest per week, annual holiday and sick, maternity and family leave, as required by national legislation and the Subproject-specific LMP. • Ensure that the decisions relating to the employment or treatment of Subproject workers are not made on the basis of personal characteristics unrelated to inherent job requirements. • Ensure that the employment of Subproject workers is based on the principle of equal opportunity and fair treatment, and there will be no discrimination with respect to any aspects of the employment relationship, such as recruitment and hiring, compensation (including wages and benefits), working conditions and terms of employment, access to training, job assignment, promotion, termination of employment or retirement, or disciplinary practices.	• Contractor • Subcontractors • Project Implementation Unit (PIU) • Social Specialist • OHS Specialist	• Labor Management Plan (LMP) • Contractor Management Plan (CMP) • Occupational Health and Safety Plan • Workers' Grievance Mechanism Procedure • National Labor Legislation

No	Risk and Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
			- Measures will be taken to prevent employment or engagement of children under the minimum age established in GFC Project's LMP⁵. - Measures will be taken in accordance with the Subproject specific Labor Management Plan to prevent use of forced labor⁶ in connection with the Subproject. - Where on-site or off-site accommodation services⁷ are provided to Subproject workers, ensure that the relevant requirements of "Workers' Accommodation: Processes and Standards: A guidance Note by IFC and the EBRD (August 2009)" are in place and implemented on the management and quality of accommodation to protect and promote the health, safety, and well-being of the Subproject workers, and to provide access to or provision of services that accommodate their physical, social and cultural needs. <u>Site-specific Measures</u> - A Subproject-specific Labor Management Plan (LMP) will be implemented during the construction phase in line with ESS2 and applicable national labor legislation. - All contractors and subcontractors will be contractually required to comply with the provisions of the LMP, including working hours, wages, leave entitlements, non-discrimination, and the prohibition of child and forced labor. - Prior to the commencement of construction activities, all workers will receive site-specific induction training, covering working conditions, occupational health and safety requirements, codes of conduct, and the workers' grievance mechanism.		

⁵ According to the Project LMP, workers under the age of 18 will not be engaged by the Project.

⁶ Forced labor consists of any work or service not voluntarily performed that is exacted from an individual under threat of force or penalty. Work is on a voluntary basis when it is done with the free and informed consent of a worker. Such consent must exist throughout the employment relationship and the worker must have the possibility to revoke freely given consent. In particular, there can be no "voluntary offer" under threat or other circumstances of restriction or deceit. To assess the authenticity of a free and informed consent, it is necessary to ensure that no external constraint or indirect coercion has been carried out, either by an act of the authorities or by an employer's practice.

⁷ Those services might be provided either directly by the Sub-borrower, contractors or by third parties.

No	Risk and Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
			- A Worker Grievance Mechanism will be established and communicated to all workers, allowing confidential and anonymous submission of grievances without retaliation. - Regular site inspections and supervision will be carried out to monitor compliance with labor and working conditions requirements throughout the construction phase. - A Code of Conduct will be implemented for all workers, including contractors and subcontractors, in line with ESS2 requirements. The Code of Conduct will include explicit provisions on the prevention of Sexual Exploitation and Abuse/Sexual Harassment (SEA/SH), respectful interaction with local communities, and a zero-tolerance approach to any form of harassment, exploitation, or discrimination. - All workers will receive mandatory training and awareness sessions on SEA/SH and communicable diseases (such as HIV/AIDS) as part of induction and periodic refresher trainings. These trainings will address acceptable behavior, reporting mechanisms, prevention measures, and health protection practices. Participation will be documented and monitored throughout the construction phase.		
	OHS – General Hazards	Construction workers Contractor and subcontractor personnel On-site technical and supervisory staff Visitors authorized to enter the construction site	<u>General Measures</u> - Develop and implement a Subproject-specific Risk Assessment, OHS Management Plan, Emergency Preparedness and Response Plan addressing emergency events relevant to the construction phase of the Subproject including both construction and camp site. - Ensure that monitoring and record-keeping activities, as well as accident and incident investigation reports, including audit procedures designed to verify and document the effectiveness of occupational hazard prevention and exposure control measures, are retained on file for a minimum of fifteen (15) years. This retention period is established in line with the applicable statute of limitations for retroactive claims under the Turkish Penal Code.	- Contractor - Subcontractors - OHS Specialist - Project Implementation Unit (PIU)	- Construction workers - Contractor and subcontractor personnel - On-site technical and supervisory staff - Visitors authorized to enter the construction site

No	Risk and Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
			• Install railing around all process tanks and pits. Require use of a life line and personal flotation device (PFD) when workers are inside the railing, and ensure rescue buoys and throw bags are readily available. • Use PFDs when working near waterways. • Maintain work areas to minimize slipping and tripping hazards. • Use proper techniques for trenching and shoring; • Implement fire and explosion prevention measures in accordance with internationally accepted standards; • Completely enclose the perimeter of the subproject area to prevent uncontrolled access and ensure that only authorized people are allowed to enter, and ensure the employment of adequate security personnel. • Ensure that the minimum requirements of helmet, reflective vest and safety shoes are fully complied with in the site. • During subproject work, where risks cannot be eliminated or sufficiently reduced by techniques for collective protection or by measures, methods or processes used in the organization of work, ensure that health and safety signs are provided and used in appropriate places in accordance with the regulation on health and safety signs. • Proper security of passageways reserved for construction site workers and visitors must be ensured. • Ensure that site cleanliness and tidiness standards are established and implemented by employees. (i) provision of first aid kits; (ii) provision of trained first aiders; (iii) provision of fire fighting equipment at construction sites and in machinery- in accordance with the national regulations. <u>Site-specific Measures</u> • A site-specific OHS Risk Assessment will be conducted prior to the commencement of construction works and updated as construction activities progress. • Toolbox talks will be carried out regularly to address site-specific hazards, including excavation works, heavy machinery operation, working at height, and simultaneous activities.		

No	Risk and Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
			- Access to the construction site will be strictly controlled, and unauthorized entry will be prevented through continuous fencing, signage, and security measures. - Emergency assembly points, emergency contact information, and evacuation routes will be clearly marked and communicated to all workers. - All incidents and near-misses occurring during construction will be recorded, investigated, and corrective actions will be implemented accordingly.		
	OHS - Physical Hazards: Confined Spaces	Construction workers involved in confined space works Contractor and subcontractor personnel authorized to enter confined spaces On-site technical and supervisory staff	<u>General Measures</u> - Ensure the implementation of engineering measures to eliminate, to the extent possible, the presence and negative character of confined spaces. - Ensure that permanent safety measures are provided for ventilation, monitoring and recovery operations to the extent possible in confined spaces requiring authorization. - Ensure that special Standard Operating Procedures (SOPs) for Confined Space Entries are in place, including work permit system for entry into confined spaces. - Access hatches should accommodate 90% of the worker population with adjustments for tools and protective clothing. The most current ISO and EN standards should be consulted for design specifications - Implement a confined spaces entry program that is consistent with applicable national requirements and internationally accepted standards. Valves to process tanks should be locked to prevent accidental flooding during maintenance; - Before entering a confined space requiring authorization, ensure that the following measures have been implemented: - Process or feed lines into the space will be disconnected or drained, and blanked and locked-out. - Mechanical equipment in the space will be disconnected, de-energized, locked-out, and braced, as appropriate. - Revised according to our OHS expert's comments	- Contractor - Subcontractors - OHS Specialist - Site Supervisor - Project Implementation Unit (PIU)	- Occupational Health and Safety Management Plan - Confined Space Entry Procedure - Emergency Preparedness and Response Plan - Contractor Management Plan - National OHS Legislation on Confined Spaces

No	Risk and Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
			○ Ensure that the measuring instruments are calibrated up to date. ○ If the atmospheric conditions are not met, the confined space will be ventilated until the target safe atmosphere is achieved, or entry is only to be undertaken with appropriate and additional PPE. ○ Control that the employee who will enter the confined space should have a portable gas measuring device on him/her and should leave the area when out-of-limit values occur in gas measurement for some reason. ● Ensure that safety measures include Self-Contained Breathing Apparatus (SCBA), lifelines and safety lookouts located outside the confined space, with rescue and first aid equipment readily available. ● Ensure that adequate and appropriate training in confined space hazard control, atmospheric testing, use of required PPE, and availability and integrity of PPE is provided before workers are required to enter a permit-required confined space. ● Ensure that adequate and appropriate rescue and/or recovery plans and equipment are in place before the worker enters the confined space. ● Obtain onfirmation from the workplace physician that employees entering the confined space are fit to work in the confined space. ● Ensure that confined space rescue drills are carried out regularly to enhance preparedness and emergency response effectiveness. <u>Site-specific Measures</u> ● A site-specific Confined Space Entry Permit System will be implemented for all confined space works during construction. ● Confined spaces to be encountered during construction (e.g. manholes, tanks, pits, chambers) will be identified, registered, and clearly marked prior to entry. ● Entry into confined spaces will only be allowed for trained and authorized personnel, under continuous supervision. ● Atmospheric testing (oxygen, flammable gases, toxic gases) will be conducted before and during entry, and results will be recorded.		

No	Risk and Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
			- A stand-by attendant will be assigned outside the confined space during all entry works, with continuous communication maintained. - Emergency rescue procedures specific to confined space works will be established and integrated into the site Emergency Preparedness and Response Plan. - Confined space rescue drills will be conducted periodically during the construction phase.		
	OHS - Physical Hazards: Electrical Hazards	Construction workers exposed to electrical works Electricians and authorized technical personnel Contractor and subcontractor personnel working near energized equipment On-site technical and supervisory staff	<u>General Measures</u> - Ensure that all energized electrical devices and lines are marked with warning signs - Ensure that the devices are locked (de-charging and leaving open with a controlled locking device) and labeled (warning sign placed on the lock) during service or maintenance. - Ensure that all electrical cords, cables, and hand power tools are checked for frayed or exposed cords. Also, ensure that the manufacturer's recommendations for the maximum permitted operating voltage of portable hand tools are followed - Ensure that all electrical equipment used in environments that are or may be wet is double insulated/grounded; use equipment with ground fault interrupter (GFI) protected circuits. - Ensure that power cords and extension cords are protected against damage from traffic by shielding or suspending above traffic areas - Ensure that high-voltage equipment ('electrical hazard') and service rooms where access is controlled or prohibited are properly labeled. - Ensure that "No Approach" zones are established around or under high voltage lines. - Ensure that construction vehicles or other vehicles with rubber tires that come into direct contact with or arc across high-voltage cables are taken out of service for 48 hours. - Ensure that all buried electrical cables are thoroughly identified and marked prior to any excavation work.	- Contracto - Subcontractors - Authorized Electrician - OHS Specialist - Site Supervisor - Project Implementation Unit (PIU)	- Occupational Health and Safety Management Plan - Electrical Safety Procedure - Lockout–Tagout (LOTO) Procedure - Construction Phase Risk Assessment - Contractor Management Plan - National OHS and Electrical Safety Legislation

No	Risk and Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
			• Ensure that the lockout-tagout system has a procedure and is implemented on site. • Ensure that the portable electrical panels used in the field are stable, their covers are closed, earthed, insulating rubber mat is used in front of them. • Ensure that there is adequate lighting in the subproject and camp sites and that there are no dark areas that may create a risk of accidents. • Ensure that a Work Permit System has been developed in cases where electricians are required to perform work under live energy. <u>Site-specific Measures</u> • All temporary and permanent electrical installations at the construction site will be designed, installed, and maintained by qualified and authorized electricians only. • A Lockout-Tagout (LOTO) procedure will be implemented and enforced during installation, maintenance, and repair works involving electrical equipment. • Temporary electrical panels and distribution boards used during construction will be clearly labeled, protected against weather conditions, and regularly inspected. • Underground and overhead electrical lines along excavation and construction areas will be identified, marked, and communicated to relevant workers prior to works. • Work permits will be required for live electrical works, and such activities will only be conducted when de-energization is not technically feasible. • Regular inspections will be conducted to ensure the integrity of cables, grounding systems, and electrical equipment throughout the construction phase. • Warning signage and physical barriers will be installed around high-voltage areas to prevent unauthorized access.		
	OHS - Physical Hazards: Fall Protection	Construction workers working at height	<u>General Measures</u> • Implementation of a fall protection program that includes training in climbing techniques and use of fall protection measures; inspection,	• Contractor • Subcontractors • OHS Specialist	• Occupational Health and Safety

No	Risk and Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
		Contractor and subcontractor personnel involved in elevated works On-site technical and supervisory staff	maintenance, and replacement of fall protection equipment; and rescue of fall-arrested workers, among others. Before proceeding with any work at height, investigate the feasibility of completing the tasks at ground level and explore engineering solutions. Additionally, ensure that a special Standard Operating Procedure (SOP) for working at height is in place, including a work permit system. Only personnel approved by the occupational physician will be assigned to work at height. - Establishment of criteria for the implementation of 100 percent fall protection in accordance with the definition of “work at height” as specified in the Regulation on Occupational Health and Safety in Construction Works. Work at height shall be considered any work carried out at a level difference where there is a risk of falling and injury. The fall protection system will be selected based on the specific risk assessment prepared for the activity and will be suitable for the structure and required movements, including ascent, descent, and horizontal movement from point to point. - Use of safety belts not less than 16 millimeters (mm) (5/8 inch) two-in-one nylon or material of equivalent strength. Rope safety belts will be replaced before signs of aging or fraying of fibers become evident. - Use fall protection equipment when working at heights, prioritizing collective protection methods. Additionally, visually check the reliability of the equipment before each use. - When operating power tools at height, use of a second (backup) safety strap by workers. - Ensure that the scaffolds used on site are installed in accordance with the standards and “Occupational Health and Safety Regulations in Construction Works”. - Prior to commencing any work-at-height activity, the relevant personnel shall undergo health surveillance conducted by the occupational physician, and their fitness for working at height shall be documented in writing. The medical evaluation shall include an assessment of any medical conditions that may create a risk of falling (such as balance disorders, epilepsy, visual impairments, cardiovascular conditions, etc.).	- Site Supervisor - Project Implementation Unit (PIU)	Management Plan - Working at Height Procedure - Construction Phase Risk Assessment - Emergency Preparedness and Response Plan - Contractor Management Plan - National OHS Regulations on Working at Height

No	Risk and Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
			This practice shall be implemented in accordance with the provisions of Law No. 6331 on Occupational Health and Safety and the Regulation on the Duties, Authorities, Responsibilities and Training of Occupational Physicians and Other Health Personnel <u>Site-specific Measures</u> • All works at height during the construction phase will be carried out in accordance with a site-specific Working at Height Procedure. • Prior to commencement of any work at height, a task-specific risk assessment will be conducted, and appropriate control measures will be defined. • Collective protection measures (e.g. guardrails, handrails, safety nets) will be prioritized over personal fall arrest systems wherever technically feasible. • Scaffolding, ladders, and access platforms will be installed, inspected, and approved by competent personnel before use and at regular intervals thereafter. • Workers performing tasks at height will receive specific training on fall protection, safe use of equipment, and emergency response procedures. • Weather conditions (e.g. strong wind, rain, icy surfaces) will be monitored, and work at height will be suspended when conditions pose an increased risk of falls. • Designated exclusion zones will be established below working-at-height areas to prevent injuries from falling objects.		
	OHS - Physical Hazards: Rotating and Moving Equipment	Construction workers operating or working near rotating and moving equipment Heavy machinery operators Contractor and	<u>General Measures</u> • Design machines to eliminate trap hazards and ensure that extremities are kept out of harm's way under normal operating conditions; i.e. availability of emergency stops dedicated to the machine and placed in strategic locations. • If a machine or equipment has an exposed moving part or an exposed pinch point that could endanger the safety of any worker, ensure that the machine or equipment is equipped with and protected by a guard or other	• Contractor • Subcontractors • Equipment Operators • OHS Specialist • Site Supervisor • Project Implementation Unit (PIU)	• Occupational Health and Safety Management Plan • Equipment Operation and Maintenance Procedures

No	Risk and Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
		subcontractor personnel present in equipment operating areas On-site technical and supervisory staff	device that prevents access to the moving part or pinch point. Guards should be designed and installed in conformance with appropriate machine safety standards, in accordance with the "Machinery Safe Regulation" (2006/42/AT). - Ensure that machinery with exposed or protected moving parts or in which energy can be stored (e.g. compressed air, electrical components) is turned-off, disconnected, isolated and de-energized (Locked Out and Tagged Out) during service or maintenance. - Where possible, ensure that equipment is designed and installed to enable routine servicing, such as lubrication, to be carried out without removing guarding devices or mechanisms <u>Site-specific Measures</u> - All rotating and moving equipment used during construction (e.g. excavators, loaders, compactors, pumps) will be operated only by trained and authorized personnel. - Machinery and equipment will be equipped with appropriate guards, protective covers, and emergency stop mechanisms, which shall not be removed or bypassed. - Equipment inspection and maintenance records will be maintained, and defective equipment will be immediately removed from service. - Clearly defined equipment operating zones and pedestrian exclusion zones will be established and marked on site to prevent collisions and entanglement risks. - Spotters will be assigned where visibility is limited or where simultaneous activities increase the risk of accidents. - Refueling, maintenance, and repair works will be carried out in designated areas and only when equipment is safely shut down.		- Construction Phase Risk Assessment - Contractor Management Plan - National OHS Legislation
	OHS - Physical Hazards: Welding and Hot Works	Construction workers performing welding, cutting, and other hot works Contractor and	<u>General Measures</u> Ensure that all personnel involved in or assisting with welding operations are provided with appropriate protective equipment, including eye protection, such as welder's goggles and/or a full-face eye shield, fireproof welder clothing, and non-flammable clothing. Additionally,	- Contractor - Subcontractors - OHS Specialist - Site Supervisor - Authorized Welding	- Occupational Health and Safety Management Plan - Hot Work

No	Risk and Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
		subcontractor personnel working in proximity to hot works On-site technical and supervisory staff	ensure that workers performing hot work do not wear flammable nylon reflective vests. • If welding or hot cutting is performed outside of established welding work stations, ensure that special hot work and fire prevention precautions and Standard Operating Procedures (SOPs) are in place, including "Hot Work Permits, stand-by fire extinguishers, stand-by fire watch and maintaining fire watch for up to one hour after welding or hot cutting is finished". • Develop specific procedures for hot work on tanks or vessels containing flammable materials. • Ensure that the instructions for the safe use of grinding machines are available and that work is carried out in accordance with the instructions. • Ensure that safe work instructions for the handling, use and storage of pressurized cylinders used in welding work are in place and implemented on site. <u>Site-specific Measures</u> • All welding and hot works during construction will be carried out under a Hot Work Permit System, approved by the Site Supervisor and OHS Specialist prior to commencement. • Hot work areas will be identified, controlled, and cleared of flammable materials before works begin. • Fire-fighting equipment (e.g. fire extinguishers suitable for hot works) will be made readily available at all hot work locations. • Welding and cutting activities will only be performed by qualified and authorized personnel using appropriate equipment and personal protective equipment (PPE). • Adequate ventilation will be ensured in enclosed or semi-enclosed areas to prevent the accumulation of fumes and gases. • A designated fire watch will be assigned during hot works and for a defined period after completion of activities, where necessary. • Hot works will be suspended during adverse weather conditions that may increase fire or safety risks.	Personnel • Project Implementation Unit (PIU)	Permit Procedure • Emergency Preparedness and Response Plan • Construction Phase Risk Assessment • Contractor Management Plan • National OHS and Fire Safety Legislation

No	Risk and Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
	OHS - Physical Hazards: Industrial Vehicle Driving and Site Traffic	Construction workers exposed to site traffic Operators of industrial vehicles and heavy machinery Contractor and subcontractor personnel working near vehicle routes Authorized site visitors	<u>General Measures</u> • Ensure that industrial vehicle operators are trained in the safe use of specialized vehicles such as forklifts, including safe loading/unloading, load limits, and that they hold an up to date driving license. • Make sure drivers undergo medical supervision • Ensure that moving equipment with restricted rear visibility is equipped with audible and illuminated back-up alarms • Ensure that rights of way, site speed limits, vehicle inspection requirements, operating rules and procedures (e.g. prohibiting operation of forklifts with forks down), and control of traffic patterns or direction are established • Ensure that deliveries and movement of private vehicles are restricted to defined routes and areas, with 'one-way' movement preferred where appropriate so as not to interfere with pedestrian routes. Additionally, ensure that a flagman accompanies vehicle movement. <u>Site-specific Measures</u> • A Site Traffic Management Plan will be prepared and implemented for the construction phase, defining internal traffic routes, speed limits, pedestrian walkways, and vehicle–pedestrian separation measures. • Speed limits will be established within the construction site and clearly communicated through signage. • Designated parking, loading, and unloading areas will be identified to prevent congestion and unsafe maneuvers. • Reversing alarms, warning lights, and mirrors will be installed and maintained on construction vehicles where applicable. • Spotters will be assigned for vehicle movements in confined or high-risk areas. • All drivers and equipment operators will receive site-specific traffic safety training prior to commencing works. • Night-time or low-visibility operations will be subject to additional control measures, including adequate lighting.	• Contractor • Subcontractors • Vehicle Operators • OHS Specialist • Site Supervisor • Project Implementation Unit (PIU)	• Occupational Health and Safety Management Plan • Site Traffic Management Plan • Construction Phase Risk Assessment • Contractor Management Plan • National Traffic and OHS Legislation

No	Risk and Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
	OHS - Physical Hazards: Ergonomics, Repetitive Motion, Manual Handling Lifting	Construction workers involved in manual handling and lifting activities Workers performing repetitive or ergonomically demanding tasks Contractor and subcontractor personnel exposed to musculoskeletal risks	<u>General Measures</u> • Ensure that mechanical assists are used to eliminate or reduce the effort required to lift materials, hold tools and work objects, and that more than one person is lifting if weights exceed thresholds • Ensure that tools are selected and designed that reduce force requirements and holding times and improve postures. Do not use handmade tools, and remove them from the site to ensure safety and compliance with proper standards. • Ensure that user-adjustable workstations are provided • Ensure that rest and stretch breaks are incorporated into work processes and job rotation is in place • Ensure quality control and maintenance programs are in place that reduce unnecessary forces and effort • Ensure that additional special circumstances, such as left-handed people, are considered <u>Site-specific Measures</u> • Manual handling and lifting tasks will be assessed on a task-specific basis, and ergonomic risks will be identified prior to commencement of works. • Where feasible, mechanical lifting aids (e.g. hoists, forklifts, trolleys) will be used to reduce manual handling requirements. • Loads will be planned, sized, and handled to minimize strain, and team lifting will be applied for heavy or awkward loads. • Workers will receive training on safe lifting techniques, posture, and ergonomics as part of site induction and toolbox talks. • Job rotation and adequate rest breaks will be implemented for tasks involving repetitive motion or prolonged physical exertion. • Workstations and work methods will be adjusted, where practicable, to reduce awkward postures and repetitive movements.	• Contractor • Subcontractors • OHS Specialist • Site Supervisor • Project Implementation Unit (PIU)	• Occupational Health and Safety Management Plan • Ergonomics and Manual Handling Procedure • Construction Phase Risk Assessment • Contractor Management Plan • National OHS Legislation
	OHS - Chemical Hazards	Construction workers handling chemicals (e.g. fuels, solvents, lubricants,	<u>General Measures</u>	• Contractor • Subcontractors • OHS Specialist	• Occupational Health and Safety

No	Risk and Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
		paints) Contractor and subcontractor personnel exposed to chemical substances Workers involved in refueling, maintenance, and storage activities On-site technical and supervisory staff	• Ensure that the hazardous substance is replaced with a less hazardous substitute • Ensure that engineering and administrative control measures are in place to prevent or minimize the release of hazardous substances into the working environment, keeping the exposure level below internationally established or recognized limits • Ensure that the number of workers exposed or likely to be exposed is minimal. • Ensure that chemical hazards are communicated to workers through labeling and marking according to nationally and internationally recognized requirements and standards, including International Chemical Safety Cards (ICSC), Material Safety Data Sheets (SDSs) or equivalent. Any means of written communication will be in an easily understood language and be readily available to exposed workers and first-aid personnel • Ensure that workers are provided with hazard communication and training to prepare them to recognize and respond to chemical hazards in the workplace. Programs should include aspects of hazard identification, safe operating and materials handling procedures, safe work practices, basic emergency procedures, and special hazards unique to their jobs. • Ensure that permitted maintenance activities such as hot work or confined space entries are defined and implemented • Ensure that appropriate PPE (including, footwear, masks, protective clothing, goggles and self-contained breathing apparatus, in appropriate areas). Provide training on its proper use (such as self-contained breathing apparatus) and its maintenance. • Ensure that employees are trained in the use of available information (such as SDSs), safe working practices and proper use of PPE • Prohibit eating, smoking, and drinking except in designated areas; • In case of intervention with asbestos-containing materials, ensure that work is carried out in accordance with the ‘Regulation on Health and Safety Measures in Working with Asbestos’	• Site Supervisor • Project Implementation Unit (PIU)	Management Plan • Chemical Management / Hazardous Substances Procedure • Spill Prevention and Response Procedure • Waste Management Procedure (Construction Phase) • Construction Phase Risk Assessment • Contractor Management Plan • National OHS and Hazardous Substances Legislation

No	Risk and Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
			<u>Site-specific Measures</u> - Chemicals used during construction will be inventoried, and Safety Data Sheets (SDS/MSDS) will be available on site in an accessible location. - Chemical storage areas will be designated and managed to prevent spills, including secondary containment, appropriate labeling, and restricted access. - Workers handling chemicals will receive site-specific training on safe handling, PPE requirements, spill response, and first aid measures. - Refueling and chemical transfer activities will be conducted in controlled areas using appropriate equipment to minimize spill and exposure risks. - A spill response procedure will be implemented, and spill kits will be maintained at relevant locations on site. - Empty containers and chemical waste will be managed in accordance with national requirements and applicable waste management procedures.		
	OHS – Excavation Works	Construction workers involved in excavation and trenching activities Contractor and subcontractor personnel working in or near excavations Heavy machinery operators On-site technical and supervisory staff	<u>General Measures</u> - Ensure that special Standard Operating Procedures (SOPs) for Excavation Works is in place, including work permit system for the excavation works at the site. Check that the excavation works are carried out in a way to meet the ‘Regulation on Occupational Health and Safety in Construction Works’. - Ensure that workers have safe access to the excavation trenches and that the necessary sloping, shoring and terracing methods are in place to prevent cave-in hazards that the work area, the excavation pit perimeter is enclosed with physical barriers - In the case of the operation of construction machinery, check that workers are at a sufficient distance from the working area of the machine, they are not located under suspended loads	- Contractor - Subcontractors - OHS Specialist - Site Supervisor - Excavation Works Supervisor - Project Implementation Unit (PIU)	- Occupational Health and Safety Management Plan - Excavation and Trenching Procedure - Construction Phase Risk Assessment - Emergency Preparedness and Response Plan

No	Risk and Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
			<u>Site-specific Measures</u> - All excavation works will be carried out in accordance with a site-specific Excavation and Trenching Procedure prepared prior to commencement. - A task-specific risk assessment will be conducted before excavation activities, considering soil conditions, depth, groundwater, nearby structures, and utilities. - Excavations and trenches will be properly shored, sloped, or benched to prevent collapse, in line with national regulations and good international practice. - Underground utilities (e.g. electricity, water, telecommunications) will be identified, marked, and verified before excavation works begin. - Safe access and egress (e.g. ladders, ramps) will be provided for all excavations exceeding safe depth limits. - Excavation areas will be clearly barricaded and signposted, and unauthorized access will be prevented at all times. - Daily inspections of excavations will be carried out by competent personnel, particularly after heavy rain or other events that may affect stability.		- Contractor Management Plan - National OHS and Excavation Regulations
	Risks associated with management of employee grievances	Construction workers Contractor and subcontractor personnel On-site technical and supervisory staff	- Develop and implement a Subproject-specific Labor Management Plan, including grievance mechanism for Subproject employees (covering all direct and contracted workers) to raise workplace concerns during the construction phase. - Ensure that all direct and contracted workers are informed of the grievance mechanisms at the time of recruitment and the measures put in place to protect them against any reprisal for its use. - Ensure that measures are put in place to make the grievance mechanism easily accessible to all Subproject employees.	- Contractor - Subcontractors - Social Specialist - OHS Specialist - Project Implementation Unit (PIU)	- Labor Management Plan (LMP) - Workers' Grievance Mechanism Procedure - Contractor Management Plan (CMP) - Occupational Health and Safety

No	Risk and Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
					Management Plan National Labor Legislation
ESS3 - Resource Efficiency and Pollution Prevention and Management					
	Resource Efficiency (Energy Use, Water Use and Raw Material Use)				
	Energy Use, Water Use and Raw Material Use	Natural Resources (Water, Fuel, Raw Materials)	<u>General Measures</u> - Implement technically and financially feasible measures to improve energy and water efficiency. - Conduct regular inspection and maintenance of electromechanical equipment to prevent leaks, losses and inefficiencies. <u>Site-specific Measures</u> - Reuse treated effluent for on-site landscape irrigation and process cleaning to reduce freshwater abstraction. - Install Variable Frequency Drives (VFDs) on pumps and blowers to optimize energy consumption. - Use SCADA automation to continuously monitor dissolved oxygen levels and regulate aeration demand. - Administrative building designed to minimize heating and cooling demand.	- Contractor - Site Manager - Project Implementation Unit (PIU)	- Environmental and Social Management Plan (ESMP) - Waste Management Plan
	Management of Soil Resources				
	Soil disturbance and erosion	Soil quality within subproject footprint , Adjacent land/road shoulders	<u>General Measures</u> - Minimize disturbance of soil/vegetation. - Implement erosion control and reinstate disturbed areas. - Avoid unnecessary widening/new road construction. <u>Site-specific Measures</u>	- Contractor - Environmental Specialist - PIU	- Soil Management Plan - Spill Prevention and Response Procedure - Construction Method Statement

No	Risk and Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
			• Access will use existing municipal/village roads; no new access roads; only temporary minor improvements (surface leveling/gravel) if needed; no permanent widening/realignment. • Sewer/collector line works will be within existing rights-of-way; temporarily affected road sections will be reinstated.		
	Impacts on topsoil	Vegetative soil layer	<u>General Measures</u> • Strip and store topsoil for rehabilitation; prevent contamination/compaction. <u>Site-specific Measures</u> • Topsoil will be stripped min. 30 cm prior to construction; stripping will not be done when soil is wet; stockpiles avg. 1.5 m height; side slope $\leq 3:1$ (h:v). • Stored vegetative soil will be reused as top cover during site reinstatement/landscaping.	• Contractor • Environmental Specialist • PIU	• Soil Management Plan • ESMP
	Management of Air Pollution				
	Emissions to air during construction	• Local community • Workers • Nearby receptors along routes	<u>General Measures</u> • Dust suppression and good housekeeping (covering loads/stockpiles); maintain machinery to minimize exhaust. <u>Site-specific Measures</u> • During site prep/civil works (incl. topsoil stripping, excavation, filling, leveling, compaction, stockpiling), apply regular water spraying and housekeeping. • Maintain equipment/vehicles to reduce NO₂/CO/HC/SO₂/PM exhaust.	• Contractor • Site Supervisor • PIU	• Air Quality Management Plan • Traffic Management Plan
	Management of Wastes				
	Generation of non-hazardous and hazardous waste during construction	Soil, Groundwater, Visual Landscape	<u>General Measures</u> • Establish waste management hierarchy (reduce, reuse, recycle, dispose). • Segregate waste at source. • Ensure that waste is classified and labeled according to waste codes. <u>Site-specific Measures</u>	• Contractor • Environmental Specialist • PIU	• Waste Management Plan

No	Risk and Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
			- Establish Temporary Waste Storage Area; store by type; deliver domestic waste to municipality; packaging/hazardous etc. to licensed companies; label with waste code/amount/storage date; store hazardous wastes in leak-proof designated areas. - Comply with Construction & Demolition Waste and Excavation Material regulation; reuse/dispose excavation at licensed sites.		
	Management of Wastewater				
	Wastewater generation (such domestic wastewater, wastewater from construction sites, etc.)	- Groundwater - Surface water - Soil	<u>General Measures</u> - Prevent discharge of untreated wastewater. - Ensure that waste minimization is carried out. <u>Site-specific Measures</u> - Provide portable toilets; collect wastewater in impermeable septic tanks (where connection not possible) and transport to Konya WWTP via licensed vacuum trucks; prevent discharge to groundwater/surface water. - No direct discharge of construction wastewater (e.g., concrete wash water) to the soil or creek bed is permitted; concrete trucks will be washed in designated impermeable areas.	- Contractor - Operator (KOSKİ) - PIU	- Wastewater Management Plan - Water Pollution Control Regulation Compliance
	Management of Chemicals and Hazardous Materials				
	Release of hazardous materials in the event of accidents during construction	Soil, Workers, Surface water	<u>General Measures</u> - Prevent uncontrolled releases of hazardous materials. • Identify the types and the quantities of hazardous substances. <u>Site-specific Measures</u> - No permanent fuel storage on site during construction; mobile refueling only. - During operation, chemicals such as chlorine for the disinfection unit will be stored in a dedicated, secure, and well-ventilated chemical storage building with secondary containment.	- Contractor - OHS Specialist - Operator (KOSKİ)	- Hazardous Material and Waste Management Plan - Emergency Preparedness and Response Plan

No	Risk and Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
			• Safety Data Sheets (SDS) for all chemicals (e.g., fuels, oils, chlorine) will be readily available on site. • Emergency spill kits will be placed near chemical handling areas and on construction vehicles.		
	Management of Environmental Noise and Vibration				
	Noise and vibration generation during construction	Residents of Köşk Neighborhood, Fauna in the vicinity	<u>General Measures</u> • Manage the potential impact of noise, selecting equipment with lower sound power levels. • Plan activities so that noisiest activities are undertaken during periods that will result in least disturbance. <u>Site-specific Measures</u> • Construction activities will be restricted to daytime hours (07:00 – 19:00). • Construction machinery (excavators, loaders) will be modern and well-maintained to meet noise emission standards. • High-noise activities (e.g., demolition of the existing structure) will be scheduled to minimize disturbance and communicated to the nearby community via the Mukhtar. • During operation, pumps and blowers will be housed in acoustic enclosures if necessary to prevent noise nuisance to the nearest receptors.	• Contractor • PIU	• Noise Management Plan • Stakeholder Engagement Plan (SEP)
ESS4 – Community Health and Safety					
	Infrastructure design and safety				
	Risks posed to the public while accessing Subproject facilities (such as physical trauma associated with failure of structures, burns and smoke inhalation)	Local communities and beneficiaries within the administrative boundaries of Köşk Neighborhood	<u>General Measures</u> • Design and construct the structural elements of the Subproject in accordance with national legal requirements, the EHSs and other GIIP, taking into consideration safety risks to third parties and affected communities.	• Administration / Employer • Design Engineers • Contractor • Site Supervisor • Project Implementation	• Environmental and Social Management Plan (ESMP) • Approved Design and Engineering Documents

No	Risk and Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
	from fire, injuries suffered as a consequence of falls or contact with heavy equipment, etc.)	Road users and visitors accessing areas adjacent to construction sites Workers of nearby facilities and land users in the vicinity of construction activities	• Ensure that the structural elements of the Subproject are designed and constructed by competent professionals, and certified or approved by competent authorities or professionals. • Ensure that the structural design takes into account climate change considerations, as appropriate. • Ensure incorporation of siting and safety engineering criteria to prevent failures due to natural risks posed by earthquakes, tsunamis, wind, flooding, landslides and fire. • Ensure design the Subproject structures in accordance with engineering and design criteria mandated by site-specific risks, including but not limited to seismic activity, slope stability, wind loading, and other dynamic loads. • Ensure application of nationally regulated or internationally recognized buildings codes to ensure structures are designed and constructed in accordance with sound architectural and engineering practice, including aspects of fire prevention and response. • Ensure that the engineers and architects responsible for designing and constructing facilities, building, plants and other structures certify the applicability and appropriateness of structure criteria employed. <u>Site-specific Measures</u> • All structural elements of the Subproject will be designed and constructed in accordance with Türkiye's seismic design requirements, taking into account the site's seismicity and applicable national earthquake regulations. • Geotechnical investigations will be conducted for foundations, large excavation areas, and embankments to determine soil characteristics and appropriate design parameters. • Where required, retaining structures, slope stabilization measures, and soil improvement techniques will be incorporated into the design to ensure structural stability during construction and operation.	Unit (PIU)	• Geotechnical Investigation Reports • National Seismic and Building Codes • Technical Specifications adopted by the Administration

No	Risk and Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
			- Temporary and permanent structures will be designed to safely withstand construction loads, equipment loads, and dynamic forces, including seismic effects where applicable. - Climate-related design considerations (e.g. intense rainfall, surface runoff, flooding risk) will be integrated into drainage and structural design to prevent instability and erosion during construction. - Design documents and calculations will be prepared, reviewed, and approved by qualified and authorized engineers, and construction will be supervised to ensure compliance with approved designs.		
	Traffic and Road Safety				
	Traffic and road safety risks during construction (such as traffic related injuries and fatalities due to traffic accidents, collisions, etc.)	Local communities and beneficiaries Road users (drivers, pedestrians, cyclists) Nearby businesses and service users Construction workers exposed to traffic movements	<u>General Measures</u> - Manage the potential impact of increase in traffic, coordination with emergency responders to ensure that appropriate first aid is provided in the event of accidents - Ensure use of locally sourced materials, whenever possible, to minimize transport distances. Locating associated facilities such as worker camps close to Subproject sites and arranging worker bus transport to minimizing external traffic - Ensure employing safe traffic control measures, including road signs and flag persons to warn of dangerous conditions - Develop sub-Project-specific SEP will be implemented to address any construction transport/traffic related grievance and plan/take corrective actions in line with the Grievance Mechanisms, where necessary. As part of SEP, local communities will be informed about the construction sites, traffic restrictions to be applied for health and safety purposes and duration of such restrictions. - Ensure the best transport safety practices are adapted across all aspects of Subproject operations with the goal of preventing traffic accidents and minimizing injuries suffered by Subproject personnel and the public. These measures include: - Emphasizing safety aspects among drivers	- Contractor - Traffic Safety Officer / Site Supervisor - Project Implementation Unit (PIU)	- Traffic Management Plan (Construction Phase) - Stakeholder Engagement Plan (SEP) - Environmental and Social Management Plan (ESMP) - National Traffic and Road Safety Regulations

No	Risk and Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
			○ Improving driving skills and requiring licensing of drivers ○ Adopting limits for trip duration and arranging driver rosters to avoid overtiredness ○ Avoiding dangerous routes and times of day to reduce the risk of accidents ○ Use of speed control devices (governors) on trucks, and remote monitoring of driver actions ● Scheduling of traffic will be undertaken to avoid the peak hours on the local road network wherever practicable (e.g. early in the morning with the daylight). Scheduling information and planned traffic disruptions will be communicated well in advance to all related parties including authorities, local communities and nearby businesses ● When installing or repairing mains adjacent to roadways, implement procedures and traffic controls, such as: ○ Establishment of work zones so as to separate workers from traffic and from equipment as much as possible ○ Reduction of allowed vehicle speeds in work zones; ○ Use of high-visibility safety apparel for workers in the vicinity of traffic ○ For night work, provision of proper illumination for the work space, while controlling glare so as not to blind workers and passing motorists ● Locate all underground utilities before digging. <u>Site-specific Measures</u> ● A Construction Phase Traffic Management Plan will be prepared and implemented, defining haul routes, speed limits, work zones, pedestrian crossings, and traffic control measures. ● Construction traffic will be scheduled, where feasible, to avoid peak hours on local roads and minimize disturbance to local communities.		

No	Risk and Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
			• Temporary traffic signage, warning lights, barriers, and flag persons will be deployed at all locations where construction activities interface with public roads. • Safe pedestrian access will be maintained at all times, including temporary walkways and controlled crossings where required. • Local communities and road users will be informed in advance about traffic diversions, temporary closures, and changes in access through communication channels defined in the SEP. • Coordination will be maintained with relevant local authorities to manage traffic safety and emergency access during construction activities.		
	Pedestrian safety risks during construction (e.g. serious injury from collisions with moving vehicles, etc.)	Residents of Köşk Neighborhood (subproject beneficiaries) Pedestrians and road users in nearby settlements with potential indirect interaction during construction Pedestrians, cyclists, and drivers using existing public roads and local access roads intersecting with or adjacent to the construction areas, including roads along the collector line routes and access roads to the wastewater treatment plant site Vulnerable road users, including children, elderly individuals, and persons with reduced mobility Visitors and service users accessing areas adjacent to	<u>General Measures</u> • Minimize pedestrian interaction with construction vehicles and routes. • Provision of safe corridors along the construction areas for pedestrians and bicyclists during construction. • Installation and maintenance of speed control and traffic calming devices at pedestrian crossing areas during construction. • Ensure collaboration with local communities and responsible authorities to improve signage, visibility and overall safety of roads, particularly along stretches located near schools or other locations where children may be present. Collaborating with local communities on education about traffic and pedestrian safety (e.g. school education campaigns). • Installation and maintenance of all signs, signals, markings, and other devices used to regulate traffic, specifically those related to pedestrian facilities or bikeways during construction. <u>Site-specific Measures</u> • Pedestrian routes in the vicinity of construction areas will be identified, clearly marked, and physically separated from construction vehicle routes wherever feasible.	• Contractor • Traffic Safety Officer / Site Supervisor • Project Implementation Unit (PIU) • Social Specialist	• Traffic Management Plan (Construction Phase) • Stakeholder Engagement Plan (SEP) • Environmental and Social Management Plan (ESMP) • National Traffic and Road Safety Regulations

No	Risk and Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
		construction sites	• Temporary pedestrian crossings, walkways, and safe corridors will be established where existing pedestrian routes are disrupted by construction activities. • Construction vehicle movements will be restricted near pedestrian areas, and speed limits will be enforced at all locations with pedestrian interaction. • Flag persons and warning signage will be deployed at interfaces between construction traffic and pedestrian movements, particularly near access points and road crossings. • Adequate lighting will be provided in pedestrian areas affected by construction works, especially during early morning or evening hours. • Local communities will be informed in advance about changes in pedestrian access, temporary restrictions, and safety measures through communication channels defined in the SEP. • Pedestrian safety measures will be reviewed and updated as construction progresses and site conditions change.		
	Emergency Preparedness and Response				
	Risks and impacts on communities due to potential emergency events during construction (unanticipated incidents, arising from both natural and man-made hazards, typically in the form of fire, explosions, leaks or spills, which may occur for a variety of different reasons, including	Residents of Köşk Neighborhood (subproject beneficiaries) Residents of nearby settlements with potential indirect interaction during construction Pedestrians and road users using public roads and access roads adjacent to construction areas	<u>General Measures</u> • Develop and implement a Subproject-specific Emergency Preparedness and Response Plan addressing emergency events relevant to the construction phase of the Subproject. • <u>Site-specific Measures</u> • A construction-phase Emergency Preparedness and Response Plan (EPRP) will be implemented, covering site-specific emergency scenarios such as fire, traffic accidents, spills, extreme weather events, and structural incidents. • Emergency contact information (including local emergency services) and response procedures will be clearly displayed at visible locations within construction sites.	• Contractor • OHS Specialist • Site Supervisor • Project Implementation Unit (PIU)	• Emergency Preparedness and Response Plan (Construction Phase) • Occupational Health and Safety Management Plan • Traffic Management Plan

No	Risk and Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
	failure to implement operating procedures that are designed to prevent their occurrence, extreme weather or lack of early warning, traffic accidents, structural failures, etc.).	Nearby land users and service users located in the vicinity of construction activities Construction workers and authorized site visitors (with potential interface with surrounding communities)	- Emergency access routes will be identified and kept clear at all times to ensure access for emergency vehicles. - Construction workers will receive site-specific emergency response training, including evacuation procedures and first response actions. - Emergency drills (e.g. fire and evacuation drills) will be conducted periodically during the construction phase. - Coordination will be maintained with local authorities and emergency services to ensure effective response in the event of an emergency affecting surrounding communities. - Information on emergency procedures and potential construction-related risks will be communicated to nearby communities in line with the SEP, where relevant.		(Construction Phase) - Stakeholder Engagement Plan (SEP) - Environmental and Social Management Plan (ESMP)
	Security Personnel				
	Risks posed by these security arrangements to those within and outside the Subproject site during construction	Construction workers and authorized site personnel Residents of Köşk Neighborhood (subproject beneficiaries) Pedestrians and road users using public roads and access roads adjacent to the construction sites Nearby land users and visitors in the vicinity of construction activities	<u>General Measures</u> - Ensure that the risks posed by the security arrangements to those within and outside the Subproject site are assessed when direct or contracted workers are retained to provide security to safeguard Subproject-related personnel and properties. - Ensure that security arrangements of the Subproject are guided by the principles of proportionality and GIIP, and by applicable national legislation, in relation to hiring, rules of conduct, training, equipping, and monitoring of such security workers. - Ensure that the use of force by direct or contracted workers is not sanctioned in providing security except when used for preventive and defensive purposes in proportion to the nature and extent of the threat. - Ensure that (i) reasonable inquiries are made to verify that the direct or contracted workers retained within the scope of the Subproject to provide security are not implicated in past abuses; (ii) security personnel are trained adequately (or determine that they are properly trained) in the use of force (and where applicable, firearms), and appropriate conduct toward workers and affected communities; and (iii) security personnel	- Contractor - Project Implementation Unit (PIU) - Social Specialist - Site Supervisor	- Environmental and Social Management Plan (ESMP) - Stakeholder Engagement Plan (SEP) - Project Grievance Mechanism Procedure - Contractor Management Plan (CMP)

No	Risk and Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
			are required to act within the applicable national legislation and any requirements set out in Project's ESCP and Subproject's ESAP. • Ensure that all allegations of unlawful or abusive acts of security personnel are reviewed, necessary actions are taken by appropriate parties to prevent recurrence and, where necessary, unlawful and abusive acts are reported to the relevant authorities. <u>Site-specific Measures</u> • Security services, where required during construction, will be limited in scope and proportionate to the actual security risks of the Subproject. • Security personnel will be instructed to restrict access only to construction areas, without interfering with public access outside the site boundaries. • Clear rules of conduct will be communicated to security personnel, emphasizing respectful engagement with local communities and avoidance of any form of intimidation or harassment. • Security personnel will be informed about the Project Grievance Mechanism, and any complaints related to security arrangements will be recorded and addressed through established grievance channels. • Coordination will be maintained between the Contractor, PIU, and local authorities, where necessary, to manage security-related issues during construction. • Security arrangements will be periodically reviewed to ensure continued relevance and to prevent unnecessary interaction with surrounding communities.		
ESS5 – Land Acquisition, Restrictions on Land Use and Involuntary Resettlement					
	Economic displacement	Not applicable. No formal or informal land users, agricultural users, or business operators are subject to economic displacement under the Subproject.	<u>Site-specific Measures</u> • The Subproject does not result in economic displacement, loss of income, or restriction of access to land or livelihood resources. • All construction activities will be carried out within existing public land and existing infrastructure corridors, and no livelihood sources will be affected.	• Project Implementation Unit (PIU) • Contractor • Social Specialist	• Environmental and Social Management Plan (ESMP) • Stakeholder Engagement Plan (SEP)

No	Risk and Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
			In the unlikely event that unanticipated impacts on livelihoods occur, the situation will be assessed in line with ESS5 requirements, and appropriate mitigation measures will be defined in consultation with affected parties.		
	Physical displacement	Not applicable. No formal or informal owners, tenants, or residents are subject to physical displacement under the Subproject.	<u>Site-specific Measures</u> - The Subproject does not involve physical displacement, relocation of households, or loss of residential structures. - No private residential properties or assets will be affected during construction. - Should any unforeseen land acquisition or displacement need arise, the Subproject will comply with ESS5, and preparation of a RAP or LRP will be initiated as required.	- Project Implementation Unit (PIU) - Contractor - Social Specialist	- Environmental and Social Management Plan (ESMP) - Stakeholder Engagement Plan (SEP)
	Grievance management	Project-affected persons or stakeholders who may raise concerns related to land use, access	Ensure that a grievance mechanism for the Subproject is in place, in accordance with ESS10 as early as possible in subproject development to address specific concerns about compensation, relocation or livelihood restoration measures raised by displaced persons (or others) in a timely fashion. Where possible, such grievance mechanisms will utilize existing formal or informal grievance mechanisms suitable for subproject purposes, supplemented as needed with Subproject-specific arrangements designed to resolve disputes in an impartial manner.	- Project Implementation Unit (PIU) - Social Specialist - Grievance Mechanism Contact Person (GMCP)	- Stakeholder Engagement Plan (SEP) - Project Grievance Mechanism Procedure - Environmental and Social Management Plan (ESMP)
ESS6 – Biodiversity Conservation and Sustainable Management of Living Natural Resources					
	Impacts on habitats	Modified Habitat (Agricultural and Ruderal vegetation areas) located within the Beyşehir Lake Wetland Buffer Zone (Parcel No: 2308,6564 and 6569)	<u>General Measures</u> - Minimize the subproject footprint to the extent possible. - Avoid disturbance to adjacent natural areas. <u>Site-specific Measures</u> - Although the site is within the Beyşehir Lake Wetland Buffer Zone, it is classified as Modified Habitat. Construction activities will be strictly	- Contractor - Environmental Specialist - PIU	- Biodiversity Management Plan - Construction Method Statement - ESMP

No	Risk and Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
			confined to the defined subproject boundaries to prevent encroachment into the sensitive buffer zone areas. • Regular watering by sprinklers will be applied to access roads and the work area to prevent dust from degrading surrounding vegetation. • The existing abandoned reinforced concrete structure is considered artificial/degraded; its demolition will be managed to minimize disturbance to the surrounding soil.		
	Impacts on flora species	Ruderal species and Salix spp. (Willow)	<u>General Measures</u> • Conduct pre-construction surveys. <u>Site-specific Measures</u> • Since no trees or woody vegetation exist on the site, no tree cutting or transplantation is required. • The individual tree specimens identified as Salix spp. (Willow) within the subproject area will be cut as part of the subproject activities. • Work areas will be regularly watered to prevent dust accumulation on photosynthetic leaves of surrounding flora. • Following the commissioning of the facility, ecological landscaping will be carried out using local, non-invasive plant species adapted to the region's natural vegetation.	• Contractor • Environmental Specialist • PIU	• Biodiversity Management Plan
	Impacts on fauna species	Reptiles (Testudo graeca), Birds, Rodents	<u>General Measures</u> • Implement pre-construction checks for fauna. • Prohibit hunting and poaching. <u>Site-specific Measures</u> • Pre-Demolition Check: Prior to demolishing the existing unused concrete structure, a biodiversity expert will inspect the structure to detect species that may use it as shelter (specifically <i>Testudo graeca</i>). • If a protected species is encountered, activities will be immediately halted, and the Regional Directorate of Nature Conservation and National Parks (DKMP) will be notified for safe relocation. • A strict speed limit of 30 km/h will be enforced within the construction site to prevent vehicle collisions with wildlife.	• Contractor • Biodiversity Expert • PIU	• Biodiversity Management Plan • Waste Management Plan

No	Risk and Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
			- Construction and domestic waste will be collected in closed, leak-proof containers to avoid attracting wildlife. - Hunting and feeding of wildlife by personnel is strictly prohibited.		
	Invasive alien species	None identified on site; wider basin risks	<u>General Measures</u> - Monitor for introduction of invasive species. <u>Site-specific Measures</u> - No direct or indirect records of invasive alien species were found on the site. However, landscaping activities during the operation phase must strictly use native, non-invasive plant species to prevent the introduction of alien flora.	- Contractor - PIU	Biodiversity Management Plan
	Impacts on ecosystem services	Regulating services (Water quality of Beyşehir Lake Basin)	<u>General Measures</u> - Apply mitigation hierarchy to minimize impacts. <u>Site-specific Measures</u> - The subproject site currently provides no significant provisioning or cultural ecosystem services due to degradation. Positive Impact: The operation of the WWTP will enhance regulating services by treating wastewater, thereby protecting the water quality of the Beyşehir Lake Basin and reducing eutrophication risks. No specific negative mitigation is required other than standard construction management.	- KOSKİ (Operator) - PIU	ESMP
ESS8 – Cultural Heritage					
	Impacts on tangible cultural heritage	Identified tangible cultural heritage assets, if any, located within or in the vicinity of the Subproject area Relevant cultural heritage authorities and institutions	<u>Site-specific Measures</u> - Based on expert assessments and desk-based and field studies, no registered or known tangible cultural heritage assets are located within the Subproject footprint or its immediate vicinity. - Nevertheless, a Cultural Heritage Management Plan (CHMP) has been prepared to define procedures and responsibilities to be followed in case cultural heritage is identified during construction activities. - The CHMP will be implemented throughout the construction phase, and its requirements will be included in contractor obligations. - Construction activities will be carried out in a manner that avoids unnecessary disturbance to the surrounding environment, and	- Project Implementation Unit (PIU) - Contractor - Environmental and Social Specialists	- Environmental and Social Management Plan (ESMP) - Cultural Heritage Management Plan (CHMP)

No	Risk and Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
			monitoring will be conducted to ensure compliance with CHMP provisions.		
	Impacts on intangible cultural heritage	Local communities residing within the administrative boundaries of Köşk Neighborhood Nearby settlements with potential indirect interaction during construction	<u>Site-specific Measures</u> - Construction activities will be planned and implemented to avoid interference with local cultural practices, traditions, and social activities, where applicable. - Stakeholder engagement activities carried out in line with the SEP will consider local sensitivities and community practices. - Any concerns raised by communities regarding potential impacts on intangible cultural heritage will be addressed through the Project Grievance Mechanism.	- Project Implementation Unit (PIU) - Social Specialist - Contractor	- Stakeholder Engagement Plan (SEP) - Environmental and Social Management Plan (ESMP) - Project Grievance Mechanism Procedure
	Chance finds	Chance Finds to be encountered	<u>General Measures</u> - Implement the Subproject-specific Chance Finds Procedure (presented in Annex J) if previously unknown cultural heritage is encountered during Subproject activities. - Include the Subproject-specific Chance Finds Procedure in all contracts relating to construction of the Subproject, including excavations, demolition, movement of earth, or other changes in the physical environment. - Ensure that the Subproject personnel are trained on the Subproject-specific Chance Finds Procedure. <u>Site-specific Measures</u> - Please see the Subproject-specific Chance Finds Procedure - In the event that any archaeological, historical, or cultural remains are discovered during construction, all works in the vicinity of the find will be immediately suspended. - The Subproject-specific Chance Finds Procedure will be implemented without delay. - Relevant authorities will be notified, and construction activities will resume only after clearance is obtained from the competent authority.	- Contractor - Project Implementation Unit (PIU) - Environmental and Social Specialists	- Chance Finds Procedure - Cultural Heritage Management Plan (CHMP) - Environmental and Social Management Plan (ESMP)

No	Risk and Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
			All contractors and subcontractors will be trained on the Chance Finds Procedure prior to commencement of construction works.		
ESS10 – Stakeholder Engagement and Information Disclosure					
	Risks associated with stakeholder engagement	Please refer to SEP for the list of Subproject stakeholders	- Implement the Subproject-specific Stakeholder Engagement Plan (SEP) during the construction phase. - Disclose Subproject information in line with the SEP to allow stakeholders to understand the risks and impacts of the Subproject , and potential opportunities.	- Project Implementation Unit (PIU) - Social Specialist - Contractor (for construction-phase stakeholder engagement activities)	Stakeholder Engagement Plan (SEP)
	Risks associated with grievance management	Please refer to SEP for the list of Subproject stakeholders	- Implement the Subproject-specific Grievance Mechanism developed as part of the SEP. - This Grievance Mechanism is also applicable to the Contractor. KOSKİ is responsible for ensuring its implementation and operation by the Contractor.	- Project Implementation Unit (PIU) - Social Specialist - Grievance Mechanism Contact Person (GMCP) - Contractor (for construction-related grievances)	- Stakeholder Engagement Plan (SEP) - Project Grievance Mechanism Procedure
	Risks associated with insufficient information disclosure on	Residents of Köşk Neighborhood (subproject beneficiaries), nearby settlements with potential indirect interaction during	- Provide timely and accurate information to stakeholders regarding construction schedules, duration of works, traffic arrangements, and temporary disturbances (e.g. noise, dust, access restrictions), in line with the SEP. - Announce planned construction activities and changes in advance through	- Project Implementation Unit (PIU) - Social Specialist	- Stakeholder Engagement Plan (SEP) - Environmental and Social

No	Risk and Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
	construction activities	construction , local authorities, and other interested stakeholders.	appropriate communication channels defined in the SEP. • Ensure that information disclosed during the construction phase is consistent with the subproject description and impact assessment findings presented in the ESMP and SEP.	• Contractor	Management Plan (ESMP)

4.3. Operation ESMP Matrix

No	Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Implementation Plans
ESS2 – Labor and Working Conditions					
	Risks associated with labor and working conditions	Sub-borrower's operation and maintenance (O&M) personnel O&M contractors and subcontractors	<u>General Measures</u> - Develop and implement a Subproject-specific Labor Management Plan for the operation phase. - Ensure that the Subproject workers are provided with information and documentation that is clear and understandable regarding their terms and conditions of employment. The information and documentation will set out their rights under national labor and employment law (which will include any applicable collective agreements), including their rights related to hours of work, wages, overtime, compensation and benefits, as well as those arising from the requirements of ESS2. - Ensure that information and documentation regarding employees' terms and conditions of employment is provided at the beginning of the working relationship and when any material changes to the terms or conditions of employment occur. - Ensure that the Subproject workers are paid on a regular basis as required by national legislation and the Subproject-specific LMP. - Ensure that the Subproject workers are provided with adequate periods of rest per week, annual holiday and sick, maternity and family leave, as required by national legislation and the Subproject-specific LMP. - Ensure that the decisions relating to the employment or treatment of Subproject workers are not made on the basis of personal characteristics unrelated to inherent job requirements. - Ensure that the employment of Subproject workers is based on the principle of equal opportunity and fair treatment, and there will be no discrimination with respect to any aspects of the employment relationship, such as recruitment and hiring, compensation (including wages and benefits), working conditions and terms of employment, access to training, job assignment, promotion, termination of employment or retirement, or disciplinary practices. - Measures will be taken to prevent employment or engagement of children under the minimum age established in GFC Project's LMP⁸.	Sub-borrower / Facility Operator Operation and Maintenance (O&M) Management OHS Specialist	Labor Management Plan (Operation Phase) Occupational Health and Safety Management Plan Emergency Preparedness and Response Plan Worker Grievance Mechanism Procedure

⁸ According to the Project LMP, workers under the age of 18 will not be engaged by the Project.

No	Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Implementation Plans
			- Measures will be taken in accordance with the Subproject specific Labor Management Plan to prevent use of forced labor⁹ in connection with the Subproject. - Where on-site or off-site accommodation services¹⁰ are provided to Subproject workers, ensure that the relevant requirements of “Workers’ Accommodation: Processes and Standards: A guidance Note by IFC and the EBRD (August 2009)” are in place and implemented on the management and quality of accommodation to protect and promote the health, safety, and well-being of the Subproject workers, and to provide access to or provision of services that accommodate their physical, social and cultural needs. <u>Site-specific Measures</u> - The operation phase will be carried out by permanent or shift-based O&M personnel, and no on-site or off-site worker accommodation will be provided under the Subproject. - All operation personnel will commute daily and will not reside within the facility or in employer-provided housing. - Employment conditions, working hours, overtime, and rest periods will be managed in accordance with national labor legislation and ESS2 requirements. - Occupational health and safety risks specific to wastewater treatment plant operation (e.g. confined spaces, chemical handling, electrical systems) will be managed through the Operation Phase OHS Management Plan. - A Worker Grievance Mechanism applicable to the operation phase will remain in place to allow workers to raise concerns confidentially and without retaliation. - No child labor or forced labor will be employed during the operation phase.		
	OHS – General Hazards	Operation and Maintenance (O&M) personnel	<u>General Measures</u> Develop and implement a Subproject-specific Operational Risk Assessment, OHS Management Plan, Emergency Preparedness and Response Plan addressing emergency events relevant to the operation phase of the Subproject.	- Employer - Employer’s Representative - Contractor - Subcontractors	- Occupational Health and Safety Management Plan - Confined Space Entry Procedure

⁹ Forced labor consists of any work or service not voluntarily performed that is exacted from an individual under threat of force or penalty. Work is on a voluntary basis when it is done with the free and informed consent of a worker. Such consent must exist throughout the employment relationship and the worker must have the possibility to revoke freely given consent. In particular, there can be no “voluntary offer” under threat or other circumstances of restriction or deceit. To assess the authenticity of a free and informed consent, it is necessary to ensure that no external constraint or indirect coercion has been carried out, either by an act of the authorities or by an employer’s practice.

¹⁰ Those services might be provided either directly by the Sub-borrower, contractors or by third parties.

No	Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Implementation Plans
		Operation-phase contractors and subcontractors Technical, administrative and support staff working within the facility	• Ensure that monitoring and record-keeping activities and accident and incident investigation reports, including audit procedures designed to verify and record the effectiveness of the prevention and control of exposure to occupational hazards, are kept on file for at least five years. • Ensure railing around all process tanks and pits are available.. Require use of a life line and personal flotation device (PFD) when workers are inside the railing, and ensure rescue buoys and throw bags are readily available. • Use PFDs when working near waterways. • Maintain work areas to minimize slipping and tripping hazards. • Implement fire and explosion prevention measures in accordance with “Regulation on the Fire Protection of Buildings”. • Ensure that the minimum requirements of work clothes and safety shoes are fully complied with in the site. • During the operation, where risks cannot be eliminated or sufficiently reduced by techniques for collective protection or by measures, methods or processes used in the organization of work, ensure that health and safety signs are provided and used in appropriate places in accordance with the regulation on health and safety signs. • Ensure that site cleanliness and tidiness standards are established and implemented by employees <u>Site-specific Measures</u> • Prior to the commencement of the operation phase, a site-specific Operational Occupational Health and Safety (OHS) Risk Assessment will be conducted covering all facility activities and will be updated as needed when changes occur. • Regular OHS briefings and toolbox talks will be conducted during the operation phase to address site-specific operational risks. • Access control will be implemented throughout the facility, and unauthorized entry into process areas and other high-risk zones will be prevented. • Regular site inspections will be carried out to verify the proper use and condition of guardrails, lifelines, and personal flotation devices when working around process tanks, pits, and water-adjacent areas. • Slipping, tripping, and falling hazards within operational areas will be monitored through routine inspections, and identified issues will be addressed through corrective actions.	• Project Implementation Unit (PIU) • Social Specialist • Occupational Health and Safety (OHS) Specialist • Occupational Physician	• Risk Assessment • Emergency Preparedness and Response Plan • Contractor Management Plan • National Occupational Health and Safety Legislation

No	Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Implementation Plans
			• Fire-fighting equipment, emergency exits, and assembly points will be clearly marked on site, and periodic fire and emergency drills will be conducted. • Compliance with work clothing and safety footwear requirements will be monitored, and corrective measures will be taken where non-compliance is observed. • Occupational health and safety signage will be regularly inspected and maintained, and damaged or missing signs will be replaced as necessary. • All accidents, near-miss incidents, and hazardous situations occurring during the operation phase will be recorded, investigated, and addressed through corrective and preventive actions, with responsibilities assigned and actions tracked to closure. All OHS activities will be implemented under the supervision of qualified OHS personnel, and records of inspections, incidents, and corrective actions will be maintained.		
	OHS - Physical Hazards: Electrical Hazards	Operation and Maintenance (O&M) personnel Operation-phase contractors and subcontractors Technical, administrative and support staff working within the facility	<u>General Measures</u> • All energized electrical equipment and lines will be clearly marked with appropriate warning signs. • During maintenance, repair, or servicing activities, all electrical equipment will be de-energized, lockout–tagout (LOTO) will be applied, and warning tags will be placed on the locks. • All electrical cables, extension cords, and portable electrical equipment will be regularly inspected for wear, damage, or exposed conductors. Compliance with the manufacturer’s specified maximum operating voltage for portable equipment will be ensured. • All electrical equipment used in wet or damp environments will be grounded or double insulated and protected by residual current devices (RCDs). • Power and extension cords will be protected against damage caused by vehicle and pedestrian traffic by shielding or suspending them above traffic areas. • High-voltage equipment and electrical rooms with restricted or prohibited access will be properly labeled and identified with warning signage. • “No Approach” zones will be established around and beneath high-voltage lines.	• Employer • Employer’s Representative • Contractor • Subcontractors • Project Implementation Unit (PIU) • Social Specialist • Occupational Health and Safety (OHS) Specialist • Occupational Physician	• Occupational Health and Safety Management Plan • Confined Space Entry Procedure • Risk Assessment • Emergency Preparedness and Response Plan • Contractor Management Plan • National Occupational Health and Safety Legislation

No	Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Implementation Plans
			- Rubber-tired vehicles that come into direct contact with or create an electrical arc with high-voltage lines will be taken out of service until the necessary inspections are completed. - All buried electrical cables will be identified and marked prior to maintenance, repair, or excavation activities. - Written procedures for the Lockout–Tagout (LOTO) system will be in place and effectively implemented on site. - Portable electrical panels used on site will be stable and secure, their covers will be kept closed, they will be properly grounded, and insulating rubber mats will be placed in front of them. - Adequate lighting will be provided throughout the facility and camp areas, and no dark areas that may pose an accident risk will be allowed. - A Work Permit System will be implemented for activities where working under live energy is unavoidable. <u>Site-specific Measures</u> - All temporary and permanent electrical installations within the facility will be operated, maintained, and repaired only by qualified and authorized electrical personnel. - The Lockout–Tagout (LOTO) procedure will be applied and its effectiveness will be monitored during maintenance, repair, and troubleshooting activities involving electrical equipment. - Electrical panels and distribution boards used during the operation phase will be clearly labeled, protected against environmental conditions, and inspected periodically. - The locations of all underground and overhead electrical lines throughout the facility will be recorded and communicated to relevant personnel prior to maintenance activities. - Live electrical works will only be carried out where de-energization is not technically feasible and strictly within the scope of the Work Permit System. - Work permits for live electrical works will be issued, approved, monitored, and formally closed by authorized personnel, and all records will be retained on site. - Regular inspections will be conducted during the operation period to verify the integrity of cables, grounding systems, and electrical equipment.		

No	Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Implementation Plans
			- Any non-compliances identified during electrical inspections will be documented, and corrective and preventive actions will be implemented within defined timeframes and tracked until closure. - Warning signage and physical barriers will be installed and maintained in areas with high-voltage equipment to prevent unauthorized access. Site-specific emergency response procedures covering electrical incidents, including electric shock and arc flash events, will be developed and integrated into the Emergency Preparedness and Response Plan.		
	OHS – Physical Hazards: Elevated and Overhead Work	Operation and Maintenance (O&M) personnel Operation-phase contractors and subcontractors Technical, administrative and support staff working within the facility	<u>General Measures</u> - Barricade the area around which elevated work is taking place to prevent unauthorized access. - Avoid working under personnel on elevated structures. - Rate and properly maintain hoisting and lifting equipment, and train the operators in their use. - Maintain the elevating platforms and operate them according to established safety procedures including use of fall protection measures (e.g. railings). - Ensure implementation of equipment movement protocols (e.g. movement only when the lift is in a retracted position), repair by qualified individuals, and installation of locks to avoid unauthorized use by untrained individuals. - Use the ladders according to pre-established safety procedures for proper placement, climbing, standing, as well as the use of extensions. - Ensure that the SOP has been prepared for ‘Elevated and Overhead Work’ that only trained personnel approved by the workplace physician carry out these activities in accordance with the related instructions. <u>Site-specific Measures</u> - Prior to commencing elevated and overhead works, a site-specific risk assessment will be conducted, and appropriate control measures will be defined. - Areas where elevated and overhead works are carried out will be identified in advance and secured with barriers, warning signage, and physical controls to prevent unauthorized access. - Simultaneous work below elevated work areas will be avoided where possible; where unavoidable, exclusion zones will be established to protect against falling objects.	- Employer - Employer’s Representative - Contractor - Subcontractors - Project Implementation Unit (PIU) - Social Specialist - Occupational Health and Safety (OHS) Specialist - Occupational Physician	- Occupational Health and Safety Management Plan - Confined Space Entry Procedure - Risk Assessment - Emergency Preparedness and Response Plan - Contractor Management Plan - National Occupational Health and Safety Legislation

No	Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Implementation Plans
			• Hoisting, lifting, and elevating equipment (such as cranes and mobile elevating work platforms) will be operated only by trained and authorized personnel, and inspection and maintenance records will be maintained on site. • Elevating platforms and similar equipment will be operated in accordance with manufacturer instructions and site procedures, with regular checks to ensure the proper use of guardrails and fall protection systems. • Ladders, access platforms, and temporary working surfaces will be inspected prior to use, and only equipment in safe condition will be permitted for work. • Elevated and overhead works will be carried out only by trained and authorized workers, whose fitness for such work has been approved by the occupational physician. • Site-specific emergency and rescue procedures for elevated and overhead work will be developed, communicated to workers, and tested where necessary through drills. • Weather conditions (such as strong winds or rain) will be monitored, and elevated and overhead works will be suspended when conditions pose safety risks.		
	OHS – Physical Hazards: Fall Protection	Operation and Maintenance (O&M) personnel Operation-phase contractors and subcontractors Technical, administrative and support staff working within the facility	<u>General Measures</u> • Implementation of a fall protection program that includes training in climbing techniques and use of fall protection measures; inspection, maintenance, and replacement of fall protection equipment; and rescue of fall-arrested workers, among others. • Criteria for the use of 100% fall protection will be defined based on the results of site- and task-specific risk assessments for all activities involving a risk of falling, regardless of height. Fall protection systems will be designed and implemented in accordance with the nature of the work to be performed, the potential fall distance, the characteristics of the structure, and the required movements (including climbing, descending, horizontal and vertical movement, and transitions between points). • Use of safety belts not less than 16 millimeters (mm) (5/8 inch) two-in-one nylon or material of equivalent strength. Rope safety belts will be replaced before signs of aging or fraying of fibers become evident. • Use PFDs when working near waterways. • When operating power tools at height, use of a second (backup) safety strap by workers.	• Employer • Employer's Representative • Contractor • Subcontractors • Project Implementation Unit (PIU) • Social Specialist • Occupational Health and Safety (OHS) Specialist • Occupational Physician	• Occupational Health and Safety Management Plan • Confined Space Entry Procedure • Risk Assessment • Emergency Preparedness and Response Plan • Contractor Management Plan • National Occupational Health and Safety Legislation

No	Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Implementation Plans
			- For work at height, ensure that collective safety measures are in place in the area of operation (such as safe guardrails, fall arrest platforms, barriers, covers, scaffolds, safety nets or airbags). - Make sure that the SOP has been prepared for ‘‘Working at Height’’ that only trained personnel approved by the workplace physician carry out these activities in accordance with the related instructions. - Check that the platforms and leaders to be used comply with the standards and periodic maintenance is up to date. <u>Site-specific Measures</u> - Prior to commencing any work at height, site supervisors will verify that the task-specific risk assessment and the Working at Height SOP are in place and communicated to workers. - Designated working-at-height areas will be clearly identified on site and monitored to ensure that barriers, guardrails, and warning signage are correctly installed and maintained. - Scaffolds, platforms, ladders, and access systems used for work at height will be visually inspected on a regular basis by competent personnel, and their conformity with applicable standards and maintenance status will be verified on site. - Site observations will be conducted to confirm that workers use personal fall protection equipment correctly and continuously, including safety harnesses, lifelines, and backup safety straps when operating power tools at height. - When work is carried out near water bodies, site observations will ensure that personal flotation devices (PFDs) are worn as required and that rescue equipment is available and in good condition. - Simultaneous work below working-at-height areas will be monitored and avoided where possible; where unavoidable, exclusion zones will be established and controlled to protect against falling objects. - Weather conditions affecting work at height will be observed on site, and works will be suspended when conditions such as strong wind, rain, or icy surfaces pose increased fall risks. - Any non-compliances identified during site observations will be recorded, corrective and preventive actions will be defined, and implementation will be followed up until closure.		

No	Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Implementation Plans
	OHS – Chemical Hazards	Operation and Maintenance (O&M) personnel Operation-phase contractors and subcontractors Technical, administrative and support staff working within the facility	<u>General Measures</u> - Implement a training program for operators who work with chlorine and ammonia regarding safe handling practices and emergency response procedures. - Provide appropriate personal protective equipment (including, for example, self-contained breathing apparatus) and training on its proper use and maintenance. - Prepare escape plans from areas where there might be a chlorine or ammonia emission. - Ensure that safety showers and eye wash stations are installed near the chlorine and ammonia equipment and other areas where hazardous chemicals are stored or used. - Limit wastes entering the sewer system to those that can be effectively treated in the wastewater treatment facility and reduce the amount of air-strippable hazardous compounds entering the system by controlling industrial discharges (e.g., by permit or similar system). Analyze incoming raw wastewater to identify hazardous constituents. - Ventilate enclosed processing areas and ventilate equipment, such as pump stations, prior to maintenance. - Use personal gas detection equipment while working in a wastewater facility. - Continuously monitor air quality in work areas for hazardous conditions (e.g. explosive atmosphere, oxygen deficiency). - Periodically sample air quality in work areas for hazardous chemicals. If needed to meet applicable occupational health national requirements or internationally accepted standards, install engineering controls to limit worker exposure, for example collection and treatment of off-gases from air stripping. - Rotate personnel among the various treatment plant operations to reduce inhalation of air-stripped chemicals, aerosols, and other potentially hazardous materials. - Consider use of drip irrigation of treated wastewater, which minimizes worker exposure and the amount of water needed. Avoid use of spray irrigation of treated wastewater, if possible. - Provide field workers with personal protective equipment, such as rubber gloves and waterproof shoes. - Provide worker health monitoring, including regular physical examinations.	- Employer - Employer's Representative - Contractor - Subcontractors - Project Implementation Unit (PIU) - Social Specialist - Occupational Health and Safety (OHS) Specialist - Occupational Physician	- Occupational Health and Safety Management Plan - Confined Space Entry Procedure - Risk Assessment - Emergency Preparedness and Response Plan - Contractor Management Plan - National Occupational Health and Safety Legislation

No	Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Implementation Plans
			- Control vectors and intermediate hosts. - Make sure that the SOP for 'Working with Hazardous Chemicals' has been prepared and that the applications in the site are fulfilled according to this SOP. - Check that the MSDSs of hazardous chemicals are ready and easily accessible and that the relevant personnel have received MSDS training. - In case of intervention with asbestos-containing materials, ensure that work is carried out in accordance with the 'Regulation on Health and Safety Measures in Working with Asbestos' <u>Site-specific Measures</u> - Areas where chlorine, ammonia, or other hazardous chemicals are used will be clearly identified on site and access will be controlled. - Proper use of personal protective equipment in chemical handling, storage, and dosing areas will be verified through regular site observations. - The availability and functionality of personal gas detection devices will be checked during site inspections. - Ventilation systems and pre-maintenance ventilation practices will be monitored through site observations. - Accessibility and functionality of safety showers, eye wash stations, and emergency escape routes will be verified during routine site inspections. - Any chemical spills, gas releases, or exposure incidents will be recorded, investigated, and addressed through corrective and preventive actions tracked to closure. - Compliance with SOPs and MSDS requirements will be monitored through site inspections and observations.		
	OHS – Pathogens and vectors	Operation and Maintenance (O&M) personnel Operation-phase contractors and subcontractors	<u>General Measures</u> - Include in safety training program for workers, safe handling and personal hygiene practices to minimize exposure to pathogens and vectors. - Use vacuum trucks or tugs for removal of fecal sludge instead of manual methods. - Provide and require use of suitable personal protective clothing and equipment to prevent contact with wastewater (e.g., rubber gloves, aprons, boots, etc.). Especially provide prompt medical attention and cover any skin trauma such as	- Employer - Employer's Representative - Contractor - Subcontractors - Project Implementation Unit (PIU) - Social Specialist	- Occupational Health and Safety Management Plan - Confined Space Entry Procedure - Risk Assessment - Emergency Preparedness and Response Plan

No	Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Implementation Plans
		Technical, administrative and support staff working within the facility	cuts and abrasions to prevent infection and use protective clothing and goggles to prevent contact with spray and splashes. • Provide areas for workers to shower and change clothes before leaving work and provide laundry service for work clothes. This practice also helps to minimize chemical exposure. • Encourage workers at wastewater facilities to wash hands frequently. • Provide worker immunization (e.g. for Hepatitis B and tetanus) and health monitoring, including regular physical examinations. • Reduce aerosol formation and distribution, for example by: • Planting trees around the aeration basin to shield the area from wind and to capture the droplets and particles • Using diffused aeration rather than mechanical aeration and using finer bubbles for aeration • Reducing aeration rate, if possible • Use of floating covers on the mixed liquor of the aeration basin • Suppression of droplets just above the surface, (e.g. by installing a screen or mesh above the basin); • Collection of droplets (e.g. by sedimentation, scrubber, electrostatic precipitator, or fabric filter) • Disinfection of airborne particles (e.g., by using ultraviolet lights) • Use of submerged effluent collector (such as pipes with orifices) rather than weirs • Avoid handling screenings by hand to prevent needle stick injuries; • Maintain good housekeeping in sewage processing and storage areas; • Advise individuals with asthma, diabetes, or suppressed immune systems not to work at wastewater treatment facilities, especially composting facilities, facility because of their greater risk of infection. • Provide access to safe drinking water and sanitation (including hand washing) facilities; • Control vectors and intermediate hosts. Site-specific Measures	• Occupational Health and Safety (OHS) Specialist • Occupational Physician	• Contractor Management Plan • National Occupational Health and Safety Legislation

No	Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Implementation Plans
			• Areas with potential direct contact with wastewater will be clearly identified on site, and the use of appropriate personal protective equipment will be verified through regular site observations. • Compliance with personal hygiene practices, including hand washing and use of shower and changing facilities, will be monitored through site inspections. • Proper condition and correct use of PPE such as gloves, boots, aprons, and eye protection will be checked during site observations. • Control measures implemented in areas with high aerosol generation potential (such as aeration basins) will be monitored to verify their effectiveness. • Site observations will be carried out to identify the presence of vectors (such as rodents, insects, or pests), and vector control measures will be implemented where necessary. • Any worker health incidents, infections, or near-miss events related to pathogen exposure will be recorded, investigated, and addressed through corrective and preventive actions tracked to closure. Housekeeping, sanitation, and waste handling practices will be monitored through routine site inspections to ensure continued effectiveness.		
	OHS-Noise	Operation and Maintenance (O&M) personnel Operation-phase contractors and subcontractors Technical, administrative and support staff working within the facility	<u>General Measures</u> • Ensure use of personal hearing protection by personnel exposed to noise from vehicular traffic and maintenance vehicles • Implement work rotation programs to reduce cumulative exposure to noise • Ensure that the SOP for hearing protection is in place and that employees are using personal protective equipment in accordance with the relevant instructions. • Ensure that the areas requiring the use of personal protective equipment in the operation area are identified and that the necessary warning signs are placed • In areas with high noise levels, ensure that engineering measures are taken to reduce the level to an acceptable level <u>Site-specific Measures</u> • Areas and equipment with high noise levels will be identified on site, and regular site observations will be conducted to verify the implementation of noise control measures.	• Employer • Employer's Representative • Contractor • Subcontractors • Project Implementation Unit (PIU) • Social Specialist • Occupational Health and Safety (OHS) Specialist • Occupational Physician	• Occupational Health and Safety Management Plan • Confined Space Entry Procedure • Risk Assessment • Emergency Preparedness and Response Plan • Contractor Management Plan • National Occupational Health and Safety Legislation

No	Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Implementation Plans
			• Proper and continuous use of personal hearing protection equipment (such as earplugs or earmuffs) by workers exposed to noise will be monitored through site inspections. • The effectiveness of work rotation arrangements implemented to reduce cumulative noise exposure will be checked during site observations. • Noise-related complaints, near-miss incidents, or health concerns reported by workers will be recorded, investigated, and addressed through corrective and preventive actions. • Engineering noise control measures (such as equipment maintenance, acoustic insulation, enclosures, or barriers) will be monitored on site to verify their effectiveness and improved where necessary. • The visibility and adequacy of warning signage in areas requiring hearing protection will be regularly inspected and maintained.		
	Risks associated with management of employee grievances	Sub-borrower's operation and maintenance (O&M) personnel O&M contractors and subcontractors	• Develop and implement a Subproject-specific Labor Management Plan, including grievance mechanism for Subproject employees (covering all direct and contracted workers) to raise workplace concerns during the operation phase. • Ensure that all direct and contracted workers are informed of the grievance mechanisms at the time of recruitment and the measures put in place to protect them against any reprisal for its use. • Ensure that measures are put in place to make the grievance mechanism easily accessible to all Subproject employees. • A Worker Grievance Mechanism specific to the operation phase will be maintained and implemented in line with ESS2. • Grievances may be submitted confidentially and, where requested, anonymously. • All grievances will be recorded, tracked, and addressed within defined timelines, and outcomes will be communicated to the complainant. • Grievance records will be periodically reviewed by facility management to identify recurring issues and corrective actions.	• Sub-borrower / Facility Operator • O&M Management • Social Specialist	• Labor Management Plan (Operation Phase) • Worker Grievance Mechanism Procedure
ESS3 – Resource Efficiency and Pollution Prevention and Management					
	Resource Efficiency (Energy Use, Water Use and Raw Material				

No	Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Implementation Plans
	Use)				
	Energy Use, Water Use and Raw Material Use	Natural Resources (Water, Energy)	<u>General Measures</u> • Ensure implementation of technically and financially feasible measures for improving efficient consumption of energy, water and raw materials. • For water supply systems and water treatments facilities; Evaluate potential adverse effects of surface water/groundwater withdrawal. • To prevent and minimize water losses; Ensure construction meets applicable standards, conduct regular inspection and maintenance, implement a leak detection and repair program. <u>Site-specific Measures</u> • Water Reuse: A portion of the treated effluent from the WWTP will be reused for on-site landscape irrigation and process cleaning (e.g., washing of screens and equipment) to reduce freshwater withdrawal from the network. • Energy Efficiency: Variable Frequency Drives (VFDs) will be installed on high-energy consuming equipment such as pumps and blowers to optimize energy consumption based on actual process demand. • Process Control: A SCADA automation system will be utilized to continuously monitor dissolved oxygen levels in aeration tanks and adjust air supply, preventing energy wastage. • Solar Energy: The administrative building is designed to minimize energy use for heating/cooling.	• KOSKİ (Operator) • Plant Manager	• Environmental and Social Management Plan (ESMP) • Operation and Maintenance Plan
	Management of Air Pollution				
	Emissions to air during operation	Residents of Köşk Neighborhood, WWTP Staff	<u>General Measures</u> • Cover emission points (e.g., aeration basins, sludge thickeners) and vent emissions to control systems as needed. • Where necessary, consider alternate aeration technologies or process configurations to reduce volatilization. <u>Site-specific Measures</u> • Sludge Handling: Sludge dewatering operations will be carried out within a closed Sludge Dewatering Building to contain odors. • Storage: Dewatered sludge (sludge cake) will be stored in designated, semi-enclosed areas for the shortest possible duration before transport to prevent anaerobic conditions and odor generation.	• KOSKİ (Operator) • Environmental Specialist	• Air Quality Management Plan • Sludge Management Plan

No	Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Implementation Plans
			• Transport: Sludge cake will be transported to the Konya Wastewater Treatment Plant for final disposal using covered trucks to prevent odor nuisance and spillage along the route. • Process Management: The biological treatment process (Simultaneous Nitrification-Denitrification) will be strictly controlled to prevent septic conditions in the tanks that could release Hydrogen Sulfide (H₂S) or Methane.		
	Management of Wastes				
	Generation of non-hazardous and hazardous waste during operation	Soil, Groundwater, Visual Landscape	<u>General Measures</u> • Manage chemicals inventories to avoid large quantities of unused product. • Minimize the quantity of solids generated by optimizing coagulation processes. • Select appropriate sludge treatment technologies considering quantity and final disposal. • Land application or other beneficial re-use should be considered based on risk assessment. • Processing, disposal and re-use should be consistent with national requirements. <u>Site-specific Measures</u> • Sludge Disposal: Biological sludge will be thickened and dewatered using a centrifugal decanter. The resulting sludge cake will not be applied to land at the Köşk site but will be transported to the central Konya Wastewater Treatment Plant for final processing/disposal. • Screenings and Grit: Solid wastes removed from the screens and grit chambers will be collected in closed containers and disposed of at the nearest sanitary landfill authorized by Hüyük Municipality. • Hazardous Waste: Waste oils from machinery maintenance and used chemical containers will be stored in a designated hazardous waste storage area with impermeable floors and secondary containment, then transferred to licensed disposal firms.	• KOSKİ (Operator) • Environmental Specialist	• Waste Management Plan • Sludge Management Plan • Hazardous Waste Management Procedure
	Management of Wastewater				
	Generation of wastewater and efficiency of wastewater treatment	Receiving Body: Yanbay Stream and Beyşehir Lake (Sensitive	<u>General Measures</u> • Consider provision of systematic, regular collection of fecal sludge and septic waste. • Ensure discharge of fecal sludge and septage at treatment facilities so that untreated septage is not discharged to the environment.	• KOSKİ (Operator) • Plant Manager • Laboratory Technicians	• Wastewater Management Plan • Operation and Maintenance Manual

No	Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Implementation Plans
	systems	Area)	• Treatment or pre-treatment to neutralize or remove toxic chemicals should ideally take place at the industrial facility itself. • Collaborate with public authorities in the regular inspection of industrial user facilities. • Conduct surveillance monitoring at sewer maintenance and of the influent to the wastewater treatment facilities. • Establish routine maintenance program (regular cleaning of grit chambers, inspection of sanitary sewer structures, monitoring of sewer flow). • Design, construct, operate, and maintain wastewater treatment facilities and achieve effluent water quality consistent with applicable national requirements or internationally accepted standards. • Consider discharge of treated wastewater to natural or constructed wetlands. • Treat greywater, if collected separately from sewage. <u>Site-specific Measures</u> • Effluent Quality: The WWTP is designed for Advanced Biological Treatment (Nitrogen and Phosphorus removal) to meet the strict discharge standards required for the Beyşehir Lake Basin (Sensitive Area). Effluent limits: BOD5 ≤ 25 mg/L, COD ≤ 125 mg/L, Total Nitrogen ≤ 15 mg/L, Total Phosphorus ≤ 2 mg/L. • Process Monitoring: Continuous monitoring of influent and effluent quality will be performed. Composite samples will be analyzed by an accredited laboratory to verify compliance with the Water Pollution Control Regulation. • Emergency Power: A standby diesel generator will be maintained on-site to ensure the operation of critical units (pumps, aeration) during power outages, preventing the discharge of untreated sewage. • Maintenance: Regular maintenance of electromechanical equipment (screens, blowers, scrapers) will be conducted to prevent treatment failure and bypass events.		• Water Pollution Control Regulation Compliance
3	Management of Stormwater				
	Stormwater runoff, contaminated with oil and grease, metals, particulate matter, deicing salts, and other pollutants released by vehicles on road, leading to pollution of water resources	Surface Water, Soil	<u>General Measures</u> • Use of stormwater management practices that slow peak runoff flow, reduce sediment load, and increase infiltration. • Where significant oil and grease is expected, using oil/water separators in the treatment activities. • Minimize bypass of the treatment system by using separate storm water and wastewater systems. <u>Site-specific Measures</u>	• KOSKİ (Operator) • Maintenance Team	• Environmental and Social Management Plan (ESMP)

No	Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Implementation Plans
			• Drainage System: Permanent surface drainage channels will be maintained around the WWTP site to divert clean stormwater runoff away from process tanks and sludge drying beds. • Separation: The facility is designed to treat domestic wastewater; stormwater from the surrounding area will be kept separate to prevent hydraulic overloading of the treatment plant. • Runoff Control: Stormwater from paved areas within the facility (e.g., parking, internal roads) will be directed to drainage systems equipped with sediment traps if necessary before discharge.		
	Management of Chemicals and Hazardous Materials				
	Release of hazardous materials in the event of accidents during operation	Workers, Soil, Air	<u>General Measures</u> • For systems that use gas chlorination: Install alarm and safety systems, containment and scrubber systems, and use corrosion-resistant piping. • Store sodium hypochlorite in cool, dry, and dark conditions with secondary containment. • Minimize the amount of chlorination chemicals stored on site. • Develop and implement a prevention program and a plan for responding to accidental releases. <u>Site-specific Measures</u> • Chlorine Storage: Chemicals required for the Disinfection Unit (Chlorine/Sodium Hypochlorite) will be stored in a dedicated, secure, and well-ventilated Chemical Storage Building with restricted access. • Secondary Containment: Chemical storage tanks will be equipped with secondary containment (bund walls) capable of holding 110% of the tank volume to prevent soil contamination in case of leaks. • Documentation: Material Safety Data Sheets (MSDS) for all operation chemicals (chlorine, polyelectrolyte, oils) will be readily available in Turkish at the point of use. • Spill Response: Absorbent materials and neutralizing agents will be kept on-site to respond to immediate chemical spills.	• KOSKİ (Operator) • OHS Specialist	• Hazardous Material Management Plan • Emergency Preparedness and Response Plan
	Management of Environmental Noise and Vibration				

No	Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Implementation Plans
	Noise and vibration generation during operation	Residents of Köşk Neighborhood, Fauna in the vicinity	<u>General Measures</u> • Manage the potential impact of noise, selecting equipment with lower sound power levels. • Plan activities in consultation with communities so that noisiest activities are undertaken during periods that will result in least disturbance. • Use, when needed and feasible, noise-control methods such as fences, barriers or deflectors. <u>Site-specific Measures</u> • Operational Noise: Noise from pumps, blowers, and mixers will be minimized by ensuring all equipment is housed in acoustic enclosures where necessary. • Maintenance: Regular preventive maintenance (lubrication, alignment) will be performed on rotating equipment to prevent abnormal noise and vibration. • Timing: Routine maintenance activities generating high noise will be scheduled during daytime hours only. • Monitoring: Periodic noise measurements will be conducted at the facility boundary to ensure compliance with the Regulation on Assessment and Management of Environmental Noise limits (Leq < 65 dBA Day / 55 dBA Night).	• KOSKİ (Operator) • PIU	• Noise Management Plan • Stakeholder Engagement Plan (SEP)
ESS4 - Community Health and Safety					
	Structural Safety of Subproject Infrastructure				
	Risks posed to the public while accessing Subproject facilities (such as physical trauma associated with failure of structures, burns and smoke inhalation from fire, injuries suffered as a consequence of falls or contact with heavy equipment, etc.)	Residents of Köşk Neighborhood (subproject beneficiaries) Visitors and service users accessing the wastewater treatment plant area	<u>General Measures</u> • Operate and decommission the structural elements of the Subproject in accordance with national legal requirements, the EHSGs and other GIIP, taking into consideration safety risks to third parties and affected communities. <u>Site-specific Measures</u> • The wastewater treatment plant will be operated and maintained by qualified and trained personnel in accordance with approved design and operational criteria. • Routine structural inspections and preventive maintenance will be conducted for buildings, tanks, mechanical units, and other fixed structures to ensure continued structural integrity. • Access to operational areas will be controlled and restricted to authorized personnel only.	• Facility Operator / Sub-borrower • Operation and Maintenance (O&M) Management • OHS Specialist	• Operation and Maintenance Manual • Occupational Health and Safety Management Plan • Emergency Preparedness and Response Plan

No	Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Implementation Plans
		Nearby land users and road users in the vicinity of the facility	- Safety signage, barriers, and guardrails will be maintained in areas where there is a risk of falls, contact with equipment, or other physical hazards. - Emergency shutdown procedures and safe access routes will be maintained to protect both workers and third parties.		Environmental and Social Management Plan (ESMP)
	Emergency Preparedness and Response Plan				
	Risks and impacts on communities due to potential emergency events during operation (unanticipated incidents, arising from both natural and man-made hazards, typically in the form of fire, explosions, leaks or spills, which may occur for a variety of different reasons, including failure to implement operating procedures that are designed to prevent their occurrence, extreme weather or lack of early warning, traffic accidents, structural failures, etc.).	Operation and Maintenance (O&M) personnel Operation-phase contractors and subcontractors Technical, administrative and support staff working within the facility	<u>General Measures</u> - An Emergency Preparedness and Response Plan will be prepared, implemented, and kept up to date in coordination with local communities and local emergency response services (fire brigade, ambulance services, law enforcement, etc.), in order to ensure timely first aid response in the event of accidents and effective hazardous materials response in case of leaks or spills. The plan will cover all relevant risks, including earthquakes, and will be developed in accordance with the “Regulation on Emergencies in Workplaces.” - Emergency scenarios that may occur during the operation phase, including fire, explosion, leaks/spills, natural hazards, and other emergency events, will be identified considering facility activities, equipment used, hazardous materials, environmental conditions, and nearby settlements. - The emergency organization structure, including roles, responsibilities, and internal and external communication chains, will be clearly defined and documented. - Regular training will be provided to facility personnel as well as contractor and subcontractor workers on emergency procedures, evacuation methods, first aid, and initial on-site response actions. - Emergency drills covering scenarios such as fire, leaks/spills, explosions, and evacuation will be conducted periodically in line with applicable legislation and the Emergency Preparedness and Response Plan. - Emergency equipment (fire extinguishers, fire detection and alarm systems, first aid equipment, spill response kits, etc.) will be provided in adequate quantities, kept easily accessible, and regularly inspected to ensure they remain in operational condition.	- Employer - Employer’s Representative - Occupational Health and Safety Specialist - Occupational Physician	National Legislation

No	Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Implementation Plans
			• Coordination mechanisms will be established with local emergency services, relevant contact information will be kept up to date, and arrangements will be in place to ensure rapid response when required. • Necessary measures will be taken to protect the health and safety of workers, visitors, and potentially affected local communities during emergency situations. • All emergency incidents, near-miss events, and emergency drill outcomes will be recorded, reviewed, and followed by the implementation of corrective and preventive actions. <u>Site-specific Measures</u> • Site-specific emergency risks will be identified based on the facility location, surrounding settlements, sensitive receptors, and environmental characteristics, and these risks will be integrated into the Emergency Preparedness and Response Plan. • Site-specific evacuation routes, emergency exits, and assembly points will be defined, clearly marked, and always kept accessible. • Site-specific emergency response and spill control procedures will be developed for areas where hazardous materials are stored, handled, or transported. • Secondary containment systems, barriers, and appropriate response equipment will be provided to minimize potential impacts of leaks and spills on the environment and local communities. • Automatic fire detection, warning, and suppression systems will be installed in high fire-risk areas and maintained in active and operational condition throughout the operation phase. • Site-specific response, evacuation, and business continuity procedures will be developed for natural hazards such as earthquakes, extreme weather events, and flooding. • Communication and notification methods will be defined for informing local communities in the event of on-site or off-site emergencies originating from the facility. Site-specific emergency response teams will be established, and their competence will be maintained through regular training and drills.		
ESS5 - Land Acquisition, Restrictions on Land Use and Involuntary Resettlement					
	Land acquisition, restrictions on land use, and involuntary	Not applicable. No individuals, households, land	• The operation phase of the Subproject does not involve land acquisition, restrictions on land use, economic displacement, or physical displacement. • All operational activities will be carried out within the existing Subproject	• Sub-borrower • Project	• Environmental and Social Management

No	Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Implementation Plans
	resettlement impacts related to the operation of the Subproject.	users, or businesses are affected by economic or physical displacement during the operation phase of the Subproject.	footprint and legally owned public land, as established during the construction phase. - No additional land take, access restriction, or livelihood impact is anticipated during operation. - In the event of any unforeseen land-related impacts, the Subproject will comply with ESS5 requirements, and appropriate mitigation measures, including preparation of a Land Resettlement Plan (LRP) or Resettlement Action Plan (RAP), will be initiated as necessary, with reference to the Construction ESMP.	Implementation Unit (PIU) Social Specialist	Plan (ESMP) - Stakeholder Engagement Plan - Project Grievance Mechanism Procedure - ESMP
ESS6 - Biodiversity Conservation and Sustainable Management of Living Natural Resources					
	Impacts on habitats and flora (Vegetation Management)	Modified Habitat within the Beyşehir Lake Wetland Buffer Zone , Local Flora	<u>General Measures</u> - Manage vegetation growth along access roads and at permanent above-ground facilities. - Remove invasive plant species and replant native species. Vegetation control will employ biological, mechanical and thermal vegetation control measures and avoid the use of chemical herbicides as much as possible. - Plant native species and remove invasive plant species. <u>Site-specific Measures</u> Ecological Landscaping: Following the commissioning of the facility, landscaping and maintenance activities around the facility will strictly use local, non-invasive plant species adapted to the region's natural vegetation to prevent the introduction of alien species into the Buffer Zone. Herbicide Restriction: Due to the location within the Beyşehir Lake Wetland Buffer Zone, the use of chemical herbicides for weed control within the facility grounds will be strictly prohibited; mechanical methods (mowing) will be used instead. Buffer Zone Protection: Operational activities and vehicle movements will be strictly confined to the fenced facility area to prevent encroachment or disturbance to the surrounding agricultural and semi-natural lands.	KOSKİ (Operator) • Plant Manager	Biodiversity Management Plan • Vegetation Management Plan • Operation Manual
	Impacts on aquatic life (Effluent Discharge)	Aquatic ecosystems in Beyşehir Lake (Final	<u>General Measures</u> - Design water containment and diversion structures to prevent adverse impacts on water quality. - Design outlet valves with sufficient capacities for releasing the	KOSKİ (Operator) • Environmental Specialist	Wastewater Management Plan • Water Pollution Control Regulation Compliance

No	Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Implementation Plans
		Receiving Body)	appropriate environmental flows. <u>Site-specific Measures</u> • Eutrophication Prevention: The WWTP operation will strictly adhere to nutrient removal standards (Nitrogen and Phosphorus) to prevent eutrophication in Beyşehir Lake, which is critical for sustaining aquatic biodiversity in the basin. • Discharge Monitoring: Continuous monitoring of the treated effluent will be conducted to ensure it meets the "Sensitive Area" discharge criteria before entering Yanbay Stream. • Sludge Containment: Sludge and screenings will be stored in closed containers/buildings to prevent runoff from entering the local drainage system and harming downstream aquatic life.		
	Impacts on fauna species (Wildlife Interaction)	Local fauna (small mammals, reptiles such as <i>Testudo graeca</i> , birds)	<u>General Measures</u> • Minimize impacts on wildlife during operation. <u>Site-specific Measures</u> • Fencing: The facility perimeter fence will be maintained to prevent larger mammals and grazing livestock from entering the treatment area and falling into open tanks (aeration/settling pools). • Waste Management: Domestic waste and screenings will be kept in closed, leak-proof bins to avoid attracting scavengers or pests to the site. • Prohibitions: Hunting, capturing, or feeding of wildlife by operational staff within the facility boundaries is strictly prohibited. • Lighting: Exterior lighting will be designed to be directional and minimized at night to reduce disturbance to nocturnal wildlife and bats in the rural vicinity.	• KOSKİ (Operator) • Site Security	• Biodiversity Management Plan • Waste Management Plan
ESS8 - Cultural Heritage					
	No impacts are anticipated during the operation phase of the Subproject.	Not applicable.	• The operation of the Subproject will comply with all applicable requirements set by the national cultural heritage authorities. • No operational activities will be carried out outside the existing Subproject footprint that could affect known or unknown cultural heritage assets. • In the unlikely event that any cultural heritage issue arises during operation, the relevant authorities will be informed and appropriate measures will be taken in line with national legislation.	Not applicable.	Not applicable.
ESS10 - Stakeholder Engagement and Information Disclosure					
	Risks associated with stakeholder engagement and information	Residents of Köşk Neighborhood	• Implement the Stakeholder Engagement Plan (SEP) during the operation phase, proportionate to the scale and nature of operational activities. • Continue information disclosure to stakeholders regarding operational	Sub-borrower	Stakeholder Engagement Plan (SEP)

No	Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Implementation Plans
	disclosure during the operation phase of the Subproject.	(subproject beneficiaries) Nearby settlements with potential indirect interaction during operation Relevant local authorities and public institutions Other interested or affected stakeholders identified in the SEP	activities, environmental performance, and monitoring results, where relevant. • Maintain the Project Grievance Mechanism to allow stakeholders to submit complaints or feedback related to operational impacts. • Ensure that stakeholder engagement and grievance handling during operation are conducted in a transparent, accessible, and timely manner.	Project Implementation Unit (PIU)	Project Grievance Mechanism Procedure Environmental and Social Management Plan (ESMP)

4.4. Monitoring and Reporting

The Sub-borrower will internally monitor the E&S performance of the Subproject and submit Periodic Monitoring Reports to ILBANK, in accordance with the requirements outlined in the sub-financing agreement at Monthly and Quarterly intervals. The reports for each monitoring period will include the following information:

- Up-to-date information on the Subproject and progress with Subproject implementation (e.g. status of construction, Subproject timeline, etc.),
- Status of compliance with legal requirements (e.g. Subproject permitting status, status and outcomes of audits conducted by national authorities, fines imposed by national authorities if any, etc.)
- Details of how the requirements of the IFI standards (e.g. WB ESSs) are being met based on compliance with Subproject-level Environmental and Social Action Plans (ESAPs),
- Incident and accident reports and statistics,
- Current Subproject-level E&S organization and capacity (including information on capacity building and training),
- Progress with Subproject level stakeholder engagement activities and management of grievances, and
- Records on E&S non-conformities identified and the general status of Corrective Action Plan implementation at Subproject level (in case of non-conformities).

Key performance indicators (KPIs) of this ESMP will be monitored, verified, and evaluated within the scope of the Subproject monitoring stage. The KPIs for both construction and operation phases of the Subproject are presented in Table 22 Key Performance Indicators for Both Construction and Operation Phases of the Subproject.

Table 22 Key Performance Indicators for Both Construction and Operation Phases of the Subproject

Monitoring Focus	KPI
Documentation	
Following ESMP Project specific plans will be developed and be in place.	Full compliance with Subproject's ESMP
Air Quality	
Air Quality incidents	Minimization and continued improvement in the number of the reported air quality related incidents.
Non-Compliance with air quality standards	Zero grievances per year
Community grievances	Minimization and continued improvement in the number of air quality related community grievances
Violation on speed limit	Minimization and continued improvement in the number of reported violations on speed limit
Noise	
Noise and Vibration incidents	Minimize and continued improvement in number of reported noise and vibration related incidents
Non-Compliance with Project standards	Zero Non-Compliance Reports (NCRs) per year
Number of noise-related community grievances	Zero grievances per year
Community grievances	Minimization and continued improvement in the number of noise related community grievances
Water / Wastewater	
Spill incident	Minimization and continued improvement in the number of the reported water quality related incidents.
Non-Compliance with Subproject standards	Zero NCRs per year
Wastewater collection system	Zero grievances per year
Groundwater levels of the community/private wells	No significant adverse impact
Water quality analyses	Meeting set national and international water quality standards for surface and groundwater impacted and/or near the Subproject
Flood incidents	No infrastructure damage and damage to loads/humans
Wastewater and Water loss records in network	Sustainable low wastewater and water loss records

Monitoring Focus	KPI
Documentation	
Waste	
Waste Generation	Minimization of total waste generated Decrease in the ratio of hazardous waste generated to total waste (by contamination + by generation)
Waste Disposal	Increase in the ratio of recovered/reused/recycled waste to total waste generated
Soil Quality	
Spill incident	Minimization and continued improvement in the number of the reported soil quality related incidents
Non-Compliance with Subproject standards	Zero NCRs per year
Soil quality accidents	Zero accident per year
Number of soil-related community grievances	Zero grievances per year
Traffic	
Number of non-compliances against the mitigation controls identified in Traffic Management Plan	Decreasing number/ continuous improvement in number of reported non-compliances
Number of drivers found to be exceeding speed limits or driving unsafely	Zero exceedance per year
Number of road traffic accidents involving: Accidental injuries and deaths, Spillages (such as cargo or fuel), Wildlife-vehicle collisions.	Zero accidents per year
Number of traffic-related grievances	Zero grievances per year
Health, Safety and Environment	
% of scheduled HSE Inspection	>90
% of attendance at HSE meetings	>90
% of closing of NCRs	100
Reporting safe observations	100%
Reporting unsafe observations	100%
Reporting near misses	100%
Reporting number of incidents	100%
Reporting number of accidents	100%
Reporting day-loss	100%
% of Toolbox attending	>90
% of Risk Assessment compliance	>90
% of Legal Requirements compliance	100%
Results of scheduled audits	>85
HSE training carried out to training matrix > 90% of all training to matrix	>90
% of attendance at scheduled trainings	>90
Engagement in HSE program by individual managers and supervisors	>90
Engagement in HSE program by contractor's	>90
Labor and Working Conditions	
Number of worker grievances closed out within the target timeframe	100% compliance with labor laws and regulations Zero unresolved health and safety incidents within the target timeframe 100% availability of required PPE

Monitoring Focus	KPI
Documentation	
	90% or higher worker satisfaction rate
Community Health and Safety	
Number of communicable and non-communicable diseases and injuries.	Negative Trend/No significant increase in communicable and non-communicable disease and injury rates per 1,000 residents per annum.
Number of community health safety & security grievances from local communities as recorded in the grievance management system.	Decreasing number/ continuous improvement in number of grievances
Number of reported community health & safety incidents	Zero incidents per year
Number of reported air quality or noise incidents	Zero incidents per year
Direct and indirect threats posed by construction activities against traffic and pedestrians	Zero number of drivers found to be exceeding speed limits or driving unsafely Zero accidental injuries and deaths, Zero traffic-related grievances
Access to the Construction Site - Security Fence/ Protection Tape	Zero Number of unauthorized accesses to the Subproject area
Trainings	
Training records	Trainings on ESMP and SEP documents. Providing all trainings (including GM, GBV, SEA/SH) to all employees. 100% of scheduled training sessions conducted 80% or higher participant satisfaction rate Zero participants without completion certificates if applicable
Disclosure	
Grievance Records, Disclosure meeting participant records, ESMP, SEP, GM will be disclosed at Project web site in two languages (English and Turkish).	All grievances closed-out within the target timeframe ESMP, Project specific SEP and GM will be prepared and disclosed at the Project web site
Vulnerable groups	
Incidents, Grievances, Toolbox talks and trainings, Information/ disclosure	All grievances closed-out within the target timeframe Sufficient information provided to the VGs
Grievance mechanism	
Grievance Records, GM disclosure	All grievances closed-out within the target timeframe GM disclosure to the PAPs, stakeholders GM disclosure at Subproject web site
Cultural Heritage	
Existence of a Chance Find	Zero Grievance Records

Table 23 Construction Environmental and Social Monitoring Table

Ref.	Subject	Parameter to be Monitored	Monitoring Location	Monitoring Method	Monitoring Frequency	Reference / Threshold Level	Responsibility	Monitoring / KPIs	Cost
C-01	Air Quality – Dust	PM10, visible dust plumes, grievance records	WWTP site (Parcel 2308, 6564 and 6569), excavation areas, unpaved haul roads, Köşk residents (330m)	Visual inspection + portable PM meter + grievance review	Daily visual / Weekly measurement during dry season	RAQAM + WBG EHS (PM10 ≤ 50 µg/m³ 24h)	Contractor EHS / KOSKİ PIU	Zero visible dust; # of valid grievances = 0; 100% watering log compliance	Included
C-02	Air Emissions – Machinery	Exhaust opacity (black smoke), maintenance logs	Construction site / Equipment yard	Visual inspection + maintenance manifest review	Weekly	National emission standards (Exhaust Gas Emission Control Reg.)	Contractor	100% of machinery with valid maintenance certificates	Included
C-03	Noise Management	LAeq (dBA) levels	Site boundary and nearest residential receptors in Köşk	Sound level meter (accredited)	Monthly + immediate check upon grievance	ÇGDYY (70 dBA for construction) + WBG EHS	Contractor / Supervision Consultant	Noise ≤ limits; Zero night-time work violations (20:00-07:00)	Included
C-04	Vibration	Vibration velocity (mm/s)	Sensitive receptors / nearest structures	Portable vibration meter (if required by complaints)	As needed (during compaction/heavy excavation)	National Vibration Standards	Contractor	No structural damage reported; Grievance closure rate 100%	Included
C-05	Surface Water Protection	Turbidity, sediment runoff, oil sheen	Yanbay Stream and local drainage channels	Visual check + turbidity observation	Weekly & within 24h after heavy rainfall	No visible sediment discharge or sheen	Contractor	Silt traps/curtains installed; Erosion controls effective	Included
C-06	Wastewater (Domestic)	Septic tank levels, leakage, disposal records	Worker facilities / On-site portable toilets	Checklist inspection + vacuum truck manifests	Weekly	No discharge to soil/water; Disposal at Konya WWTP	Contractor	Zero illegal discharges; Manifests matching worker	Included

Ref.	Subject	Parameter to be Monitored	Monitoring Location	Monitoring Method	Monitoring Frequency	Reference / Threshold Level	Responsibility	Monitoring / KPIs	Cost
								numbers	
C-07	Soil Management	Erosion signs, topsoil storage (min 30cm depth)	Site stockpiles / Parcel 2308, 6564 and 6569 boundary	Visual inspection of slopes and covers	Weekly	Regulation on Soil Pollution Control; GIIP	Contractor	100% of topsoil preserved for rehabilitation; No erosion gullies	Included
C-08	Hazardous Materials	Fuel/chemical storage, MSDS, bunding integrity	Chemical/Fuel storage area (secondary containment)	Checklist inspection (leak-proof checks)	Weekly	WBG EHS + Regulation on Dangerous Substances	Contractor	110% bunding capacity; MSDS available for all chemicals	Included
C-09	Spill Control	Spill incidents, spill kit availability	Entire site / Refueling zones	Incident log review + equipment inspection	Continuous monitoring / Weekly kit check	Zero uncontrolled spills to soil	Contractor	# of spills; Spill response time < 30 mins	Included
C-10	Solid Waste	Segregation (packaging, domestic, organic)	On-site Temporary Waste Storage Area	Inspection + waste log manifests	Weekly	Waste Management Regulation	Contractor	Segregation rate > 90%; No waste burned on site	Included
C-11	Hazardous Waste	Labeling, storage duration, storage condition	Locked hazardous waste container	Inspection + MoEUCC manifests (MOTAT)	Weekly	Hazardous Waste Regulation	Contractor	Licensed disposal 100%; Zero storage > 180 days	Included
C-12	Excavation Waste	Disposal volume, reuse on-site, disposal location	Haul routes to licensed sites	Documentation review (Receipts)	Per load / Monthly summary	Regulation on Construction and Demolition Waste	Contractor	Disposal only at licensed sites; Reuse max. for site leveling	Included
C-13	Construction Debris	Proper removal of concrete residues	WWTP unit construction zones	Visual check	Weekly	No open dumping	Contractor	Zero concrete wash-water discharge to soil	Included

Ref.	Subject	Parameter to be Monitored	Monitoring Location	Monitoring Method	Monitoring Frequency	Reference / Threshold Level	Responsibility	Monitoring / KPIs	Cost
C-14	Traffic Safety	Vehicle speed (max 30 km/h), signage	Village roads to Köşk settlement	GPS tracking + Spot speed checks	Daily	Traffic Management Plan (TMP)	Contractor	Speed compliance = 100%; Zero traffic accidents	Included
C-15	Community Safety	Barricades, night lighting, trench covers	Site perimeter & collector line trenches	Visual inspection	Daily (Start/End of shift)	GIIP + ESS4 requirements	Contractor	100% fencing integrity; Zero unauthorized site entries	Included
C-16	Occupational Health & Safety	OHS monitoring (site inspections, high-risk activities, incident reporting and corrective actions)	Entire site / Unit foundations	Site audit	Daily	Law No. 6331 + WB ESS2	Contractor HSE Manager	PPE compliance = 100%; # of OHS non-conformities	Included
C-17	Accidents/Incidents	Lost Time Injury (LTI), Near misses, fatalities	Entire site	Incident reporting system	Continuous / 24h report to KOSKİ/İLBANK	Zero Fatalities; Zero High-Risk Incidents	Contractor / KOSKİ PIU	LTIFR (Frequency Rate); # of near-misses reported	Included
C-18	Working Conditions	Contracts, insurance, working hours, child labor	HR records / Site gate logs	Document review + Worker interviews	Monthly	Labor Law + WB ESS2	Contractor / KOSKİ PIU	100% of workers with legal contracts; No unregistered labor	Included
C-19	Training	Induction, OHS, E&S, Code of Conduct, Fauna awareness	Site office / Training room	Attendance logs + Evaluation scores	Monthly / Upon new hiring	ESMP Training Plan	Contractor	100% of staff trained before starting work	Included
C-20	Biodiversity	<i>Salix spp.</i> cutting, <i>Testudo graeca</i> checks	Parcel 2308, 6564 and 6569/ Abandoned structure	Visual survey by Biodiversity Expert	Once before demolition / Monthly	WB ESS6; IUCN Vulnerable (Tortoise)	Contractor / Biodiversity Expert	Zero harm to tortoises; <i>Salix</i> cutting limited to design footprint	Included
C-	Cultural Heritage	Chance finds (archaeological)	Excavation faces (Collector and	On-site	Continuous during	Chance Finds Procedure	Contractor /	100% compliance with procedure; #	Included

Ref.	Subject	Parameter to be Monitored	Monitoring Location	Monitoring Method	Monitoring Frequency	Reference / Threshold Level	Responsibility	Monitoring / KPIs	Cost
21			WWTP)	monitoring	excavation	(Annex İ)	Museum Dir.	of finds reported	
C-22	Grievance Mechanism	Complaints received/resolved/timeframe	Köşk, İmrenler, Selki	Grievance Register (GM) log review	Monthly	WB ESS10	KOSKİ / Contractor	Resolution time ≤ 15 days; Closure rate = 100%	Included
C-23	Stakeholder Engagement	Information disclosure, notice of works	Beneficiary neighborhoods	Disclosure logs / Meeting minutes	Quarterly / Before phase changes	SEP (Stakeholder Engagement Plan)	KOSKİ	# of announcements via Mukhtars; # of attendees	Included
C-24	Sanitation & Hygiene	Cleanliness of toilets, drinking water quality	Worker rest areas	Checklist inspection	Weekly	WBG EHS Guidelines	Contractor	Hygiene score > 90%; Potable water test results	Included
C-25	Emergency Preparedness	Drills (fire, spill, medical), equipment status	Entire site	Drill reports + Equipment checklist	Quarterly	ERP (Emergency Response Plan)	Contractor	# of drills/year ≥ 4; 100% fire extinguisher readiness	Included
C-26	Resource Efficiency	Fuel, water, and electricity consumption	Site meters / Fuel logs	Log review	Monthly	ESS3 requirements	Contractor	Consumption per work unit (e.g., L fuel/m ³ excavation)	Included
C-27	Housekeeping	Site tidiness, scrap removal	Entire site	Inspection	Daily	GIIP	Contractor	"Clean Site" score; Absence of scattered debris	Included
C-28	Documentation	ESMP compliance, audit reports	Site office	Internal audit / Document control	Monthly	ESMP Compliance System	Supervision Consultant	% of previous non-conformities closed	Included

Table 24 Operation Environmental and Social Monitoring Table

Ref.	Subject	Parameter to be Monitored	Monitoring Location	Monitoring Method	Monitoring Frequency	Reference / Threshold Level	Responsibility for Monitoring	Monitoring / KPIs	Cost
O-01	Treated Effluent Quality	BOD ₅ , COD, TSS (Suspended Solids)	WWTP outlet (before Yanbay Stream)	Automatic sampling + accredited lab analysis	Weekly	WPCR + Urban WWTP Reg. (BOD: 25, COD: 125, TSS: 35 mg/L)	KOSKİ Operator	≥95% compliance with limits	Included
O-02	Nutrient Removal Performance	Total Nitrogen (TN), Total Phosphorus (TP)	WWTP outlet flow structure	Composite sampling and lab analysis	Weekly	Sensitive Area limits (TN ≤ 15 mg/L, TP ≤ 2 mg/L)	KOSKİ	100% compliance; Eutrophication risk minimized	Included
O-03	Microbiological Safety	E.coli / Total Coliform	Disinfection unit outlet	Grab sampling + lab analysis	Monthly	National standards for discharge	KOSKİ	Within legal limit; Disinfection efficiency	Included
O-04	Hydraulic Flow Rate	Influent and effluent m ³ /day	Parshall flume / SCADA meters	Continuous (Ultrasonic meter)	Continuous	Design capacity: 750 m ³ /day (2045 target)	KOSKİ	Overload events = 0; Flow data integrity	Included
O-05	Receiving Body Protection	Visual turbidity, odor, bank erosion	Yanbay Stream discharge point	Field inspection (walkover)	Weekly	No visible pollution or abnormal color	KOSKİ	Zero visible impact sign; 0 complaints	Included
O-06	Sludge Cake Quality	Moisture %, stabilization, organic content	Sludge dewatering building	Lab analysis of dewatered cake	Weekly	Technical Procedures for WWTP Reg.	KOSKİ	Cake dryness ≥ 20% solids for transport	Included
O-07	Sludge Disposal Tracking	Disposal manifests, MOTAT records	Storage area to truck loading	Document review (Manifests)	Per shipment	Licensed disposal (Konya Landfill)	KOSKİ	100% manifest verification	Included
O-08	Odor Control	H ₂ S presence, organic odor nuisance	Plant boundary & nearest neighbors	Handheld H ₂ S meter + odor patrol	Weekly + complaint-based	Reg. on Odour-Creating Emissions	KOSKİ	# of complaints = 0; Gas levels within range	Included
O-09	Ambient Air Quality	PM ₁₀ , H ₂ S (if gas leak suspected)	Site boundary (Parcel 2308, 6564 and 6569)	Portable measurement device	Quarterly	WBG EHS Guidelines / RAQAM	KOSKİ	Concentrations within safe limits	Included
O-	Operational Noise	LAeq (dBA) from	Site boundary / Nearest house	Sound level meter	Semi-	ÇGDYY (55 dBA	KOSKİ	Compliance with	Included

Ref.	Subject	Parameter to be Monitored	Monitoring Location	Monitoring Method	Monitoring Frequency	Reference / Threshold Level	Responsibility for Monitoring	Monitoring / KPIs	Cost
10		blowers and pumps	(330m)	(accredited)	annually	Day / 45 dBA Night)		night-time limits	
O-11	Chemical Storage Safety	FeCl ₃ (40%), Polyelectrolyte, Chlorine bins	Chemical storage room	Visual checklist inspection	Weekly	WBG EHS / MSDS / Bunding Reg.	KOSKİ	100% secondary containment integrity	Included
O-12	Resource Efficiency (Chemicals)	Usage vs. Flow ratio	Dosing units / SCADA	Log review and audit	Monthly	Design optimization target	KOSKİ	kg chemical / m ³ treated wastewater	Included
O-13	Spill Prevention & Control	Leaks, staining, spill kit readiness	Fuel and chemical transfer areas	Physical inspection	Weekly	Zero uncontrolled soil discharge	KOSKİ	# of leak events; Spill kit stock 100%	Included
O-14	Solid Waste (Operational)	Screenings and grit waste quantity	Pre-treatment waste containers	Visual check + volume log	Weekly	Waste Management Regulation	KOSKİ	100% proper segregation and disposal	Included
O-15	Hazardous Waste (O&M)	Waste oils, empty chemical containers	Hazardous waste temporary storage	Inspection of labels + manifests	Monthly	HW Regulation (MOTAT system)	KOSKİ	Licensed disposal rate 100%	Included
O-16	Energy Efficiency	Specific electricity consumption (kWh)	Main switchgear meters	Meter reading / Utility audit	Monthly	Resource efficiency plan / ESS3	KOSKİ	Energy intensity (kWh/m ³ treated)	Included
O-17	Water Reuse (Internal)	Process water/irrigation reused volume	WWTP internal reuse line	Metering logs	Monthly	Internal conservation target	KOSKİ	% of effluent reused for on-site needs	Included
O-18	Mechanical Integrity	Pump/Blower uptime, SCADA alarms	Entire plant units	Maintenance log (SAP/Manual)	Monthly	Preventive Maintenance Plan	KOSKİ	Mechanical uptime ≥ 95%	Included
O-19	Emergency Preparedness	Chlorine leak, fire, or earthquake drills	Entire facility	Drill simulation + report	Semi-annually	Emergency Response Plan (ERP)	KOSKİ	# drills/year ≥ 2; Staff readiness score	Included
O-20	Occupational Health & Safety	PPE usage, unsafe acts, LTI/Near misses	Working floors and buildings	Safety audit + incident log	Monthly	OHS Law No 6331 + WB ESS2	KOSKİ OHS Specialist	LTIFR = 0; PPE compliance rate 100%	Included

Ref.	Subject	Parameter to be Monitored	Monitoring Location	Monitoring Method	Monitoring Frequency	Reference / Threshold Level	Responsibility for Monitoring	Monitoring / KPIs	Cost
O-21	Confined Space Entry Safety	Entry permits (Gas check, ventilation)	Pumping wells and tanks	Permit review (PTW system)	Per entry	OHS Standard for Confined Spaces	KOSKİ	100% compliance with PTW protocol	Included
O-22	Technical & E&S Training	Staff training hours and topics	Training room / On-the-job	Attendance record review	Annual	Annual Training Plan	KOSKİ	≥ 8 training hours per staff/year	Included
O-23	Labor & Working Conditions	Contracts, payment, hours, child labor	Administration office	HR document audit	Annual	Labor Law + WB ESS2	KOSKİ PIU	100% compliant contracts/overtime	Included
O-24	Biodiversity (Landscaping)	Survival of native flora, fauna incidents	Buffer zone (500m radius)	Visual botanical inspection	Quarterly	WB ESS6 / No herbicide use	KOSKİ Env. Spec.	Native species survival rate ≥ 90%	Included
O-25	Social Grievance Mechanism	Public complaints (Odor, Noise, etc.)	Köşk, Selki, İmrenler villages	GM log review	Monthly	WB ESS10	KOSKİ Social Spec.	Resolution ≤ 15 days; Closure rate 100%	Included
O-26	Traffic Safety (Sludge Trucks)	Speed, route compliance, vehicle condition	Access roads (village network)	Manifest check + GPS log review	Monthly	Traffic Management Plan (TMP)	KOSKİ / Contractor	Zero road accidents; Speed compliance	Included
O-27	SCADA & Data Reliability	Monitoring system uptime/accuracy	Central control room	System uptime check	Weekly	Continuous Monitoring Req.	KOSKİ IT/SCADA	SCADA data availability ≥ 99%	Included
O-28	Permitting & Legal Status	Permit validity (Discharge, EIA Exemption)	Official documentation	Periodic permit audit	Annual	National Regulations	KOSKİ	100% valid permits at all times	Included
O-29	ESG Reporting	Submission of ESMR to İLBANK/WB	Management office	Report submission review	Quarterly	GFC Project Requirements	KOSKİ PIU	On-time submission of all ESG reports	Included
O-30	Resource Efficiency (Overall)	Energy consumption per unit pollution	Plant-wide	KPI calculation against targets	Quarterly	GIIP / Benchmark analysis	KOSKİ	Improvement in operational footprint	Included

4.5. List of Associated Plans and Procedures

The E&S management plans and procedures to be prepared by Contractor/s are listed in Table 25 Plans and Procedures associated

Table 25 Plans and Procedures associated

Management Plan or Procedure	Relevant Subproject Phase (Construction only, Operation only, both Construction and Defect Liability Period (DLP))
Contractor's Environmental and Social Management Plan (C-ESMP)	Construction and Operation
OHS Management Plan	Construction and Operation
Emergency Preparedness and Response Plan	Construction and Operation
Traffic Management Plan	Construction and Operation
Waste Management Plan	Construction and Operation
Wastewater Management Plan	Construction and Operation
Sludge Management Plan	Construction and Operation
Air Quality Management Plan	Construction and Operation
Noise Management Plan	Construction and Operation
Stakeholder Engagement Plan	Construction and Operation
Labor Management Plan	Construction and Operation
Soil Management Plan	Construction and Operation
Community Health and Safety Management Plan	Construction and Operation
Risk Assessment	Construction and Operation
Chance Finds Procedure	Construction

The plans/procedures will be reviewed and revised in the event of any major change and/or at least every 6 months.

4.6. Management of Change

The Sub-borrower shall notify ILBANK of any material changes to the Subproject (including those resulting from the activities of the Sub-borrower and/or contractor) using ILBANK's Change Notification Form template (see Annex K).

Such changes may include, inter alia, the following:

- Administrative/ organizational structure changes at the decision-making level
- Changes in assigned environmental, social and/or OHS staff
- Legislative changes impacting Subproject implementation (e.g. new permitting processes).
- Design changes (e.g. any changes in the Subproject description, footprint such as new temporary or permanent sites/facilities – on-site or off-site, changes in number of workforce involved, changes in on-site/off-site worker accommodation arrangements).
- Schedule changes
- Changes related to E&S issues (e.g. new biodiversity features or cultural heritage assets identified, additional resettlement need, etc.)
- Changes in the contractor or construction supervision consultants at any phase of the Subproject that require: (i) clarification of E&S commitments and roles and responsibilities with the new contractor or supervision consulting firm, and (ii) reorganization and redelivery of E&S training to the staff of the new contractor or supervision consulting firm

5. CAPACITY DEVELOPMENT AND TRAINING

5.1. Organizational Capacity

The organizational structure of the PIU to be established by the Sub-borrower, is presented Table 26 The PIU will include qualified staff and resources to the satisfaction of İLBANK.

Table 26 Organization Structure – Project Implementation Unit (PIU)

NAME - SURNAME	TITLE	DEPARTMENT	ROLE IN THE PROJECT IMPLEMENTATION UNIT
Mehmet METİN	Head of Wastewater Treatment Facilities Department – Mechanical Engineer (M.Sc.)	Department of Wastewater Treatment Facilities	Project Management
Muhammed CEYLAN	Assistant Project Manager – Electrical & Electronics Engineer	Department of Wastewater Treatment Facilities	Project Management
Mahmut ACAR	Civil Engineer	Department of Wastewater Treatment Facilities	Technical Specialist – Construction Works
İbrahim SİYİRDİCİ	Environmental Engineer	Department of Wastewater Treatment Facilities	Technical Specialist – Process Works
Fatih KOÇ	Mechanical Engineer	Department of Wastewater Treatment Facilities	Technical Specialist – Mechanical Works
Dursun GÜZEL	Electrical & Electronics Engineer	Department of Wastewater Treatment Facilities	Technical Specialist – Electrical Works
Muhammet Nurullah DEĞİRMENCİ	Civil Engineer (M.Sc.)	Department of Wastewater Treatment Facilities	Technical Specialist – Construction Works
Çağrı ŞAHİN	Branch Manager of Wastewater Treatment Facilities – Environmental Engineer	Department of Wastewater Treatment Facilities	Technical Specialist – Environmental and Social Monitoring & Evaluation
Mehmet Ali KAHVECİ	Officer	Department of Investment and Construction	Procurement Specialist – Tendering and Procurement
Banu EKİNCİ	Officer	Department of Financial Services	Finance Specialist – Financial Affairs
İlyas MURAT	OHS Specialist (Class A)	Occupational Health and Safety Unit	Technical Specialist – OHS
Reyyan ERDOĞAN	Sociologist	Department of Human Resources	Social Expert

The Sub-borrower will maintain the PIU by ensuring that there is qualified staff assigned and serving on the duty throughout the sub-financing agreement lifecycle.

At minimum, the E&S team at the Sub-borrower PIU will include the following personnel, who shall support the management and monitoring of Subproject E&S risks and impacts and ensure full compliance with the ESMP and other relevant E&S instruments:

- **Environmental Specialist(s):** to address environmental risks and impacts identified under the Environmental and Social Assessment (ESA) reports, such as Environmental and Social Impact Assessment (ESIA), Environmental and Social Management Plan (ESMP), etc.
- **Social Expert/ Grievance Mechanism (GM) Focal Point:** to address social risks and impacts identified under the ESA reports, land acquisition, and labor issues, including stakeholder engagement and grievance redress; and
- **Occupational Health and Safety (OHS) Specialist(s)** to address OHS risks and impacts identified under the ESA reports.

If the necessary staff is not available within their own organizational structure, the Sub-borrower will obtain support/consultancy services from outside.

Contractors

The Sub-borrower will require the awarded contractors to establish and maintain throughout the contract duration an organizational structure with qualified staff and resources.

This will be achieved through assigning the following personnel within the contractor's organization:

- Environmental Specialist(s)
- Social Specialist(s) who will also act as the GM Focal Point
- Occupational Health and Safety (OHS) Specialist(s)

If the necessary staff is not available within their own organizational structure, contractors will obtain third-party support/consultancy services.

5.2.Roles and Responsibilities

The roles and E&S related responsibilities of the Sub-borrower and other key parties are described in Table 27.

Table 27 Roles and E&S related Responsibilities of Key Parties associated with ESMP Implementation

Party	Role	Key Responsibilities
Sub-borrower		
KOSKI	Sub-borrower Management	• Hold ultimate responsibility for the E&S performance of the Subproject to the satisfaction of the İLBANK, including the performance of Subproject contractors throughout the sub-financing agreement lifecycle. • Establish Project Implementation Unit (PIU) following the execution of sub-financing agreements to carry out operational and administrative tasks to oversee the implementation of the E&S instruments and monitoring progress; allocate resources for the recruitment of in-house environmental, social and OHS staff under the PIU • Ensure that ESMP, SEP and other E&S management plans and procedures required by İLBANK is prepared within the timeframes agreed with İLBANK and allocate adequate financial and human resources – either from the Sub-borrower's own resources or from the Subproject loan and implement. • Cooperate with the İLBANK representatives to discuss and agree on the ESAP and other E&S covenants for incorporation into sub-financing agreements to be executed between the İLBANK and the sub-borrower (with support from RD E&S team as necessary) • Ensure that EHSS requirements of İLBANK are incorporated into relevant contractor tender and agreement documents to be prepared in collaboration with the construction supervision consultant • Hold and use the authority and responsibility to stop any Subproject related work activity if it poses an imminent danger to health, safety, or the environment. • Allocate resource to ensure monitoring of Subproject E&S performance and reporting to İLBANK at IFI standards in line with the sub-financing agreement conditions • Facilitate monitoring visits and audits by İLBANK and their consultants • Notify the İLBANK DG of any significant E&S incident or accident within maximum 24 hours of the accident/incident; contractually require the supervision consultants and/or contractors to promptly report such incident and accidents (timeframe to be defined by İLBANK)

Party	Role	Key Responsibilities
		Prepare and submit a detailed E&S Incident Investigation Form, supplemented by an RCA to be conducted pursuant to GIIPs, to İLBANK within 15 days of the accident/incident date for significant accidents or incidents (in line with the template presented in the E&S Supervision, Monitoring and Reporting Procedure). The investigation will be supplemented by a Root Cause Analysis (RCA).
	E&S Team - Environmental staff - Social staff - OHS staff	- Participate in the training to be organized by İLBANK as part of İLBANK ESMS Training Procedure implementation - Ensure that satisfactory ESMP, SEP and as required other E&S assessment documentation required by İLBANK is prepared by qualified independent specialists and submitted to İLBANK for appraisal and credit decision-making for High and Substantial risk Subproject, as well as for Moderate risk Subproject where the sub-borrower has limited E&S capabilities, coordinate commissioning independent third-party specialists (such as external E&S consultancy companies, individual consultants) to carry out the E&S assessment and prepare the E&S documentation required for İLBANK's appraisal and credit decision-making processes - Provide İLBANK with relevant adequate information to undertake the E&S due diligence in accordance with the ESMS (e.g. duly completed sub-borrower questionnaire and supporting documentation to be requested by İLBANK in accordance with the E&S Screening and Risk Classification and ESDD procedures) - Support the sub-borrower management as required in the review and evaluation of ESAP and other E&S covenants for incorporation into sub-financing agreements to be executed between the İLBANK and the sub-borrower - Ensure compliance of Subproject operations (including contractor activities on site) with national legislation and E&S requirements of the lending IFIs as included in the sub-financing agreements, ESAP and Subproject-specific E&S documentation (such as ESMP, SEP and other E&S management plans and procedures required by İLBANK) - Undertake monitoring of Subproject E&S performance and reporting to İLBANK at IFI standards in line with the sub-financing agreement conditions - Ensure implementation of corrective actions in case of E&S non-compliances in coordination and agreement with İLBANK DG and RD E&S teams over reasonable timeframes - Coordinate the construction supervision consultants, contractors and/or external E&S consultants for collection of the monitoring data and compilation of or providing input to periodic monitoring reports as necessary and appropriate - Allow İLBANK representatives (including individual consultants) to access Subproject facilities and records.
Construction Supervision Consultants ("Müşavir")	Management and E&S staff	Carry out the following tasks on behalf of the sub-borrowers: - Participate in the training sessions to be organized by sub-borrowers in line with the requirements of İLBANK ESMS Training Procedure - Supervise the construction works of contractors on-site, including implementation of Subproject-specific E&S requirements (requirements stemming from ESMP, SEP and other E&S management plans and procedures required by İLBANK as applicable) by contractors on a daily basis - Ensure sufficient E&S capacity for implementation of E&S requirements as set out in the sub-financing agreements between the sub-borrower and İLBANK - Support the sub-borrowers for the supervision and review of E&S management documentation prepared by construction contractors and submit them to sub-borrowers upon finalization - Review monthly self-monitoring reports prepared by the construction contractors for early identification of E&S issues and/or non-compliances and submit them to municipalities/municipal utilities upon finalization - Identify E&S non-compliances on site and enforce construction contractors to undertake corrective actions within defined and agreed timeframes

Party	Role	Key Responsibilities
		- Support the sub-borrowers (as requested) in the preparation of periodic E&S monitoring reports to be submitted to İLBANK in line with the İLBANK E&S Supervision, Monitoring and Reporting Procedure - Notify the sub-borrower of any significant E&S incident or accident that have taken place in Subproject related operations within 24 hours.
Construction Contractor	Management and E&S staff	- Ensure sufficient E&S capacity for implementation of E&S requirements as set out in the construction contracts - Participate in the training sessions to be organized by sub-borrowers in line with the requirements of İLBANK ESMS Training Procedure - Prepare Subproject-specific E&S management plans and procedures prior to start of construction works as required by the construction contracts - Comply with the requirements of national legislation and implement the E&S requirements as set out in the sub-financing agreements (executed between İLBANK and the sub-borrowers) and construction contracts - Submit periodic (in frequencies to be set by ESAP) E&S self-monitoring reports to the municipalities/municipal utilities through construction supervision consultants (“müşavir”) – in line with the format provided by İLBANK. - Fill in monthly occupational health and safety (OHS) forms – reviewed by construction supervision consultants. - Implement corrective actions in case of E&S non-compliances under the supervision of sub-borrower’s construction supervision consultant - Promptly notify the sub-borrower of any significant E&S incident or accident that have taken place in Subproject related operations within 24 hours.

5.3. Capacity Building and Training

Sub-borrower staff (trained by İLBANK) will deliver E&S training to contractors. The training contents are summarized in Table 28. The Sub-borrower will identify specific training programs to be conducted in line with these modules and submit this to İLBANK prior to commencement of works.

The Sub-borrower will ensure that E&S training programs are extended to subcontractors by contractors in the event of their involvement in Subproject implementation.

Table 28 Training Components for Training of Contractor Staff

Module	Training Name	Training Duration	Key Training Content
Module 1	İLBANK E&S Requirements	1 hour	- Overview of İLBANK E&S requirements: - İLBANK E&S Policy (including but not limited to the guiding principles on human rights, labor rights and working conditions, community health, safety and well-being, cultural heritage, gender equality, etc.) - External Communications (including stakeholder engagement, grievance management, etc.) - Monitoring, Review and Reporting - Labor Management, Contractor Management - İLBANK Code of Conduct
Module 2	Subproject-level E&S Requirements for contractors as per sub-financing agreement conditions	3 hours	- Subproject specific requirements: - E&S covenants included in sub-loan agreements - Subproject ESAP requirements - Subproject-level E&S assessment and management documentation (such as ESMP, SEP and other E&S management plans and procedures as applicable); - Emergency Preparedness and Response Plan including a training program for emergency responders including drills at regular intervals; - Specific training (such as driver training in case of involvement of vehicles or fleets of vehicles in Subproject-operations, training of security forces in the use of force (and where applicable, firearms), and appropriate conduct toward workers and affected communities, etc.). - Implementation of Labor Management Plan.

IMPLEMENTATION SCHEDULE AND COST ESTIMATES

5.4. Implementation Schedule

Duration of the construction and operation phase activities are listed in Table 29.

Table 29 Duration of Activities

Phase	Remarks/ Notes
Construction Duration	12 months
Defect Liability Period	12 months

5.5. Cost Estimates

Under this heading, expenditure items for the implementation of the ESMP are presented. Moreover, the estimated cost breakdown for the Subproject is presented in Table 30.

- Environmental, Social, Occupational Health and Safety Experts,
- Monitoring Activities,
- Revisions in site-specific ESMP and SEP,
- Social, Environmental, and OHS Trainings, Awareness, Information Dissemination,
- Capacity building,
- Implementation of SEP and ESMPs' measures.

Table 30 ESMP Cost Breakdown for Implementation and Monitoring.

Budget Item	Estimated Cost
Construction Phase	
Environmental Expert	Key staff (*)
Social Expert	Key staff (*)
OHS Expert	Key staff (*)
Monitoring (Measurements and laboratory analyses)	Included in the contractor's budget (**)
Financial Experts	No extra cost (***)
Technical Experts	No extra cost (***)
Operation Phase	
Monitoring (Measurements and laboratory analyses)	Included in the operation budget of KOSKİ (**)
Financial Experts	No extra cost (***)
Technical Experts	No extra cost (***)

(*) Recruitments of specialists shall be financed under the budget of supervision consultancy services. Relevant cost estimates are taken into account at the initial stage of the consultant selection. The contractors are obliged to hire environmental, social and OHS experts for the implementation and monitoring of ESMP within the scope and price of their bids. At this stage monthly cost estimated per specialist is 1,000 €/month)

(**) The laboratory and testing obligations and relevant reporting responsibility will be included within the works contract, during the construction period and the defect liability period. Later, for the operation stage, this responsibility will be transferred to KOSKİ.

(***) Since KOSKİ permanent staff will be appointed to these positions, there will be no extra cost to the Subproject budget.

List of Annexes

Annex A – List of the Individuals/Organizations that Prepared or Contributed to the ESMP	150
Annex B – Coordinates of Subproject Facilities	151
Annex C – Title Deeds.....	152
Annex D – Existing Permitting Documentation.....	156
Annex E - DSI Official Opinion on Flood Risk, Surface Water Drainage and Irrigation Infrastructure Constraints	170
Annex F – Site Photographs	174
Annex G – Baseline Measurements.....	175
Annex H – E&S Incident Notification Form Template.....	176
Annex I – E&S Incident Investigation Form Template	179
Annex J – Chance Finds Procedure	182
Annex K – Change Notification Form	192
Annex L – Legislative Framework and Gap Analysis.....	194
Annex M Agreement Documents	206

Annex A – List of the Individuals/Organizations that Prepared or Contributed to the ESMP

Name of the Individual/ Organization	Company/ Institution	Profession/ Expertise
Pelin Deniz YOĞURTÇU	POSEİDON Environmental Social Consulting Engineering Trade Ltd. Co. (POSEİDON)	Project Manager / Environmental Engineer
İrem AĞAÇCIOĞLU	POSEİDON Environmental Social Consulting Engineering Trade Ltd. Co. (POSEİDON)	Project Engineer / Environmental Engineer
Fikret VAROL	POSEİDON Environmental Social Consulting Engineering Trade Ltd. Co. (POSEİDON)	Project Engineer / Environmental Engineer
Ceyda TERZİ	POSEİDON Environmental Social Consulting Engineering Trade Ltd. Co. (POSEİDON)	Project Engineer / Environmental Engineer
Yavuz HİMMETOĞLU	POSEİDON Environmental Social Consulting Engineering Trade Ltd. Co. (POSEİDON)	Project Engineer / Environmental Engineer
Gözde YURTTAŞ	POSEİDON Environmental Social Consulting Engineering Trade Ltd. Co. (POSEİDON)	Biologist / Biodiversity Expert
Merve YILDIRIM	POSEİDON Environmental Social Consulting Engineering Trade Ltd. Co. (POSEİDON)	Sociologist
Ali Can CAN	POSEİDON Environmental Social Consulting Engineering Trade Ltd. Co. (POSEİDON)	Sociologist

Annex B – Coordinates of Subproject Facilities

Unit	Coordinates (WGS84 in decimals)	
	Y	X
Köşk WWTP	37.88977298	32.85791834
	37.88913768	32.85717641
	37.88921176	32.85740652
	37.88952380	32.85773289
	37.88989003	32.85766107

Annex C – Title Deeds

2038

			
TÜRKİYE CUMHURİYETİ TAPU SENEDİ			
TAŞINMAZ BİLGİLERİ	İl:	KONYA	
	İlçe:	HÜYÜK	
	Mahalle/Köy:	KÖŞK	
	Mevki:	KIZILYER	
	Ada:	Parsel: 2308	
	Yüz Ölçümü:	Cilt/Sayfa No: 24 - 2307	
Niteliği:	Atıksu Arıtma Tesisi Alanı		
MALİK BİLGİLERİ	Adı Soyadı/Baba Adı:	Hissesi:	Hisseye düşen m ² :
	KONYA SU VE KANALİZASYON İDARESİ GENEL MÜDÜRLÜĞÜ (KOSKİ)	Tam	2.440,00
TESCİLLE İLİŞKİN BİLGİLER	Taşınmaz No:	Edinme Nedeni:	İşlem Bedeli:
	63228512	Diğer Cins Değişiklikleri:	
	Konum Bilgisi:	Tescil Tarihi/Yevmiye No:	Siciline Uygundur
		12/05/2026 - 2858	Veriliş Tarihi: 12/05/2026 Özge SÖNMEZ Tapu Müdür V.
Mülkiyetin dışındaki aynı ve şahsi haklar ile şerh ve belirtmeler için tapu siciline müracaat edilmesi gerekmektedir.			

BU BELGE TOPLAM 3 SAYFADAN OLUŞMAKTADIR BİLGİ AMAÇLIDIR.

Tarih: 18-11-2025-09:04



Kaydı Oluşturan: MUHAMMET NURULLAH DEĞİRMENCİ (Konya Su ve Kanalizasyon İdaresi Genel Müdürlüğü)

Tapu Kaydı (Hepsi)

TAPU KAYIT BİLGİSİ

Zemin Tipi:	AnaTasınmaz	Ada/Parsel:	0/6564
Taşınmaz Kimlik No:	63313360	AT Yüzölçümü(m2):	402.00
İl/İlçe:	KONYA/HÜYÜK	Bağımsız Bölüm Nitelik:	
Kurum Adı:	Hüyük	Bağımsız Bölüm Brüt Yüzölçümü:	
Mahalle/Köy Adı:	KÖŞK Mah.	Bağımsız Bölüm Net Yüzölçümü:	
Mevkii:	KIZILYER	Blok/Kat/Giriş/BBNo:	
Cilt/Sayfa No:	68/6642	Arsa Pay/Payda:	
Kayıt Durum:	Aktif	Ana Taşınmaz Nitelik:	TARLA

TAŞINMAZA AİT ŞERH BEYAN İRTİFAK BİLGİLERİ

Ş/B/İ	Açıklama	Malik/Lehtar	Tesis Kurum Tarih-Yevmiye	Terkin Sebebi-Tarih-Yevmiye
Beyan	3083 SAYILI KANUN GEREĞİNCE DEVİR-TEMLİK, İPOTEK EDİLEMEZ VE SATIŞ VAADİNE KONU OLAMAZ. (Şablon: 3083 Sayılı Kanunun 13. Maddesine Göre Belirtme)	(SN:6424519) TARIM REFORMU GENEL MÜDÜRLÜĞÜ KONYA BÖLGE MÜDÜRLÜĞÜ	Hüyük - 22-11-2010 00:00 - 2468	

1 / 3

	VKN:8240304698	
--	----------------	--

MÜLKİYET BİLGİLERİ

(Hisse) Sistem No	Malik	El Birliği No	Hisse Pay/ Payda	Metrekare	Toplam Metrekare	Edinme Sebebi-Tarih-Yevmiye	Terkin Sebebi-Tarih-Yevmiye
177086919	(SN:127667554)-GÜLPERİ PARLAR- İBRAHİM Kızı-KN:43528624600	-	1/1	402.00	402.00	İfraz İşlemi (TSM)- 10-03-2011- 572	Kamulaştırma- 24-10-2016- 2823
359597577	(SN:2150170) KONYA SU VE KANALİZASYON İDARESİ GENEL MÜDÜRLÜĞÜ (KOSKİ) VKN:5800024777	-	1/1	402.00	402.00	Kamulaştırma 24-10-2016 2823	-

MÜLKİYETE AİT ŞERH BEYAN İRTİFAK BİLGİLERİ

Ş/B/İ	Açıklama	Kısıtlı Malik (Hisse) Ad Soyad	Malik/Lehtar	Tesis Kurum Tarih-Yevmiye	Terkin Sebebi-Tarih-Yevmiye
Serh	İhtiyati Haciz :- İSTANBUL 36. İCRA MÜDÜRLÜĞÜ'nün 21/11/2019 tarih- 2019/44143 ESAS sayılı Haciz Yazısı- sayılı yazıları ile Borç :- 2098611.42 TL - (Alacaklı :- QNB-FİNANS FAKTORİNG A.Ş. -)	KONYA SU VE KANALİZASYON İDARESİ GENEL MÜDÜRLÜĞÜ (KOSKİ)		Hüyük- 26-11-2019 11:48- 3965	Hüyük- 10-10-20 22-08-53- 4881

Bu belgeyi akıllı telefonunuzdan karekod tarama programları ile aşağıdaki barkodu taratarak;

Kaydı Oluşturan: MUHAMMET NURULLAH DEĞİRMENCİ (Konya Su ve Kanalizasyon İdaresi Genel Müdürlüğü)

Tapu Kaydı (Hepsi)

TAPU KAYIT BİLGİSİ

Zemin Tipi:	AnaTasınmaz	Ada/Parsel:	0/6569
Tasınmaz Kimlik No:	63313365	AT Yüzölçümü(m2):	1338.00
İl/ilçe:	KONYA/HÜYÜK	Bağımsız Bölüm Nitelik:	
Kurum Adı:	Hüyük	Bağımsız Bölüm Brüt Yüzölçümü:	
Mahalle/Köy Adı:	KÖŞK Mah.	Bağımsız Bölüm Net Yüzölçümü:	
Mevkii:	KIZILYER	Blok/Kat/Giriş/BBNo:	
Cilt/Sayfa No:	68/6647	Arsa Pay/Payda:	
Kayıt Durum:	Aktif	Ana Tasınmaz Nitelik:	TARLA

TAŞINMAZA AİT ŞERH BEYAN İRTİFAK BİLGİLERİ

Ş/B/İ	Açıklama	Malik/Lehtar	Tesis Kurum Tarih-Yevmiye	Terkin Sebebi-Tarih-Yevmiye
Beyan	3083 SAYILI KANUN GEREĞİNCE DEVİR-TEMLİK, İPOTEK EDİLEMEZ VE SATIŞ VAADİNE KONU OLAMAZ. (Şablon: 3083 Sayılı Kanunun 13. Maddesine Göre Belirtme)	(SN:6424519) TARIM REFORMU GENEL MÜDÜRLÜĞÜ KONYA BÖLGE MÜDÜRLÜĞÜ	Hüyük - 22-11-2010 00:00 - 2468	

1 / 3

	VKN:8240304698	
--	----------------	--

MÜLKİYET BİLGİLERİ

(Hisse) Sistem No	Malik	El Birliği No	Hisse Pay/Payda	Metrekare	Toplam Metrekare	Edinme Sebebi-Tarih-Yevmiye	Terkin Sebebi-Tarih-Yevmiye
177086924	(SN:127667559)-FATMA-YEŞİLDAĞ- ALİ MEHMET Kızı KN:	-	1/1	1338.00	1338.00	İfraz-İlemleri- (TSM)- 10-03-2011- 572	İfraz-İlemleri- (TSM)- 21-04-2011- 903
177086925	(SN:127667558)-İBRAHİM GÖZTEPE- AHMET Oğlu KN:22193335738	-	1/1	1338.00	1338.00	Satış- 21-04-2011- 903	Kamulaştırma- 24-10-2016- 2824
359598827	(SN:2150170) KONYA SU VE KANALİZASYON İDARESİ GENEL MÜDÜRLÜĞÜ (KOSKİ) VKN:5800024777	-	1/1	1338.00	1338.00	Kamulaştırma 24-10-2016 2824	-

MÜLKİYETE AİT ŞERH BEYAN İRTİFAK BİLGİLERİ

Ş/B/İ	Açıklama	Kısıtlı Malik (Hisse) Ad Soyad	Malik/Lehtar	Tesis Kurum Tarih-Yevmiye	Terkin Sebebi-Tarih-Yevmiye
Serh	İhtiyatı Haciz - İSTANBUL 36. İCRA MÜDÜRLÜĞÜ'nün 21/11/2019 tarih-2019/14143-ESAS sayılı Haciz Yazısı- sayılı yazıları ile Borç - 2098611.42 TL - (Alacaklı - QNB-FİNANS FAKTORİNG A.Ş.)	KONYA SU VE KANALİZASYON İDARESİ GENEL MÜDÜRLÜĞÜ (KOSKİ)		Hüyük - 26-11-2019 11:48 - 3965	Hüyük - 10-10-2022 08:53 - 4881

2 / 3

Annex D – Existing Permitting Documentation



T.C.
KONYA VALİLİĞİ
Çevre ve Şehircilik İl Müdürlüğü

Sayı : 47342952-220.03-E.18497
Konu : ÇED Muafiyeti.

07.12.2017

AK-KO MED. MÜH. VE PAT. DAN. SAN. TİC. LTD. ŞTİ. NE
Sahibiata Mh. Alaaddin Bulvarı Saray İşhanı No:3/407 Meram/KONYA

İlgi : a) 05/12/2017 tarihli ve 1331 sayılı yazınız.
b) 07/12/2017 tarihli ve 83399 Referans No'lu Başvuru.

İlimiz Hüyük İlçesi Köşk Mahallesi (2308 Parsel) adresinde Konya Büyükşehir Belediye Başkanlığı (KOSKİ Genel Müdürlüğü) tarafından yapılması planlanan Köşk Atıksu Arıtma Tesisi (750 metreküp/gün, 5652 kişi) projesi, 25/11/2014 tarih ve 29186 sayılı Resmi Gazete'de yayımlanarak yürürlüğe giren ÇED Yönetmeliği Listelerindeki eşik değerden az olduğu için kapsam dışı olarak değerlendirilmiştir.

Ancak, planlanan yatırım ile ilgili olarak, 5491 sayılı kanunla değişik 2872 sayılı Çevre Kanunu ile bu Kanuna istinaden çıkarılan Yönetmeliklerin ilgili hükümlerine uyulması ve diğer mer'i mevzuat çerçevesinde öngörülen gerekli izinlerin alınması, ekolojik dengenin bozulmamasına, çevrenin korunmasına ve geliştirilmesine yönelik tedbirlere riayet edilmesi hususunda;

Gereğini rica ederim.

e-imzalıdır

Özgür SOMUNCU
İl Müdür Yardımcısı V.

Not: 5070 sayılı Elektronik İmza Kanunu gereği bu belge elektronik imza ile imzalanmıştır.

Horozluhan Mah. Abdulbasri Sok. No:2 Selçuklu/KONYA
Tel: (332) 235 45 20 Fax: (332) 235 45 27 konya@csb.gov.tr

Bilgi için: Mehmet KIYICI
Mühendis
Telefon No: (332) 235 45 25



T.C.
KONYA VALİLİĞİ
Çevre, Şehircilik ve İklim Değişikliği İl Müdürlüğü

Sayı : E-47342952-220.03-14699728
Konu : ÇED Muafiyet Belgesi

KONYA SU VE KANALİZASYON İDARESİ GENEL MÜDÜRLÜĞÜNE
(Arıtma Tesisleri Dairesi Başkanlığı)

İlgi : a) 09/01/2026 tarihli ve E-20824400-220.04.02-119072 sayılı yazınız.
b) 20/01/2026 tarihli ve 228569 referans no'lu başvuru.

İlgi (a) yazınız ile yapılan başvurunuz ilgi (b) referans numarası ile çevrimiçi Çevresel Etki Değerlendirmesi süreci yönetim sistemine kayıt edilmiş olup, başvurunuzun incelenmesi neticesinde; Konya İli, Hüyük İlçesi, Köşk Mahallesi 0 Ada, 6569, 6564 ve 2308 Parsellerde bulunan alanda Koski Genel Müdürlüğü tarafından yapılması planlanan Atıksu Arıtma Tesis (750 m³/gün) projesi, 29/07/2022 tarih ve 31907 sayılı Resmi Gazete'de yayımlanarak yürürlüğe giren ÇED Yönetmeliği Ek-2 Listesi 51. Maddesinde belirtilen (Kapasitesi 30.000 m³/gün ve üzeri olan atık su arıtma tesisleri,) eşik değer in altında kaldığından kapsam dışı olarak değerlendirilmiştir.

Planlanan yatırım ile ilgili olarak 2872 sayılı Çevre Kanunu ile bu Kanuna istinaden çıkarılan Yönetmeliklerin ilgili hükümlerine uyulması ve diğer mer'i mevzuat çerçevesinde öngörülen gerekli izinlerin alınması, ekolojik dengenin bozulmamasına, çevrenin korunmasına ve geliştirilmesine yönelik tedbirlere riayet edilmesi, Yönetmeliğe tabi değişikliklerin planlanması halinde Valiliğimize (Çevre, Şehircilik ve İklim Değişikliği İl Müdürlüğü) başvurulması hususunda;

Bilgilerinizi ve gereğini rica ederim.

Sebahattin TUNÇEZ

Vali a.

İl Müdür Yardımcısı V.

Bu belge, güvenli elektronik imza ile imzalanmıştır.

Doğrulama Kodu: 6A0ADE5B-9353-4FD0-9445-CC174BC33154

Doğrulama Adresi: <https://www.turkiye.gov.tr>

Horozluhan Mahallesi Ankara Caddesi 145/2 Selçuklu/ KONYA

Tel : (332)2239000 Faks: (332)2239313

e-Posta: konya@icseb.gov.tr <https://konya.icseb.gov.tr>

KEP Adresi : konyacevreseshircilik@hs01.kep.tr

Bilgi için İ.Mete TEMİZ

Mühendis





T.C.
KONYA VALİLİĞİ
İl Tarım ve Orman Müdürlüğü



2025 AİLE YILI

Sayı : E-67894191-230.04.02-20663674
Konu : TD.Konya,Muhtelif İlçeler,Muhtelif
Mahalle,(Konya Su ve Kanalizasyon İdaresi
Genel Müd.)(Sondaj Su Deposu
Atıksu Arıtma Tesisi)

KONYA BÜYÜKŞEHİR BELEDİYE BAŞKANLIĞI
(Konya Su ve Kanalizasyon İdaresi Genel Müdürlüğü)

İlgi : Konya Su ve Kanalizasyon İdaresi Genel Müdürlüğünün 03.02.2023 tarihli ve 92623187-220.01.99-45590 sayılı yazısı.

Konya ili, Muhtelif ilçeler, Muhtelif Mahallelerin sınırları içerisinde yer alan çoklu parsellerde kayıtlı 2,5036 hektar alan ile Muhtelif büyük ova koruma alanları sınırları içerisinde yer alan 3,1348 hektar alanda olmak üzere toplam 5,6384 hektar alanda Konya Su ve Kanalizasyon İdaresi Genel Müdürlüğü tarafından "Sondaj-Su Deposu-Atık Su Arıtma Tesisi" amaçlı tarım dışı kullanım talebi istenmekte olup; 5403 sayılı Toprak Koruma ve Arazi Kullanım Kanunu kapsamında kurum görüşümüz istenmektedir.

Söz konusu başvuru; 5403 sayılı Toprak Koruma ve Arazi Kullanım Kanunu kapsamında değerlendirilmek üzere Bakanlığımıza gönderilmiş, talebe yönelik Tarım Reformu Genel Müdürlüğü'nün 15.08.2025 tarih ve E.220576477 sayılı yazıları ile toplam 5,6384 hektar alanda Konya Su ve Kanalizasyon İdaresi Genel Müdürlüğü tarafından "Sondaj-Su Deposu-Atık Su Arıtma Tesisi" amaçlı tarım dışı kullanım talebi uygun görülmüştür.

Arazi kullanımına ilişkin verilen bu izin, taşınmaz üzerinde izinsiz yapı yada bozulum olması durumunda Kanun'un 21'inci maddesi kapsamında işlem yapılması, 09.12.2017 tarih ve 30265 sayılı Resmi Gazete'de yayımlanarak yürürlüğe giren Tarım Arazilerinin Korunması, Kullanılması ve Planlanmasına Dair Yönetmelik'in 12'nci maddesinin 8'inci fıkrası gereği, izni talep eden kurum veya kişilere bildiriminden itibaren iki yıl süre ile geçerli olup, tarım dışı amaçlı kullanımlarda planların onaylanmaması, tarımsal amaçlı izinlerde ise ruhsata bağlanmaması durumunda geçersiz kabul edilecektir.

Gereğini arz ederim.

Esat ALTUNTAŞ
İl Müdürü V.

Bu belge, güvenli elektronik imza ile imzalanmıştır.

Doğrulama Kodu: 91FEBE5C-8C2B-4CC7-83A9-82AD09F9C7F3 Doğrulama Adresi: <https://www.turkiye.gov.tr/tarim-cbys>
Konevi Mahallesi Larende Caddesi No:14 Meram/Konya Bilgi için:Ömer KARA
Tel: (0332) 322 34 60 Faks: 0 332 322 43 15 Mühendis
E-Posta: konya@tarim.gov.tr Kep: tarimveormanbakanligi@hs01.kep.tr Telefon No:(332) 322 34 60-
KEP Adresi : tarimveormanbakanligi@hs01.kep.tr 1183



Sayı : E-92623187-220.01.99-45590
Konu : Tad Portalı Hk.

03.02.2023

KONYA İL TARIM VE ORMAN MÜDÜRLÜĞÜNE

İlgi : a) 30.01.2023 tarihli ve E-67894191-230.04.02-8725863 sayılı yazı.
b) 27.01.2023 tarihli ve 92623187-220.01.99-45142 sayılı yazı.
c) 01.02.2023 tarihli ve 92623187-220.01.99-45377 sayılı yazı.

İlgi (a) yazınız ile Tad Portal sistemine giriş yapılarak kurum görüşü sorulan yerlerle ilgili ilgi (b) ve ilgi (c) yazılarımız revize edilmiş ve yeniden talep edilmiştir. İlgi (a) yazınızda belirtilen DSI görüşü yazısı yazınız ekinde gönderilmiştir.

Ayrıca aşağıda belirtilen yerlerin Tad Portal girişleri yapılmış olup talep edilen yerleri için tarım dışı kullanım izinlerinin verilmesi hususunda gereğini rica ederim.

İLÇE ADI	MAHALLE ADI	ADA	PARSEL	İŞİN ADI	BAŞVURU TAKİP NUMARASI
Altınekin	Oğuzeli	518	1	Sondaj	2023-42-000061
Taşkent	Balcılar	248	1	Atık Su Arıtma	2023-42-000063
Taşkent	Balcılar	248	2	Atık Su Arıtma	2023-42-000063
Taşkent	Balcılar	248	3	Atık Su Arıtma	2023-42-000063
Hüyük	Köşk	0	2308	Atık Su Arıtma	2023-42-000064
Doğanhisar	Pazar	171	134	Atık Su Arıtma	2023-42-000065
Doğanhisar	Pazar	171	136	Atık Su Arıtma	2023-42-000065
Hüyük	Kireli	216	32	Atık Su Arıtma	2023-42-000066
Derebucak	Sarayönü	159	25	Atık Su Arıtma	2023-42-000067
Kulu	Kozanlı/Yeşilova	128	53	Atık Su Arıtma	2023-42-000068
Emirgazi	Merkez	0	5261	Atık Su Arıtma	2023-42-000069

Hüseyin Kürşat CİVELEKOĞLU
Genel Müdür a.
Plan Proje Daire Başkanı

Ek:

1- DSI Yazısı

2- Dsi Muafiyet Belgesi

Bu belge, güvenli elektronik imza ile imzalanmıştır.

Doğrulama Kodu: yJz85d-S7a6Gz-KqKglq-8fxRsb-UCsZjLRv Doğrulama Linki: <https://www.turkiye.gov.tr/icisleri-belediye-ehys>

İhsaniye Mah. Kazım Karabekir Cd. No:56 42060 Selçuklu / Konya
Telefon No: (332)221 61 00 Faks No: (332)235 46 34

Bilgi için: Rahime YAVUZ
Tekniker





T.C.
KONYA SU VE KANALİZASYON İDARESİ GENEL
MÜDÜRLÜĞÜ
Arıtma Tesisleri Dairesi Başkanlığı



Sayı : E-20824400-220.04.02-115784
Konu : İmar Durumu Hk.

27.11.2025

**KONYA BÜYÜKŞEHİR BELEDİYE BAŞKANLIĞI
İMAR VE ŞEHİRCİLİK DAİRESİ BAŞKANLIĞINA**

Finansmanı Dünya Bankası tarafından sağlanan ve İlbank tarafından yürütülmekte olan Yeşil ve Geleceğin Şehirleri Projesi (GFC) kapsamında finanse edilmesi planlanan Kireli Atıksu Arıtma Tesis, Köşk Atıksu Arıtma Tesis, Karaali Atıksu Arıtma Tesis için fizibilite raporları etüt çalışmaları ile çevre ve sosyal dökümanların hazırlık çalışmaları devam etmektedir.

İller Bankasına sunulmak üzere ekli listede bilgileri verilen tesislerin yapılacağı taşınmazların imar planı içerisinde kalıp kalmadığının ve imar açısından sakınca olup olmadığı hakkındaki görüşünüzün bildirilmesini arz ederim.

Ahmet DEMİR
Genel Müdür

Ek : Parsel Listesi

Bu belge, güvenli elektronik imza ile imzalanmıştır.

Doğrulama Kodu: a9445cfe-79b7-440f-a26c-53d3918b9ff5

Doğrulama Linki: <https://www.turkiye.gov.tr/icisleri-belediye-ebys>

Adres: İhsaniye Mah. Kazım Karabekir Cd. No:56 42060 Selçuklu / Konya
Telefon No: (332)221 61 00 Faks No: (332)235 46 34
e-Posta: bilgi@koski.gov.tr İnternet Adresi: <https://www.koski.gov.tr>
Kep Adresi: koski@hs03.kep.tr

Bilgi için: İbrahim SİYİRDİCİ
Mühendis
Telefon No: -





T.C.
TARIM VE ORMAN BAKANLIĞI
Doğa Koruma ve Milli Parklar Genel Müdürlüğü
8. Bölge Müdürlüğü



Sayı : E-98572095-622.02-22670323

Konu : Atıksu Arıtma Tesisleri Hk.

KONYA SU VE KANALİZASYON İDARESİ GENEL MÜDÜRLÜĞÜNE
(Arıtma Tesisleri Dairesi Başkanlığı)

İlgi : 19.12.2025 tarihli ve E-20824400-220.04.02-117644 sayılı yazınız.

İlgi yazı gereği; Finansmanı Dünya Bankası tarafından sağlanan ve İlbank A.Ş. tarafından yürütülmekte olan Yeşil ve Geleceğin Şehirleri Projesi (GFC) ile finanse edilmesi planlanan;

- Beyşehir İlçesi, Karaali Mahallesi kaynaklı atıksuların arıtılması amacıyla Karaali İleri Biyolojik Atıksu Arıtma Tesis,

- Hüyük İlçesi Kireli, Çavuş, İmen Tolca, Pınarbaşı, Değirmenaltı ve Göçeri Mahalleleri kaynaklı atıksuların arıtılması amacıyla Kireli İleri Biyolojik Atıksu Arıtma Tesis,

- Hüyük İlçesi Köşk, Selki, İnrenler ve Burunsuz Mahalleleri kaynaklı atıksuların arıtılması amacıyla Köşk İleri Biyolojik Atıksu Arıtma Tesis projelerine ilişkin fizibilite raporları, etüt çalışmaları ile çevresel ve sosyal dokümanların hazırlık çalışmaları kapsamında Bölge Müdürlüğümüz görüşü talep edilmektedir.

Bölge Müdürlüğümüz tarafından yapılan inceleme neticesinde; Atıksu Arıtma Tesislerinin tamamının nihai deşarj noktasının Beyşehir Gölü olduğu görülmüştür.

Beyşehir Gölü Milli Parkı Uzun Devreli Gelişme Revizyon Planının 4.3.19 maddesinde "Beyşehir Gölü'nü besleyen kaynakların akışları değiştirilemez, kanal içine alınamaz, arıtmadan atık su deşarjı yapılamaz." hükmü, 4.3.28.7-iii. maddesinde "Mevcut kullanımların atıksuları için biyolojik atık su arıtma sistemi veya doğal atıksu arıtma tesisi kurulması zorunludur. Atıksu arıtma tesisi olmayan yerlerde atıksular en yakın atıksu arıtma tesisine taşınmalıdır." hükmü ve 4.3.34 maddesinde "Beyşehir Gölü'nde ve gölü besleyen su kaynaklarında kirlilik yükünün azaltılması esastır. Bu amaçla, göldeki ötrofikasyon kontrolü için Beyşehir Gölü Havzası Özel Hükümleri Ek-1'de yer alan deşarj standartlarının sağlanması ve devamlılığı gereklidir. Belirli periyotlarla, DSİ 4. Bölge Müdürlüğü'nce gölden ve gölü besleyen kaynaklardan su örnekleri alınarak analizlerinin yapılması ve raporlanarak Doğa Koruma ve Milli Parklar Genel Müdürlüğü'ne gönderilmesi zorunludur. Kirlilik yükünün arttığı tespit edilmesi halinde ilgili Kurumlarla gerekli önlemler alınacaktır." hükmü bulunmakta, 04.04.2014 tarih ve 28962 sayılı (Değişik: RG-23/10/2019-30927) Resmi Gazete'de yayımlanan Sulak Alanların Korunması Yönetmeliği'nin "Atık su deşarjı" başlıklı 15. Maddesinde "Sulak alanlara ve sulak alanları besleyen tüm sulara veya sisteme bağlantılı kuru derelere hiçbir surette arıtılmamış evsel ve endüstriyel atık sular verilemez. Atık su deşarjı ile ilgili olarak, 31/12/2004 tarihli ve 25687 sayılı Resmi Gazete'de yayımlanan Su Kirliliği Kontrolü Yönetmeliği, su ürünleri istihsal sahalarında ise 10/3/1995 tarihli ve 22223 sayılı Resmi Gazete'de yayımlanan Su Ürünleri Yönetmeliği hükümleri uygulanır." hükmü yer almaktadır.

Bu belge, güvenli elektronik imza ile imzalanmıştır.

Doğrulama Kodu: A281A43F-BDBB-43E2-B25A-C588109EABA7

Doğrulama Adresi: <https://www.turkiye.gov.tr/tarim-ebys>

KEP Adresi : tarimveormanbakanligi@hs01.kep.tr

Bilgi için: Mehmet ÖZDEMİR

Şube Müdürü



Beyşehir İlçesi Karaali İleri Biyolojik Atıksu Arıtma Tesisi, Hüyük İlçesi Kireli İleri Biyolojik Atıksu Arıtma Tesisi ile Hüyük İlçesi Köşk İleri Biyolojik Atıksu Arıtma Tesisi projelerinin yapılmasında; 2873 sayılı Milli Parklar Kanunu, 4915 sayılı Kara Avcılığı Kanunu ve Sulak Alanların Korunması Yönetmeliği kapsamında sakınca bulunmamaktadır.

Ancak Hüyük İlçesi Kireli İleri Biyolojik Atıksu Arıtma Tesisi ve Hüyük İlçesi, Köşk İleri Biyolojik Atıksu Arıtma Tesisi projelerinin; Beyşehir Gölü Sulak Alanı Tampon Bölgesi sınırları içerisinde kalması nedeniyle, Sulak Alanların Korunması Yönetmeliğine göre, "**Kentsel ve/veya evsel nitelikli atık su arıtma tesisleri**" Ek-2 faaliyetleri kapsamında olup, söz konusu projeler için faaliyete başlama esnasında Sulak Alan Faaliyet İzin Belgesi alınabilmesi için Konya Doğa Koruma ve Milli Parklar Müdürlüğümüze müracaat edilmesi hususunu bilgilerinize arz ederim

Orhan ÇATALÇAM
Bölge Müdürü V.

Bu belge, güvenli elektronik imza ile imzalanmıştır.
Doğrulama Kodu: A281A43F-BDBB-43E2-B25A-C588109EABA7 Doğrulama Adresi: <https://www.tuzkiye.gov.tr/tarim-ebys>
KEP Adresi : tarimveormanbakanligi@hs01.kep.tr Bilgi için: Mehmet ÖZDEMİR
Şube Müdürü



MERAM ELEKTRİK DAĞITIM A.Ş. BAĞLANTI GÖRÜŞÜ				NO: 2017-3-1638	
Talep No: 2017-3-1638 İşletme: BEYŞEHİR Bağlantı Seviyesi: OG Kullanım Amacı: Atık Su Arıtma Tipi: 1 Bağlantı Şekli: Radyal		Talep Sebebi ☒ Yeni Abonelik ☐ Güç Artışı ☐ Bağlantı Noktası Değişikliği Ref. Tesisat No: 2308173		Tahsis Edilen Kapasite Mevcut Güç: Talep Edilen Güç: 160 Toplam Güç: 160 Birim: ☐ KW ☒ KVA Gerilim Seviyesi: 31.5 KV BN Kısa Devre Akımı: 03,00	
		Talep Tarihi: 23.11.2017 Veriliş Tarihi: 25.11.2017 Geçerlilik Tarihi: 23.02.2018 Tüketim Tesis Tamamlanma Tarihi: 15.06.2018 Tesisin Yapılacağı Tarih: 2019			
Tesis Sahibinin Bilgileri			Proje Müellifi Bilgileri		
Adı Soyadı, Unvanı, TC Kimlik No: Mahalli İdareler / Büyükşehir Belediyeleri Vergi Kimlik No: Adres: Nişantaş Mah. Vatan Cad. No:2/A 42060 Selçuklu/KONYA			☐ Gerçek ☐ Tüzel ☒ Kamu Tesisin Kullanıcı Sayısı: 1		
			Adı Soyadı: MAHMUT GÖRÜK Grubu: Unvanı: Müellif		
			Kayıt No: İmza:		
Tesis Adres Bilgileri			Bağlantı Noktasının Elektrik Adresi		
İl: Konya İlçe: HÜYÜK Mahalle: KÖŞK Belediye: HÜYÜK CSBM: Köy: MERKEZ Dış Kapı No: Koordinat: X 381253,50 Y 4194420,77 Pafta: 0 Ada: 0 Parsel: 2308 İmar: Dış Köy: Evet			Rider Adı: HÜYÜK Trafo Merkezi: BEYŞEHİR TM Dağıtım Merkezi: ÇUKURKENT KÖK Dağıtım Hattı: Kök: Kök Çıkış: Direk Numarası: 10 Envanter No: 0041083239		
			Tesisin Özellikleri Bağlantı Noktasına Kadar Olan Kesit: 3 X SWL Bağlantı Ciri: Gevşek Bağ Ölçüm Noktası: AG Trafo Platformu: Direk Bransman Direği Değiştirilebilir mi? Evet Trafo/DM Yeni Devri Gerekli mi? Evet Boş Hücre Yeni Adedi:		
Mevcut Durum			Bağlantı Görüşü		
Enerji Mühürde Mühendisi: TÜRKER SOYLU e i m z a			Baş Mühendis: Mustafa SAGLAM e i m z a		

Varsa Özel Şartları Yazınız

İstenilen 31.5 kV, 160 kVA gücünde Konya İli, HÜYÜK İlçesi, Köşk Mahallesi Hüyük mevkii, 0 Ada, 0 pafta, 2308 parselde kurulması planlanan Atık Su Arıtma Tesisini amaçlı sisteme bağlantı talebi aşağıdaki şartlarla karşılanacaktır.

BEYŞEHİR TM(154/31,5 kV), Fider HÜYÜK, , GÖLKAŞI KÖK DM, Köşk TR3 çıkışlı, Köşk İçme Suyu hattının, 41083239 nolu direği ile 41260944 nolu direkler arasına projede hesaplanan direk dikilerek, bu direkten gergi tip izolatör kullanılarak gevşek bağ ile min 10 mt, max. 20 mt mesafeye hat başı seksiyoner direği dikilerek 3 X SWL kesitli ENH tesis edilerek tüketim tesislerine ait şalt sahasının bittiği noktaya nihayet direği dikilecektir.

Tesis edilecek ENH askı tertip zincir izolatörlü olarak projelendirilecektir.

160 kVA direk tipi trafo postası tesis edilerek, tüketim tesislerine ait şalt sahasının bittiği noktaya dikilecek nihayet direğinden direk tipi trafo postasına bağlantı yapılacaktır.

Trafo direğine sigortalı seksiyoner takılacaktır.

Dağıtım varlıkları projede netleştirilecek olup, tesisin geçici kabulüne müteakip dağıtım tesisi olarak kaydedilecektir.

Bağvuru tarihi itibarıyla talebi karşılayacak gerekli yatırımların yapılması için 2017 ve 2018 yılları yatırım dönemlerinde yeterli bütçe olmadığında; talep 2019 yılı yatırım programında değerlendirilecektir.

2918 sayılı Karayolları Trafik Kanunu gereği, yer altı ve/veya havai tüm karayolları geçişleri için gerekli izinler kullanıcı tarafından alınacaktır.

Ekteki genel kurallar, bu bağlantı görüşünün ayrılmaz bir parçasıdır.

2017-3-1482 ve 2017-3-1588 sayılı bağlantı görüşü iptal edilecektir.

Tesis Sahibinin Dağıtım Şebekesi Haline Gelecek Kısmın Yapımına İlişkin Tercih

Bu kısmın proje onayı esnasında doldurulmuş olarak teslim edilmesi gerekmektedir.

1-) Önerilen tarihi kabul ediyorum. Tesisin dağıtım şirketince tamamlanmasını bekleyeceğim.

2-) Tesisin MEDAŞ tarafından yapılmasını istiyorum. Finansmanı sağlayacağım.

3-) Tesisi kendim yapacağım.

Dağıtım şebekesine bağlanmak için yapılacak olan dağıtım tesisi niteliğindeki bağlantı hattı tarafımdan yapılacağından; 6446 sayılı Elektrik Piyasası Kanunu 17 nci madde 6 ncı fıkra a bendi "...Bağlantı hattının tüketici tarafından tesis edilmesi hâlinde, bağlantı hattı işletme ve bakım sorumluluğu karşılığı dağıtım şirketine devredilir, bu tüketicilerden bağlantı bedeli alınmaz." hükmü gereği bağlantı bedeli ödemedem bağlantı anlaşması yapılmasını kabul ve beyan ederim.

Yukarıda tarafıma sunulan seçeneklerden nolu olanı tercih

Tesis Sahibi

İmza

Tarih

Bu belge, 5070 sayılı Elektronik İmza Kanununun 5. maddesi gereğince güvenli elektronik imza ile imzalanmıştır.

Orjinal elektronik belge adresi:

<https://ybs.meramedas.com.tr/BelgeDogrula/MEDAS>

Doğrulama kodu: 1caf8159fb

Sayı : 42193254-110.03.01-E.49823
Konu : Drenaj Kanalına Deşarj

20.03.2018

DAĞITIM YERLERİNE

İlgi : 07.03.2018 tarihli ve 12066277-3158-1214 sayılı yazınız.

İlgi yazıda, Genel Müdürlüğünüzce yapılan Tuzlukçu, Sarayönü ve Ortakaraören İleri Biyolojik Atıksu Arıtma tesislerinin deşarj yerlerinin DSİ Genel Müdürlüğüne ait toprak drenaj kanalları olduğu ve DSİ Genel Müdürlüğünce atıksuların II. Sınıf Su Kalitesinde arıtılmasının istenildiği belirtilmiş olup, konuya ilişkin görüşümüz talep edilmektedir.

Bilindiği üzere, 31.12.2004 tarihli ve 25687 sayılı Resmi Gazete'de yayımlanarak yürürlüğe giren Su Kirliliği Kontrolü Yönetmeliği, atıksuların boşaltım ilkelerini ve boşaltım izni esaslarını, atıksu altyapı tesisleri ile ilgili esasları ve su kirliliğinin önlenmesi amacıyla yapılacak izleme ve denetleme usul ve esaslarını düzenlemektedir. Yönetmelikte, alıcı ortama, atıksu altyapısına ve merkezi bir AAT yönetimine atıksu bağlama ile ilgili esaslar ile atıksuyun deşarj standartları belirlenmiş olup, bertaraf edilecek atıksuyun deşarj edileceği alıcı ortamın özelliklerine göre deşarj standartları ve deşarj usul ve esasları değişiklik göstermektedir.

Söz konusu Yönetmeliğin 26 ncı Maddesinde "Alıcı Ortama Doğrudan Boşaltım" esasları düzenlenmiş olup, aynı maddenin (g) bendinde, "Sulama kanallarına arıtılmış atıksu deşarjında, alıcı ortama doğrudan boşaltımda uygulanan hükümler aynen geçerlidir. Ancak, sulama kanallarına arıtılmış atık su deşarjında DSİ Genel Müdürlüğünün uygun görüşünün alınması gereklidir." hükmü yer almaktadır.

Bu kapsamda, sulama kanallarına yapılacak deşarjlarda, Devlet Su İşleri Genel Müdürlüğünün uygun görüşünün alınarak alıcı ortama doğrudan boşaltım hükümlerinin aynen uygulanması, drenaj kanallarına yapılacak deşarjlarda ise alıcı ortama doğrudan deşarj hükümlerinin aynen uygulanması gerekmektedir.

Bilgilerinizi ve gereğini rica ederim.

KOSKİ GENEL MÜDÜRLÜĞÜ		
GENEL EVRAK KAYDI		
No	Tarih	Eki
1149	23 Mart 2018	-

Kanal Do. Bşk. İlg.

Atıksu Arıt. Tes. Ş. Md.

26 Mart 2018

Muhammet ECEL
Bakan a.
Genel Müdür

Dağıtım:

KOSKİ GENEL MÜDÜRLÜĞÜ		
GENEL EVRAK KAYDI		
No	Tarih	Eki
292	26 Mart 2018	-

Not: 5070 sayılı Elektronik İmza Kanunu gereği bu belge elektronik imza ile imzalanmıştır.

Mustafa Kemal Mah. Eskişehir Devlet Yolu 9. km. No:278 Çankaya/ANKARA

Bilgi için: Ahmet DOĞAN
Çevre ve Şehircilik Uzmanı
Telefon No:(312) 586 32 05



T.C.
TARIM VE ORMAN BAKANLIĞI
Su Yönetimi Genel Müdürlüğü

Sayı : E-51398780-251.03.01-23508698

Konu : Beyşehir Gölü Arıtma Tesisleri

KONYA SU VE KANALİZASYON İDARESİ GENEL
MÜDÜRLÜĞÜ
(Arıtma Tesisleri Dairesi Başkanlığı)

İlgi : E-20824400-220.04.02-117644 sayılı yazınız.

İlgi yazı ile, Mülga Çevre ve Orman Bakanlığı tarafından 2008 yılında hazırlanan Beyşehir Gölü Havza Koruma Eylem Planı, Çevre, Şehircilik ve İklim Değişikliği Bakanlığı Atıksu Arıtımı Eylem Planı ile 08.01.2006 tarih ve 26047 sayılı Resmî Gazete'de yayımlanarak yürürlüğe giren Kentsel Atıksu Arıtımı Yönetmeliği, 2872 sayılı Çevre Kanunu ve 31.12.2004 tarih ve 25687 sayılı Resmî Gazete'de yayımlanan Su Kirliliği Kontrolü Yönetmeliği hükümleri doğrultusunda hazırlanan ve 04.07.2017 tarih ve 309 sayılı karar ile Tarım ve Orman Bakanlığı tarafından onaylanan Beyşehir Gölü Özel Hükümleri kapsamında; yerleşim yerlerine ait atıksuların toplanması, arıtılması ve dışarıdan kaynaklanabilecek olumsuz çevresel etkilerin önlenmesi amacıyla, bölgede atıksu arıtma tesisi bulunmayan yerleşim yerlerine atıksu arıtma tesisleri kurulması planlandığından bahsedilmekte olup, atıksu arıtma tesisi yapılması planlanan ve yazı ekinde bilgileri iletilen taşınmazlar için, İller Bankasına sunulmak üzere Genel Müdürlüğümüz görüşü talep edilmektedir.

İlgi yazı, Genel Müdürlüğümüz görev, yetki ve sorumlulukları kapsamında tetkik edilmiş olup, görüş sorulan alanlarının, 28.10.2017 tarihli ve 30224 sayılı Resmî Gazete'de yayımlanarak yürürlüğe giren "İçme-Kullanma Suyu Havzalarının Korunmasına Dair Yönetmelik" kapsamında, Konya iline içme-kullanma suyu temin edilen Beyşehir Gölü havzasında yer aldığı tespit edilmiştir.

Söz konusu havzada hali hazırda 2017 yılında yürürlüğe giren Beyşehir Gölü Havzası Özel Hükümleri geçerlidir. Mezkûr koruma planı/özel hükümler kapsamında görüş sorulan alanlar Uzak Mesafeli (1000 m-Havza Sınırı) koruma alanında kalmaktadır.

Söz konusu talebe ilişkin Genel Müdürlüğümüz görüşleri aşağıda yer almaktadır;

1-) Beyşehir Gölü Havzası Özel Hükümleri hükümlerinin söz konusu koruma alanında yer alan faaliyete ilişkin kısmı kapsamında:

Madde 15: "Arıtılmış atıksuların dışarının yapılacağı alıcı ortamlar üzerinde, yapılacak teknik etütlerle uygunluğu tespit edilmesi durumunda 'yapay sulak alan veya benzeri sistemler' yapılabilir."

Madde 19: "Evsel atıksu arıtma tesisi dışarj sularının sulama mevsiminde yeniden kullanımı, ilgili mevzuata uyulması şartı ile Göl Yeşil Kuşaklama Alanı, Göl Koruma Alanı, organik tarım

Bu belge, güvenli elektronik imza ile imzalanmıştır.

Doğrulama Kodu: 534B6CBA-F55C-4209-9EE2-9F2606EB60C5	Doğrulama Adresi: https://www.turkiye.gov.tr/tarim-ebys
Beştepe Mah. Alparslan Türkeş Cad. No:71 Yenimahalle/ANKARA	Bilgi için İlker YILDIRIM
Telefon: (0312) 207 50 00	Mühendis
KEP Adresi: tarimveormanbakanligi@hs01.kep.tr	

uygulanabilecek alanlar dışındaki alanlarda kullanmak şartıyla ilgili kurumlar tarafından teşvik edilecektir."

Madde 20: "Havzadaki yerleşimlerden kaynaklanan evsel nitelikli atıksular için EK-1, Tablo 1 ve Tablo 2'de verilen deşarj standartları ve endüstriyel nitelikli atıksular için ise EK-1 Tablo 3'ten Tablo 9'a kadar (Tablo-9 dâhil) verilen deşarj standartları uygulanacaktır. Tekstil sektörünün atıksularını EK-1 Tablo 5'de verilen standartlara uygun şekilde arıtması ve Beyşehir kanalizasyon şebekesine deşarjı zorunludur. Havza genelinde izin verilen sanayilere ait liste EK 2 Tablo 1'de verilmiştir." hükümleri yer almaktadır.

İlaveten, 2560 sayılı Kanun kapsamında, su, kanalizasyon (atıksu), derelerin ıslahı ve yağmur suyunun uzaklaştırılması hususunda her türlü hizmeti yürütmek, bunlar için gerekli tesisleri kurmak, kurdurmak, işletmek ve işlettirmek; içme suyu temin edilen kaynakların kullanılmış sularla ve endüstri artıkları ile kirlenmesini, bu kaynaklarda suların kaybına veya azalmasına yol açacak tesis kurulmasını ve bu tür faaliyetlerde bulunulmasını önlemek, bu konuda her türlü teknik, idari ve hukuki tedbiri almak, büyükşehir belediyesi su ve kanalizasyon idarelerinin görevleri arasında sayılmaktadır.

Mezkûr Kanun uyarınca, Beyşehir Gölü Havzasında yapılacak her türlü faaliyet ve yapılaşmanın koruma planına ilave olarak diğer mer'i mevzuat hükümleri, havzadaki mevcut planlar ve arazi kullanımı, jeolojik ve hidrojeolojik durum, coğrafi koşullar, oluşacak kirlilik yükü, mevcut altyapı durumu, içme suyu kaynağının miktar ve kalitesine etkisi gibi hususlar da dikkate alınarak içme suyunu temin eden idareler ve ilgili kurumlarca yerinde tetkiki ile değerlendirilmesi ve faaliyete ilişkin alınması gereken tedbirlerin ortaya konması önem arz etmektedir.

Bu çerçevede, yerleşim yerlerine ait atıksuların toplanması, arıtılması ve deşarjından kaynaklanabilecek olumsuz çevresel etkilerin önlenmesi amacıyla, bölgede atıksu arıtma tesisi bulunmayan yerleşim yerlerine atıksu arıtma tesisleri kurulması için üzerine atıksu arıtma tesisi yapılması planlanan taşınmazlar hakkındaki değerlendirmenin, 2560 sayılı Kanun uyarınca tarafınızca yapılması gerekmektedir.

2-) Söz konusu Atıksu Arıtma tesislerinin konumlarına (Kireli AAT) ve nihai deşarj noktalarına (Beyşehir Gölü) bakıldığında nitrata hassas alanda yer aldığı tespit edilmiştir. Bu kapsamda Kentsel Atıksu Arıtma Yönetmeliği'nde yer alan "Tablo 2" değerleri referans alınarak arıtma tesisleri planlanmalı ve KOSKİ tarafından gönderilen bilgi notunda da bu şekilde tasarlandığı belirtilmektedir.

Söz konusu bilgi notunda Kireli ve Köşk Atıksu Arıtma Tesisleri için nüfus çalışması da yapılarak ilgili yönetmelikteki Tablo 2'den eşdeğer nüfusa göre seçilen tasarım parametreleri verilmektedir. Ancak Karaali Atıksu Arıtma Tesisi tasarım parametrelerinde nüfus verisinin yer almaması nedeni ile hangi tasarım parametresinin seçildiği anlaşılamamaktadır. Eşdeğer Nüfus aralığına göre TN ve TP parametreleri tasarım konsantrasyonlarının belirlenmesi gerekmektedir. Nitrata hassas alanlar yazı ekinde ki "Ek-1" de gösterilmiştir.

3-) Söz konusu proje alanları Konya Kapalı Havzasında kalmaktadır. Konya Kapalı Havzası Nehir Havza Yönetim Planı kapsamında mahalleler bazında atıksu arıtma tesisleri tedbirleri önerilmiştir.

Bu belge, güvenli elektronik imza ile imzalanmıştır.

Doğrulama Kodu: 534B6CBA-F55C-4209-9EE2-9F2606EB60C5

Doğrulama Adresi: <https://www.turkiye.gov.tr/tarim-ebys>

Beştepe Mah. Alparslan Türkeş Cad. No:71 Yenimahalle/ANKARA

Bilgi için İlker YILDIRIM

Telefon: (0312) 207 50 00

Mühendis

KEP Adresi : tarimveormanbakanligi@hs01.kep.tr



Sorumlu kurum olarak da KOSKİ olarak belirlenmiştir. Aşağıda söz konusu belirlenen tedbirler ayrı ayrı yer almaktadır. Tedbirlerin tarafımızca takip edilebilmesi için Ulusal Su Bilgi Sistemi (USBS) üzerinden proje çalışmalarının her aşamasında bilgilendirme girişlerinin yapılması önem arz etmektedir.

Konya Kapalı Havzası kapsamında belirlenen tedbirler:

- 1.Uygun arıtma ile KİRELİ AAT'nin inşası (Kireli AAT Projesi kapsamındadır)
- 2.Uygun arıtma ile ÇAVUŞ AAT'nin inşası (Kireli AAT Projesi kapsamındadır)
- 3.Uygun arıtma ile PINARBAŞI AAT'nin inşası (Kireli AAT Projesi kapsamındadır)
- 4.Uygun arıtma ile İLMEN AAT'nin inşası (Kireli AAT Projesi kapsamındadır)
- 5.Uygun arıtma ile KÖŞK AAT'nin inşası (Köşk AAT Projesi kapsamındadır.)
- 6.Uygun arıtma ile BURUNSUZ AAT'nin inşası (Köşk AAT Projesi kapsamındadır.)
- 7.Uygun arıtma ile İMRENLER AAT'nin inşası (Köşk AAT Projesi kapsamındadır.)
- 8.Uygun arıtma ile SELKİ AAT'nin inşası (Köşk AAT Projesi kapsamındadır.)
9. İkincil Arıtma ile Karaali AAT (Karaali AAT Projesi kapsamındadır.)

4-) İlaveten, söz konusu talep için Çevre, Şehircilik ve İklim Değişikliği Bakanlığı'ndan görüş alınması gerekmektedir.

Bilgilerini ve gereğini rica ederim.

Afire SEVER
Bakan a.
Genel Müdür

Ek: Nitrata Hassas Alanlar (1 Sayfa)



Annex E - DSI Official Opinion on Flood Risk, Surface Water Drainage and Irrigation Infrastructure Constraints



T.C.
TARIM VE ORMAN BAKANLIĞI
Devlet Su İşleri Genel Müdürlüğü
4. Bölge Müdürlüğü



Sayı : E-57417367-754-7169867

Konu : Kireli, Karaali ve Köşk Atıksu Arıtma
Tesisleri

KONYA SU VE KANALİZASYON İDARESİ GENEL MÜDÜRLÜĞÜNE (Arıtma Tesisleri Dairesi Başkanlığı)

İlgi : a) 17.03.2026 tarihli ve E-20824400-220.04.02-124849 sayılı yazınız.
b) 21.04.2026 tarihli ve E-57417367-754-7073901 sayılı yazınız.
c) 24.04.2026 tarihli ve E-20824400-220.04.02-127650 sayılı yazınız.

İlgi yazıda Finansmanı Dünya Bankası tarafından sağlanan ve İLBANK A.Ş. tarafından yürütülmekte olan Yeşil ve Geleceğin Şehirleri Projesi (GFC) kapsamında yapımı planlanan Karaali, Kireli ve Köşk Atıksu Arıtma Tesislerine ilişkin çevresel ve sosyal dokümanların hazırlanmasına yönelik çalışmaların devam ettiği belirtilerek; söz konusu tesislerin zemin kotları; Köşk Atıksu Arıtma Tesisleri için 1.179 m, Kireli Atıksu Arıtma Tesisleri için 1.140 m ve Karaali Atıksu Arıtma Tesisleri için 1.288,50 m olup, tesisler için tahsis edilen parseller üzerindeki genel yerleşim planları ile planlanan deşarj noktaları hakkında görüşümüz istenmektedir.

Konu ile ilgili gerekli inceleme yapılmış aşağıdaki hususlar tespit edilmiştir.

Taşkın yönünden;

Karaali AAT Teknik Şartları ve Kanal Tasarım Opsiyonları: evvelki yazımızda belirtildiği üzere; Karaali AAT sahasında belirlenen koordinatlar arasındaki mevcut sedde ve müdahaleler kaldırılmalı, dere yatağı parsel sınırına paralel şekilde eski haline getirilmelidir. Tesis, taşkın riskine karşı tabii zemin kotundan en az 3,00 metre yükseklikteki dolgu üzerine inşa edilmelidir. Bu kapsamda, yazımız ekinde sunulan ve genel yerleşim kotu 1.288,50 m olarak planlanan tesis zemin kotu uygun mütalaa edilmektedir. Veya zeminin dolgu ile yükseltilmesi yerine, yapının bulunduğu hizadaki kanal üst kotundan aşağı olmamak kaydıyla, A:B koordinatları arasındaki hat boyunca yapılacak kanal düzenlemesi için aşağıdaki seçeneklerden biri uygulanmalıdır:

- Toprak Kanal Opsiyonu: 10.60 m taban genişliğinde, 3.00 m kanal derinliğinde ve 1:2 (düşey:yatay) şev eğiminde (toplam 22.60 m üst genişliğinde) toprak trapez kesit.
- Beton Kanal Opsiyonları:

10.00 m genişlik / 3.00 m derinlik

12.00 m genişlik / 2.50 m derinlik

16.00 m genişlik / 2.00 m derinlik

Köşk AAT Yapılaşma Şartları: Tesisin tabii zemin kotundan **en az 1,00 metre** üst kotta inşa edilmesi gerekmektedir. **1.179 m** olarak planlanan tesis zemin kotu uygun mütalaa edilmektedir.

Bu belge, güvenli elektronik imza ile imzalanmıştır.
Doğrulama Kodu: 33842796-B786-462B-BDE0-A1886009FA28 Doğrulama Adresi: <https://www.turkiye.gov.tr/devlet-su-isleri-ebys>
Adres: DSI 4. Bölge Müdürlüğü Anıt Alanı Meram / KONYA Bilgi için: Ali Ersin GÜRBAK
Telefon No: Belgegeçer No: Yüksek Mühendis
KEP Adresi: dsi.genelmu@hs01.kep.tr Telefon No: (332) 322 01 91-1258



Kireli AAT Yapılaşma Şartları: Tesisin tabii zemin kotundan **en az 1,50 metre** üst kotta inşa edilmesi gerekmektedir. **1.140 m** olarak planlanan tesis zemin kotu uygun mütalaa edilmektedir.

Ayrıca suyun serbest akışını engelleyecek, yatak kesitini daraltacak veya akışını bozacak hiçbir müdahalede bulunulmamalıdır. İnşaat sürecinde kullanılan veya çıkan hiçbir malzeme dere yatağına dökülmemeli; şiddetli yağış ve rüzgârla yatağa taşınmayacak şekilde uygun alanlarda depolanmalıdır. 2006/27 sayılı Başbakanlık Genelgesi ve ilgili yönetmelik hükümleri uyarınca; dere yataklarının akışını engelleyecek yapılaşmadan kaçınılması ve servis yollarının sürekliliğinin korunması zorunludur. Her üç tesis için de taşkın riskine ve yüzey sularına karşı gerekli tüm teknik tedbirlerin faaliyet sahibi tarafından alınmalıdır.

Sulama projeleri yönünden;

Bahse konu alan proje çalışmaları tamamlanan " Konya Beyşehir Kireli Pompaj Sulaması " işi sulama sahasında kaldığı tespit edilmiştir. 5403 Sayılı "Toprak Koruma Ve Arazi Kullanımı Kanunu " 12. maddesi 1. fıkrası e bendinde belirtilen "Kamu yararı gözetilerek yol, altyapı ve üstyapı faaliyetlerinde bulunacak yatırımlar" kapsamında ana ve yedek boru hatlarına sağ ve sol sahilindeki 10 metrelik şeritvari mesafede yaklaşılması gerekmektedir.

İşletme projeleri yönünden;

Beyşehir Karaali ve Hüyük Köşk Mahallelerindeki AAT yapılması planlanan alanlarda işletme halinde olan herhangi bir sulama tesisimiz bulunmamaktadır.

Hüyük Kireli Mahallesinde AAT yapılması planlanan Hüyük Kireli 216 ada 32 parsel sayılı tarla vasıflı taşınmaz, Kireli I. Kademe Pompaj Sulaması Sahası içerisinde yer aldığından olumsuz görüş bildirilmişti. 15.05.2026 tarihinde KOSKİ yetkilileri tarafından Hüyük Kireli 216 ada 32 parsel sayılı tarla vasıflı taşınmaza ait cins değişikliği yapılarak "Atıksu Arıtma Tesis Alanı" olarak değiştirildiği belirtilmiş ve Tapu Senedi elden İşletme ve Bakım Şube Müdürlüğümüze teslim edilmiştir. Bu kapsamda; bahse konu Hüyük Kireli Mahallesi 216 ada 32 parsel sayılı Atıksu Arıtma Tesis Alanı vasıflı taşınmazda yukarıda belirtilen diğer hususların da dikkate alınması şartıyla imar planı çalışması yapılmasında herhangi bir sakınca bulunmamaktadır.

Bilgilerinizi ve gereğini rica ederim.

Hasan DEVECİ
Bölge Müdürü a.
Bölge Müdür Yardımcısı

Ek: harita (1 Sayfa)

Bu belge, güvenli elektronik imza ile imzalanmıştır.
Doğrulama Kodu: 33842796-B786-462B-BDE0-A1886009FA28 Doğrulama Adresi: <https://www.turkiye.gov.tr/devlet-su-isleri-ebys>
Adres: DSI 4. Bölge Müdürlüğü Anıt Alanı Meram / KONYA Bilgi için: Ali Ersin GÜRBAK
Telefon No : Belgegeçer No : Yüksek Mühendis
KEP Adresi : dsi_gnlmud@hs01.kep.tr Telefon No:(332) 322 01 91-1258



T.C.
TARIM VE ORMAN BAKANLIĞI
Devlet Su İşleri Genel Müdürlüğü
4. Bölge Müdürlüğü



Sayı : E-57417367-754-7169867
Konu : Kireli, Karaali ve Köşk Atıksu Arıtma
Tesisleri

KONYA SU VE KANALİZASYON İDARESİ GENEL MÜDÜRLÜĞÜNE
(Arıtma Tesisleri Dairesi Başkanlığı)

İlgi : a) 17.03.2026 tarihli ve E-20824400-220.04.02-124849 sayılı yazınız.
b) 21.04.2026 tarihli ve E-57417367-754-7073901 sayılı yazınız.
c) 24.04.2026 tarihli ve E-20824400-220.04.02-127650 sayılı yazınız.

İlgi yazıda Finansmanı Dünya Bankası tarafından sağlanan ve İLBANK A.Ş. tarafından yürütülmekte olan Yeşil ve Geleceğin Şehirleri Projesi (GFC) kapsamında yapımı planlanan Karaali, Kireli ve Köşk Atıksu Arıtma Tesislerine ilişkin çevresel ve sosyal dokümanların hazırlanmasına yönelik çalışmaların devam ettiği belirtilerek; söz konusu tesislerin zemin kotları; Köşk Atıksu Arıtma Tesisleri için 1.179 m, Kireli Atıksu Arıtma Tesisleri için 1.140 m ve Karaali Atıksu Arıtma Tesisleri için 1.288,50 m olup, tesisler için tahsis edilen parseller üzerindeki genel yerleşim planları ile planlanan deşarj noktaları hakkında görüşünüz istenmektedir.

Konu ile ilgili gerekli inceleme yapılmış aşağıdaki hususlar tespit edilmiştir.

Taşkın yönünden;

Karaali AAT Teknik Şartları ve Kanal Tasarım Opsiyonları: evvelki yazımızda belirtildiği üzere; Karaali AAT sahasında belirlenen koordinatlar arasındaki mevcut sedde ve müdahaleler kaldırılmalı, dere yatağı parsel sınırına paralel şekilde eski haline getirilmelidir. Tesis, taşkın riskine karşı tabii zemin kotundan en az 3,00 metre yükseklikteki dolgu üzerine inşa edilmelidir. Bu kapsamda, yazımız ekinde sunulan ve genel yerleşim kotu 1.288,50 m olarak planlanan tesis zemin kotu uygun mütalaa edilmektedir. Veya zeminin dolgu ile yükseltilmesi yerine, yapının bulunduğu hizadaki kanal üst kotundan aşağı olmamak kaydıyla, A:B koordinatları arasındaki hat boyunca yapılacak kanal düzenlemesi için aşağıdaki seçeneklerden biri uygulanmalıdır:

- Toprak Kanal Opsiyonu: 10.60 m taban genişliğinde, 3.00 m kanal derinliğinde ve 1:2 (düşey:yatay) şev eğiminde (toplam 22.60 m üst genişliğinde) toprak trapez kesit.
- Beton Kanal Opsiyonları:

10.00 m genişlik / 3.00 m derinlik
12.00 m genişlik / 2.50 m derinlik
16.00 m genişlik / 2.00 m derinlik

Köşk AAT Yapılaşma Şartları: Tesisin tabii zemin kotundan **en az 1,00 metre** üst kotta inşa edilmesi gerekmektedir. **1.179 m** olarak planlanan tesis zemin kotu uygun mütalaa edilmektedir.

Bu belge, güvenli elektronik imza ile imzalanmıştır.

Doğrulama Kodu: 33842796-B786-462B-BDE0-A1886009FA28

Doğrulama Adresi: <https://www.turkiye.gov.tr/devlet-su-isleri-ebys>

Adres: DSİ 4. Bölge Müdürlüğü Anıt Alanı Meram / KONYA

Telefon No : Belgegeçer No :

KEP Adresi : dsi.genimud@hs01.kep.tr

Bilgi için: Ali Ersin GÜRBAK

Yüksek Mühendis

Telefon No:(332) 322 01 91-1258



Kireli AAT Yapılaşma Şartları: Tesisin tabii zemin kotundan **en az 1,50 metre** üst kotta inşa edilmesi gerekmektedir. **1.140 m** olarak planlanan tesis zemin kotu uygun mütalaa edilmektedir.

Ayrıca suyun serbest akışını engelleyecek, yatak kesitini daraltacak veya akışını bozacak hiçbir müdahalede bulunulmamalıdır. İnşaat sürecinde kullanılan veya çıkan hiçbir malzeme dere yatağına dökülmemeli; şiddetli yağış ve rüzgârla yatağa taşınmayacak şekilde uygun alanlarda depolanmalıdır. 2006/27 sayılı Başbakanlık Genelgesi ve ilgili yönetmelik hükümleri uyarınca; dere yataklarının akışını engelleyecek yapılaşmadan kaçınılması ve servis yollarının sürekliliğinin korunması zorunludur. Her üç tesis için de taşkın riskine ve yüzey sularına karşı gerekli tüm teknik tedbirlerin faaliyet sahibi tarafından alınmalıdır.

Sulama projeleri yönünden;

Bahse konu alan proje çalışmaları tamamlanan " Konya Beyşehir Kireli Pompaj Sulaması " işi sulama sahasında kaldığı tespit edilmiştir. 5403 Sayılı "Toprak Koruma Ve Arazi Kullanımı Kanunu " 12. maddesi 1. fıkrası e bendinde belirtilen "Kamu yararı gözetilerek yol, altyapı ve üstyapı faaliyetlerinde bulunacak yatırımlar" kapsamında ana ve yedek boru hatlarına sağ ve sol sahilindeki 10 metrelik şeritvari mesafede yaklaşılması gerekmektedir.

İşletme projeleri yönünden;

Beyşehir Karaali ve Hüyük Köşk Mahallelerindeki AAT yapılması planlanan alanlarda işletme halinde olan herhangi bir sulama tesisimiz bulunmamaktadır.

Hüyük Kireli Mahallesinde AAT yapılması planlanan Hüyük Kireli 216 ada 32 parsel sayılı tarla vasıflı taşınmaz, Kireli I. Kademe Pompaj Sulaması Sahası içerisinde yer aldığından olumsuz görüş bildirilmişti. 15.05.2026 tarihinde KOSKİ yetkilileri tarafından Hüyük Kireli 216 ada 32 parsel sayılı tarla vasıflı taşınmaza ait cins değişikliği yapılarak "Atıksu Arıtma Tesisi Alanı" olarak değiştirildiği belirtilmiş ve Tapu Senedi elden İşletme ve Bakım Şube Müdürlüğümüze teslim edilmiştir. Bu kapsamda; bahse konu Hüyük Kireli Mahallesi 216 ada 32 parsel sayılı Atıksu Arıtma Tesisi Alanı vasıflı taşınmazda yukarıda belirtilen diğer hususların da dikkate alınması şartıyla imar planı çalışması yapılmasında herhangi bir sakınca bulunmamaktadır.

Bilgilerinizi ve gereğini rica ederim.

Hasan DEVECİ
Bölge Müdürü a.
Bölge Müdür Yardımcısı

Ek: harita (1 Sayfa)

Bu belge, güvenli elektronik imza ile imzalanmıştır.
Doğrulama Kodu: 33842796-B786-462B-BDE0-A1886009FA28 Doğrulama Adresi: <https://www.turkiye.gov.tr/devlet-su-isleri-ebys>
Adres: DSİ 4. Bölge Müdürlüğü Anıt Alanı Meram / KONYA Bilgi için: Ali Ersin GURBAK
Telefon No : Belgegeçer No : Yüksek Mühendis
KEP Adresi : dsi.gulmud@hs01.kep.tr Telefon No:(332) 322 01 91-
1258



Annex F – Site Photographs

Photo No: 01 Date: 20 August 2025 Location: Project Area and Planned Discharge Point Details/Notes:			
Photo No: 02 Date: 20 August 2025 Location: Project Area Details/Notes:			

Annex G – Baseline Measurements

Site-specific baseline environmental measurements could not be conducted at the Köşk WWTP site at the time of ESMP preparation. Therefore, no direct baseline measurement results are presented in this annex.

In line with İLBANK and World Bank requirements, site-specific baseline measurements, including air quality measurements if required, shall be conducted by the Contractor prior to and during the construction phase. The results of such measurements will be documented and reported as part of the construction-phase monitoring activities.

Until site-specific measurements become available, relevant baseline information and assessment approaches referenced from comparable projects within the same basin have been used for impact evaluation purposes.

Annex H – E&S Incident Notification Form Template

1) Incident Details			
Date of Incident: <i>[Please indicate]</i>		Time of Incident: <i>[Please indicate]</i>	
Location of the Incident:		<i>[Please indicate]</i>	
Full Name of Sub-borrower:		<i>[Please indicate]</i>	
Date Reported to ILBANK: <i>[Please indicate]</i>	Reported to ILBANK by: <i>[Please indicate]</i>	Notification Type: <i>[Please indicate; e-mail/phone call/media notice/other]</i>	
Date Reported to WB: <i>[Please indicate]</i>	Reported to WB by: <i>[Please indicate]</i>	Notification Type: <i>[Please indicate; e-mail/phone call/media notice/other]</i>	
Full Name of the Contractor of the Subproject:		<i>[Please indicate]</i>	
Full Name of the Sub-contractor involved in the incident:		<i>[Please indicate]</i>	
2) Type of incident (please check all that apply) ¹¹			
☐ Fatality ☐ Lost time injury ☐ Displacement without due process ☐ Child labor ☐ Forced labor ☐ Disease outbreaks		☐ Acts of violence/protest ☐ Unexpected impacts on heritage resources ☐ Unexpected impacts on biodiversity resources ☐ Environmental pollution incident ☐ Dam failure ☐ Other	
3) Description/Narrative of Incident			
<i>For example:</i> I. What is the incident? <i>[Please briefly describe]</i> II. What were the conditions or circumstances under which the incident occurred (if known)? <i>[Please briefly describe]</i> III. Are the basic facts of the incident clear and uncontested, or are there conflicting versions? What are those versions? <i>[Please briefly describe]</i> IV. Is the incident still ongoing or is it contained? <i>[Please briefly describe]</i> V. Have any relevant authorities been informed? <i>[Please briefly describe]</i>			
4) Actions taken to contain the incident			
Short Description of Action	Responsible Party	Expected Date	Status

¹¹ See Appendix 2 for definitions.

<u>For incidents involving a Contractor:</u> Name of Contractor: Have the works been suspended? Yes ☐ No ☐ Note: Please attach a copy of the instruction suspending the works			
5) What support has been provided to affected people			
<i>[Please briefly describe]</i>			
APPENDICES			
Appendix 1: Supporting documents			
[Note: Please mark the relevant documents available at this stage and submit them attached to the report]: ☐ Copy of the social security registration records of the victims and involved persons ☐ Copy of the instruction suspending the works ☐ Statement of victims ☐ Statement of witnesses ☐ Copies of notifications done to the relevant authorities ☐ Copies of legal investigation reports of relevant authorities ☐ Copies of E&S training records of the affected and involved persons ☐ Copies of OHS training records of the affected and involved persons ☐ Photographs related to the incident ☐ Others			

Appendix 2: Incident Types

The following are incident types to be reported using the environmental and social (E&S) incident response process:

Fatality: Death of a person(s) that occurs within one year of an accident/incident, including from occupational disease/illness (e.g., from exposure to chemicals/toxins).

Lost Time Injury: Injury or occupational disease/illness (e.g., from exposure to chemicals/toxins) that results in a worker requiring 3 or more days off work, or an injury or release of substance (e.g., chemicals/toxins) that results in a member of the community needing medical treatment.

Acts of Violence/Protest: Any intentional use of physical force, threatened or actual, against oneself, another person, or against a group or community, that either results in or has a high likelihood of resulting in injury, death, psychological harm, deprivation to workers or project beneficiaries, or negatively affects the safe operation of a project worksite.

Disease Outbreaks: The occurrence of a disease in excess of normal expectancy of number of cases. Disease may be communicable or may be the result of unknown etiology.

Displacement Without Due Process: The permanent or temporary displacement against the will of individuals, families, and/or communities from the homes and/or land which they occupy without the provision of, and access to, appropriate forms of legal and other protection and/or in a manner that does not comply with an approved resettlement action plan.

Child Labor: An incident of child labor occurs: (i) when a child under the age of 14 (or a higher age for employment specified by national law) is employed or engaged in connection with a project, and/or (ii) when a child over the minimum age specified in (i) and under the age of 18 is employed or engaged in connection with a project in a manner that is likely to be hazardous or interfere with the child's education or be harmful to the child's health or physical, mental, spiritual, moral or social development.

Forced Labor: An incident of forced labor occurs when any work or service not voluntarily performed is exacted from an individual under threat of force or penalty in connection with a project, including any kind of involuntary or compulsory labor, such as indentured labor, bonded labor, or similar labor-contracting arrangements. This also includes incidents when trafficked persons are employed in connection with a project.

Unexpected Impacts on heritage resources: An impact that occurs to a legally protected and/or internationally recognized area of cultural heritage or archaeological value, including world heritage sites or nationally protected areas not foreseen or predicted as part of project design or the environmental or social assessment.

Unexpected impacts on biodiversity resources: An impact that occurs to a legally protected and/or internationally recognized area of high biodiversity value, to a Critical Habitat, or to a Critically Endangered or Endangered species (as listed in IUCN Red List of threatened species or equivalent national approaches) that was not foreseen or predicted as part of the project design or the environmental and social assessment. This includes poaching or trafficking of Critically Endangered or Endangered species.

Environmental pollution incident: Exceedances of emission standards to land, water, or air (e.g., from chemicals/toxins) that have persisted for more than 24 hours or have resulted in harm to the environment.

Dam failure: A sudden, rapid, and uncontrolled release of impounded water or material through overtopping or breakthrough of dam structures.

Other: Any other incident or accident that may have a significant adverse effect on the environment, the affected communities, the public, or the workers, irrespective of whether harm had occurred on that occasion. Any repeated non-compliance or recurrent minor incidents which suggest systematic failures that the task team deems needing the attention of Bank management.

Annex I – E&S Incident Investigation Form Template

1) Investigation Findings						
<i>For example:</i> I. <i>where and when the incident took place,</i> II. <i>who was involved, and how many people/households were affected,</i> III. <i>what happened and what conditions and actions influenced the incident,</i> IV. <i>what were the expected working procedures and were they followed,</i> V. <i>did the organization or arrangement of the work influence the incident,</i> VI. <i>were there adequate training/competent persons for the job, and was necessary and suitable equipment available,</i> VII. <i>what were the underlying causes; where there any absent risk control measures or any system failures.</i>						
2) Corrective Actions from the investigation to be implemented (to be fully described in Corrective Action Plan)						
Action	Responsible Party		Expected Date			
3a) Fatality/Lost Time Injury Information						
Fatality ☐			Lost time injury ☐			
Immediate cause of fatality/injury for worker or member of the public (please check all that apply) ¹²: ☐ Caught in or between objects ☐ Struck by falling objects ☐ Stepping on, striking against, or struck by objects ☐ Drowning ☐ Chemical, biochemical, material exposure ☐ Falls, trips, slips ☐ Fire & explosion ☐ Electrocution ☐ Homicide ☐ Medical Issue ☐ Suicide ☐ Project Vehicle Work Travel ☐ Non-project Vehicle Work Travel ☐ Project Vehicle Commuting ☐ Non-project Vehicle Commuting ☐ Vehicle Traffic Accident (Members of Public Only) ☐ Other						
Name	Age/ Date of Birth	Nationality	Gender	Date of Fatality/ Injury	Cause of Fatality/ Injury	Affected Party (Employee/ Public)
			☐ Female ☐ Male			☐ Sub-borrower employee ☐ Contractor employee ☐ Sub-contractor employee ☐ Public

¹² See Appendix 1 for definitions

3b) Financial Support/Compensation Types (to be fully described in Corrective Action Plan template – template is given in Appendix 3)						
☐ No Compensation Required ☐ Contractor Insurance ☐ Workman's Compensation/National Insurance ☐ Other ☐ Contractor Direct ☐ Court Determined Judicial Process						
Name	Compensation Type	Compensation Amount (TRY)	Responsible Party			
4) Supplementary Narrative						
Appendix 1: Definition of fatality/injury immediate causes						
1. Caught in or between objects: caught in an object; caught between a stationary object and moving object; caught between moving objects (except flying or falling objects). 2. Struck by falling objects: slides and cave-ins (earth, rocks, stones, snow, etc.); collapse (buildings, walls, scaffolds, ladders, etc.); struck by falling objects during handling; struck by falling objects. 3. Stepping on, striking against, or struck by objects: stepping on objects; striking against stationary objects (except impacts due to a previous fall); Striking against moving objects; Struck by moving objects (including flying fragments and particles) excluding falling objects. 4. Drowning: respiratory impairment from submersion/emersion in liquid. 5. Chemical, biochemical, material exposure: exposure to or contact with harmful substances or radiations. 6. Falls, trips, slips: falls of persons from heights (e.g., trees, buildings, scaffolds, ladders, etc.) and into depths (e.g., wells, ditches, excavations, holes, etc.) or falls of persons on the same level. 7. Fire & explosion: exposure to or contact with fires or explosions. 8. Electrocution: exposure to or contact with electric current. 9. Homicide: a killing of one human being by another. 10. Medical Issue: a bodily disorder or chronic disease. 11. Suicide: the act or an instance of taking, or attempting to take, one's own life voluntarily and intentionally. 12. Others: any other cause that resulted in a fatality or injury to workers or members of the public. <u>Vehicle Traffic</u> 13. Project Vehicle Work Travel: traffic accidents in which project workers, using project vehicles, are involved during working hours and which occur in the course of paid work. 14. Non-project Vehicle Work Travel: traffic accidents in which project workers, using non-project vehicles, are involved during working hours and which occur in the course of paid work. 15. Project Vehicle Commuting: traffic accidents in which project workers, using project vehicles, are involved while travelling to (i) the worker's principal or secondary residence; (ii) the place where the worker usually takes his or her meals; or (iii) the place where he or she usually receives his or her remuneration.						

16. Non-project Vehicle Commuting: traffic accidents in which project workers, using non-project vehicles, are involved while travelling to (i) the worker's principal or secondary residence; (ii) the place where the worker usually takes his or her meals; or (iii) the place where he or she usually receives his or her remuneration.

17. Vehicle Traffic Accident (Members of Public Only): traffic accidents in which non-project workers/members of the public are involved in an accident while travelling for any purpose.

Appendix 2: Supporting documents

[Note: Please mark the relevant documents available and submit them attached to the report]:

- ☐ Copy of the social security registration records of the victims and involved persons
- ☐ Copy of the instruction suspending the works
- ☐ Statement of victims
- ☐ Statement of witnesses
- ☐ Copies of notifications done to the relevant authorities
- ☐ Copies of legal investigation reports of relevant authorities
- ☐ Copies of E&S training records of the affected and involved persons
- ☐ Copies of OHS training records of the affected and involved persons (such as basic OHS training, induction training, visitors training, job-specific training, refreshment training, etc.)
- ☐ Photographs related to the incident
- ☐ Health examination records of the affected and involved employees
- ☐ Copies of Personal Protective Equipment delivery forms (signed copies)
- ☐ Root Cause Analysis completed for the incident
- ☐ Information/documentation related to any judicial process
- ☐ Others

Appendix 3: Corrective Action Plan template

Action No:	Brief Description of E&S non-compliance	Corrective Action	Financial and Human Resources Required	Responsible Party	Due Date for Completion of Corrective Action	Indicators for Successful Completion of Corrective Action	Status of Corrective Action

Annex J – Chance Finds Procedure

1. INTRODUCTION

This Chance Finds Procedure is a Subproject-specific procedure which will be followed in the Subproject if previously unknown cultural heritage is encountered during Subproject activities.

It will be included in all contracts relating to construction of the Subproject, including excavations, demolition, movement of earth, flooding or other changes in the physical environment.

1.1. SCOPE

This Procedure sets out how chance finds associated with the Subproject will be managed. The procedure includes a requirement to notify relevant authorities of found objects or sites by cultural heritage experts; to fence-off the area of finds or sites to avoid further disturbance; to conduct an assessment of found objects or sites by cultural heritage experts; to identify and implement actions consistent with the requirements of national legislation and WB ESS8; and to train Subproject personnel and Subproject workers on chance find procedures.

1.2. DEFINITIONS

Chance Find	According to WB ESS8, a chance find is archaeological material encountered unexpectedly during Project/Subproject construction or operation. Most often, chance finds occur during the construction phase of a Project/Subproject. Such finds include, for example, the discovery of a single artifact, an artifact indicating the presence of a buried archaeological site, human remains, fossilized plant or animal remains or animal tracks, or a natural object or soil feature that appears to indicate the presence of archaeological material.	According to WB ESS8, a chance find is archaeological material encountered unexpectedly during Project/Subproject construction or operation. Most often, chance finds occur during the construction phase of a Project/Subproject. Such finds include, for example, the discovery of a single artifact, an artifact indicating the presence of a buried archaeological site, human remains, fossilized plant or animal remains or animal tracks, or a natural object or soil feature that appears to indicate the presence of archaeological material.
Museum(s)	Konya Museum Directorate Address:Sahipata Mh. Cahipata Cd. NO:95 Meram / KONYA Tel: 0 332 351 89 58 E-mail: konyamuzesi@ktb.gov.tr	
Regional Board(s) for the Conservation of Cultural Heritage	Konya Regional Board for the Conservation of Cultural Heritage Address: Şems-i Tebrizi Mahallesi, Mevlana Cad. Hükümet Meydanı 1. Vakıf İşhanı Kat:2 No:33/201 Karatay/KONYA Tel : 0332 350 93 19 Fax : 0332 352 03 08	

	Web: https://korumakurullari.ktb.gov.tr/TR-89464/konya-kultur-varliklarini-koruma-bolge-kurulu-mudurlugu.html	
	E-mail: konyakurul@ktb.gov.tr	

1.3. REFERENCES

- Law on the Conservation of Cultural and Natural Assets (Law No: 2863, 1983)
- [Principal Decision No. 658](#) on Archaeological Sites, Conservation and Utilization Conditions

2. ROLES AND RESPONSIBILITIES

The roles and responsibilities of the Subproject parties associated with the implementation of this Procedure are described in Table 5-31 Roles and Responsibilities associated with Chance Finds Procedure Implementation.

The Sub-borrower will ensure that all Subproject personnel (including direct or contracted workers) involved in site works are trained by qualified staff on this Subproject-specific Chance Finds Procedure and its implementation upon recruitment .

Table 5-31 Roles and Responsibilities associated with Chance Finds Procedure Implementation

Party	Role	Responsibilities
Sub-borrower		
KOSKI	Sub-borrower Management	• KOSKI management is responsible for overall oversight of the implementation of the Chance Finds Procedure during the Subproject. This includes ensuring institutional commitment, allocation of resources, coordination with relevant authorities when required, and ensuring compliance with national legislation and World Bank requirements.
	E&S Team - Environmental staff - Social staff - OHS staff	• Environmental Staff Responsible for ensuring that the Chance Finds Procedure is integrated into construction activities, monitoring contractor compliance, reporting chance find incidents to İLBANK and relevant authorities, and coordinating technical actions required following a chance find. • Social Staff Responsible for coordinating communication with local stakeholders and authorities in case of chance finds, supporting awareness and training activities, and ensuring that social considerations related to cultural heritage are properly addressed. • OHS Staff Responsible for ensuring that construction activities are safely suspended in the event of a chance find, implementing site safety measures, and coordinating worker access restrictions until clearance is obtained from the competent authorities.
Construction Supervision Consultants	Management and E&S staff	Carry out the following tasks on behalf of the sub-borrowers: • Controlling whether contractors receive training in accordance with this procedure through KPIs,
Construction Contractor	Management and E&S staff	• Complying with the requirements and standards of this Chance Find Procedure, • Fulfilling the works under the contract, • Completing the Subproject awareness and competency training before commencement of work, • Complying with the requirements of this Procedure and ESMP.

3. CHANCE FINDS PROCEDURE

The following step-by-step procedure will be followed if previously unknown cultural heritage is encountered during Subproject activities.

Step 1 – Immediate actions following the discovery of a Chance Find

- 1) All works in the survey area shall cease.
- 2) Transitional buffer zones shall be established around the chance find area.
- 3) Site management and the Museum Archaeologist shall be contacted immediately.
- 4) The chance find site shall be adequately secured by markings, signposts, and banners, etc.
- 5) Protection of the chance find site shall not be transported, lifted or damaged further.

Step 2 – Registration

- 1) Chance Find Notification Form Section A shall be filled in by the relevant Subproject representative (such as environmental or social staff – to be designated by the Contractor upon appointment) and a copy shall be forwarded to the Contractor's management and the Sub-borrower in **24 hours** of the discovery.
- 2) Completed Chance Find Notification Form Section A s shall be forwarded by the Contractor's management to the Sub-borrower in **48 hours** of the discovery.

Step 3 – Communication with Local Authorities

- 1) The director of the respective museum shall be notified by the relevant Subproject representative regarding the chance find.

Step 4 – Museum Assessment and Decision

- 1) The Museum officials evaluate the significance of the discovery and determines the required actions:
 - a) Site/Chance Find is of **No Significance**:
 - The Museum officials declare the site or find as **insignificant**.
 - Records are maintained and chance finds procedure is closed.
 - No further action is required. Construction activities may resume.
 - b) Site/Chance Find is **Significant**:
 - The Museum officials declare the site or find as **significant**.
 - The Museum officials decide on further action and notify the relevant Subproject representative.
 - The Subproject representative communicates with the Sub-borrower and relevant Subproject parties to coordinate actions.

Step 5 – Site Survey

1) The Subproject's site workers are notified by relevant Subproject representative regarding the decision and instructions of the relevant Museum Directorate.

2) The Museum officials determine the significance level of the site/chance find following a site survey.

a) Sites/chance finds of **minor** significance:

- The Museum officials declare the site or find as of minor significance.
- The relevant Subproject representative notifies the Contractor's management.
- The Contractor's management notify the Sub-borrower.
- Records are maintained by the relevant Subproject representative and chance finds procedure is closed.
- No further action is required. Construction activities may resume.

b) Sites/chance finds of **moderate** significance:

- The Museum officials declare the site or find as of moderate significance and determine the actions to be implemented.
- The relevant Subproject representative notifies the Contractor's management.
- The Contractor's management notify the Sub-borrower.
- The actions determined by the Museum Directorate are implemented by the Subproject:
 - Subproject management shall provide an archaeological task force under the leadership of the Museum officials. The task force shall be composed of qualified archaeologists as well as other specialists and workers.
 - The actions required by the Museum Directorate such as the test pit, salvage excavation or remote sensory surveys, shall be completed under the instructions and supervision of the Museum officials.
 - Upon completion of the required actions, the team shall report to the Museum Directorate.
 - Museum Directorate forwards the findings of the survey to the relevant Regional Board.
 - The Regional Board shall officially verify the completion actions and notifies the Subproject management accordingly.
- Records are maintained by the relevant Subproject representative and chance finds procedure is closed.
- No further action is required. Construction activities may resume.

c) Sites/chance finds of **high** significance:

- The Museum officials declare the site or find as of high significance and determine the actions to be implemented.
- The relevant Subproject representative notifies the Contractor's management.
- The Contractor's management notify the Sub-borrower.
- The actions determined by the Museum Directorate are implemented by the Subproject:
 - Subproject management shall provide an archaeological task force under the leadership of the Museum officials. The task force shall be composed of qualified archaeologists as well as other specialists and workers.
 - The actions required by the Museum Directorate such as the test pit, salvage excavation or remote sensory surveys, shall be completed under the instructions and supervision of the Museum officials.
 - Upon completion of the required actions, the team shall report to the Museum Directorate.
 - Museum Directorate forwards the findings of the survey to the relevant Regional Board.
 - The Regional Board shall officially verify the completion actions and notifies the Subproject management accordingly.
 - As required, the site shall be registered and placed under protection as per Turkish legislation in accordance with the Law on the Conservation of Cultural and Natural Assets (Law No: 2863, 1983).

If human remains are discovered, the entire Subproject team shall be immediately notified by the Subproject management.

The Subproject management shall also immediately notify the Sub-borrower.

All activities in the area shall cease, and the site shall be secured until further instructions are provided by relevant authorities.

4. MONITORING AND REPORTING

The Contractor's and construction supervision consultant's E&S staff shall conduct advance pre-construction surveys and monitoring of all ground disturbing activities, especially in the locations with a high likelihood of cultural heritage.

Detailed information on chance finds discovered during the Subproject implementation, if any, shall be included by the Sub-borrower in the Periodic Monitoring Reports to be submitted to İLBANK, in accordance with the requirements outlined in the sub-financing agreement.

The Subproject representative shall retain copies of all documentation related to the chance find.

All actions and decisions taken by the cultural heritage authorities shall be clearly recorded and stored in the Subproject's E&S database.

5. REPORTING TEMPLATES

5.1. CHANCE FINDS NOTIFICATION FORM

PART A BÖLÜM A		
Date: <i>Tarih</i>		Form No: <i>Form No</i>
Sub-borrower: <i>Alt borçlu</i>		Subproject: <i>Alt Proje</i>
Construction Supervision Consultant: <i>Müşavir Firma</i>		Contractor: <i>Yüklenici</i>
Subproject Location <i>Alt Proje Sahası</i>	District: <i>İlçe</i>	Neighborhood/Village: <i>Mahalle/Köy</i>
Name of person reporting chance find: <i>Şans bulgusunu rapor eden kişinin ismi</i>		
IMMEDIATE ACTIONS ACİL ÖNLEMLER		
Was work stopped in the immediate vicinity of the chance find? <i>Şans bulgusunun tam çevresinde iş durduruldu mu?</i>		☐ Yes <i>Evet</i> ☐ No <i>Hayır</i>
Was a buffer zone created to protect the chance find? <i>Şans bulguyu korumak için tampon bölge oluşturuldu mu?</i>		☐ Yes <i>Evet</i> ☐ No <i>Hayır</i>
Contractor's management representatives (e.g. Project/Site Manager) contacted? <i>Yüklenici yönetim temsilcileri (ör. Proje/Saha Müdürü) ile irtibata geçildi mi?</i>		☐ Yes <i>Evet</i> ☐ No <i>Hayır</i>
Supervision Consultant's E&S team contacted? <i>Müşavir firma Ç&S ekibi ile irtibata geçildi mi?</i>		☐ Yes <i>Evet</i> ☐ No <i>Hayır</i>
Sub-borrower contacted? <i>Alt borçlu ile irtibata geçildi mi?</i>		☐ Yes <i>Evet</i> ☐ No <i>Hayır</i>
CHANCE FIND DETAILS ŞANS BULGU AYRINTILARI		

GPS coordinates <i>GPS koordinatları</i>	Photo record <i>Fotoğraf kaydı</i> ☐ Yes ☐ No <i>Evet Hayır</i> Other records ☐ Yes ☐ No <i>Diğer kayıtlar Evet Hayır</i> Specify (drawings, HD quality videos, etc.): <i>Belirtin (çizimler, HD kalite videolar, vb.)</i>
Description of chance find: <i>Tesadüfi buluntunun tanımı</i>	
Description of site/finding and other specifications of site/finding: (e.g. surface sediment type, ground surface visibility, distance to closest watercourse, etc.) <i>Sahanın / bulgunun ve saha/bulgunun diğer özelliklerinin tanımı: (örn. Yüzey sediman türü, yüzey zemin görünürlüğü, en yakın su yoluna olan mesafe, vb.)</i>	

PART B <i>BÖLÜM B</i>		
NOTIFICATION OF MUSEUM DIRECTORATE OFFICIALS <i>MÜZE MÜDÜRLÜĞÜ YETKİLİLERİNE BİLDİRİM</i>		
Subproject representative contacted relevant Museum Directorate? <i>Alt proje temsilcisi müze müdürlüğü ile irtibata geçti mi?</i>	☐ Yes <i>Evet</i>	☐ No <i>Hayır</i>
Date of notification: <i>Bildirim tarihi</i>		
Name of Museum Directorate: <i>Müze müdürlüğünün adı</i>		
Name of the relevant Museum official: <i>Müze Müdürlüğü yetkilisinin adı</i>		
Contact number of the official:		

Yetkilinin iletişim numarası		
DECISION OF MUSEUM DIRECTORATE ARCHAEOLOGIST MÜZE MÜDÜRLÜĞÜ ARKELOĞUNUN KARARI		
Date of site visit: Saha ziyaret tarihi:		
☐ Site/Finding of <u>no</u> significance – Construction to proceed with no further action – End of chance find procedure <i>Önemsiz Saha – Bulgu - daha fazla araştırma yapılmadan inşaat devam edilebilir – Şans bulgu prosedürün sonu.</i> Date of notice to resume work: <i>İşe devam etme tarihinin bildirisi</i>	☐ Site/Finding of <u>significance</u> – Further actions required <i>Önemli Saha – Bulgu - Ek araştırma gerekmektedir</i> Please Fill out Part C <i>Lütfen Bölüm C'yi doldurun.</i>	
Name of Museum directorate official: Müze müdürlüğü yetkilisinin ismi		
Contact information: İletişim numarası		
Contractor's management representatives (e.g. Project/Site Manager) contacted? Yüklenici yönetim temsilcileri (ör. Proje/Saha Müdürü) ile irtibata geçildi mi?	☐ Yes Evet	☐ No Hayır
Supervision Consultant's E&S team contacted? Müşavir firma Ç&S ekibi ile irtibata geçildi mi?	☐ Yes Evet	☐ No Hayır
Sub-borrower contacted? Alt borçlu ile irtibata geçildi mi?	☐ Yes Evet	☐ No Hayır
PART C – FURTHER FIELD INVESTIGATION		
BÖLÜM C – İLAVE SAHA ARAŞTIRMALARI		
☐ Site/Finding of minor significance Az önem taşıyan saha/bulgu	☐ Site/Finding of moderate significance Orta derecede önemli saha/bulgu	☐ Site/Finding of high significance Çok önemli saha/bulgu
Describe additional actions required to be implemented: İlave aksiyonların tanımı		

PART D – IMPLEMENTATION OF ACTIONS AND RESUMPTION OF WORKS <i>BÖLÜM D – AKSİYONLARIN TAMAMLANMASI VE İŞE DEVAM</i>	
Date of actions started: <i>Aksiyonların başlangıç tarihi:</i>	Date of notice from the cultural heritage authorities to resume work: <i>Otorilerden alınan işe devam izni tarihi:</i>
Date of actions completed: <i>Aksiyonların tamamlanma tarihi:</i>	

5.2. CHANCE FINDS LOG

Date of Chance Find Discovery	Brief Description of the Chance Find	Notification of Subproject Parties/ Representatives	Notification of Relevant Authorities	Actions Required by the Authorities	Status of Actions (open or losed	Other Remarks

Annex K – Change Notification Form

Change Notification Form	
Subproject Name	
Subproject Location	
Subproject Phase	☐ Pre-construction
	☐ Construction
	☐ Operation
Name of the Institution Notifying the Change	
Date	
Category of the Change <i>(please select all that apply)</i>	☐ Legislative Change
	☐ Design Change
	☐ Schedule Change due to E&S factors
	☐ Project Schedule Changes due to technical, financial, legal or administrative factors
	☐ Changes due to E&S issues encountered at Subproject implementation
	☐ Contractor or Construction Supervision Consultant Change
	☐ Other <i>(please specify below)</i>
Detailed Description of the Change(s)	

Change Notification Form	
Documents Submitted with Change Notification Form	
Name of the Staff Notifying the Change	
Position of the Staff Notifying the Change	
Signature	

Annex L – Legislative Framework and Gap Analysis

The National Legislation and International Legislation applicable to the management of environmental, social, health and safety aspects of the proposed Project has been identified under this section.

Institutional and Legal Framework in Türkiye

In Türkiye, institutional framework consists of central and local administrations. Türkiye is structured by provinces according to economical and geographical conditions. Each province is managed by local administrations consisting of municipalities, villages/neighborhoods. Representatives of the administrative structure of municipalities and villages/neighborhoods are mayors and mukhtar, respectively. Ministries, which are central administrative units, provide services to local areas through their local branches including provincial organizations affiliated to governor and district organizations affiliated to district governors.

Environmental impacts, permits, management and inspection of the project is under the scope of authority of MoEUCC, Ministry of Agriculture and Forestry, Ministry of Culture and Tourism, Ministry of Labor and Social Security and Ministry of Health. MoEUCC is the key authority regulating policies and procedures related to conservation and protection of natural environment, management of natural resources and settlements by its general directorates. Those principally related to the Project are given as follows:

General Directorate of Environmental Impact Assessment, Permit, and Inspection

General Directorate of Environmental Management

General Directorate of Protection of Natural Assets

General Directorate of Infrastructure and Urban Transformation Services

General Directorate of Land Registry and Cadastral

Provincial, regional and district level administrations are the provincial organizations of ministries and related institutions. The Project is within the scope of Konya Metropolitan Municipality, Konya Provincial Directorate of Environment, Urbanization and Climate Change, Beyşehir District Directorate of Agriculture and Forestry, Konya Provincial Directorate of Agriculture and Forestry, Konya Regional Directorate for the Protection of Cultural Assets, State Hydraulic Works (DSİ) 4th Regional Directorate, Beyşehir Municipality, Beyşehir District Health Directorate, and Konya Regional Directorate of Highways. Relevant neighborhood administrations have been associated as local administrations for the Project.

National Legislation on Environmental, Social, Labor and Health and Safety:

The National Legislation applicable to the management of environmental, social, health and safety aspects of the proposed Project has been identified under this section.

The Environmental Impact Assessment (EIA) process for the Köşk Wastewater Treatment Plant was first evaluated on 07 December 2017, and the Konya Governorship Provincial Directorate of Environment and Urbanization concluded that the project, with a design capacity of 750 m³/day and planned to serve approximately 5,652 people, remained below the 30,000 m³/day threshold defined in the applicable EIA Regulation and was therefore out of scope of the EIA process. In subsequent years, the project was re-evaluated due to administrative and technical updates, and following the application submitted by the Konya Water and Sewerage Administration, a second assessment was conducted on 09 January 2026. This reassessment confirmed that no capacity increase exceeding the EIA threshold had occurred and reaffirmed that the project does not require an EIA. Both decisions emphasize that exemption from the EIA process does not relieve the project from complying with the provisions of Environmental Law No. 2872 and other relevant environmental legislation, including the obligation to obtain all necessary permits and implement appropriate environmental protection measures.

In addition to Environmental Law No: 2872, several associated laws are complementary regarding the protection and sustainability of the environment as well as the protection of health and safety rights of people. Those laws which would be applicable to the proposed Project are listed below:

Environmental Law No. 2872 (OG No:18132, dated 11.08.1983)

Expropriation Law No. 2942 (OG No:18215, dated 08.11.1983)

Forestry Law No. 6831 (OG No:9402, dated 08.09.1956)

National Parks Law No. 2873 (OG No:18132, dated 11.08.1983)

Conservation of Cultural and Natural Assets Law No. 2863 (OG No:18113, dated 23.07.1983, and revised through the amendment issued on 27.07.2004)

Highways Traffic Law No. 2918 (OG No:18195, dated 13.10.1983)

Soil Conservation and Land Use Law No. 5403 (OG No:25880, dated 19.07.2005)

Terrestrial Hunting Law No. 4915 (OG No:25165, dated 11.07.2003)

Animal Protection Law No. 5199 (OG No:25509, dated 01.07.2004)

Labor Law No. 4857 (OG No:25134, dated 10.06.2003)

Occupational Health and Safety Law No. 6331 (OG No:28339, dated 30.06.2012)

Social Insurance and General Health Insurance Law (OG No:26200 dated: 16.06.2006)

The regulations developed under the Environmental Law aim to specify and identify the procedures and principles of the management of environmental aspects. Under the relevant laws, several regulations or communiques are summarized in Table 5-32:

Table 5-32 Regulations and/or Communiques regarding Environmental, Social, Labor, Health and Safety Aspects

Regulations / Communiques	OG Number	OG Date	Relevance/Implication for the Project
Environmental Permit and Licenses			
Regulation on Environmental Impact Assessment	31907	29.07.2022	Scoping the Project and evaluating impacts during pre-construction, construction, and operation phases of the project.
Regulation on Environmental Permits and Licensing	29115	10.09.2014	Determination of required environmental permits and licenses at all phases of the Project.
Regulation on Environmental Auditing	27061	21.11.2008	Environmental audits performed by either Project Owner or governmental authorities during construction and operation stages.
Regulation on the Implementation of the Law Concerning Private Security Services	25606	07.10.2004	During the construction phase for camp site security (in case of any) and during the operation phase for safety purposes for reservoirs (in case of any planning).
Air Quality Control and Greenhouse Gas (GHG) Emissions			
Air Quality Assessment and Management Regulation	26898	06.06.2008	Emissions during operation stage.
Industrial Air Pollution Control Regulation	27277	03.07.2009	During the construction phase, dust emissions.
Regulation on the Control of Odor Causing Emissions	28712	19.07.2013	Possible odorous emissions generated during operation stage.
Exhaust Gas Emission Control Regulation	30004	11.03.2017	Operation of Project vehicles, machinery, and equipment at all phases of the Project.
Regulation on the Control of Air Pollution from Heating	25699	13.01.2005	Heating of the operational buildings during operation phase.
Biodiversity Conservation and Protection of Nature			
Regulation on the Protection of Wetlands	25818	17.05.2005	Measures to be taken for wetland protection near to the Project area during the planning phase of the Project.
Law on Natural Parks	18132	11.08.1983	Measures to be taken for natural parks protection near to the Project area during the planning phase of the Project.
Regulation on Protection of Wildlife and Wildlife Development Area	259637	08.11.2004	Measures to be taken for wildlife protection near to the Project area during the planning phase of the Project.

Regulations / Communiqués	OG Number	OG Date	Relevance/Implication for the Project
Regulation on Biological Agents	28678	15.06.2013	The regulation governs the management of occupational health risks from exposure to biological agents (pathogens, bacteria, viruses) present in raw wastewater. It is essential for protecting worker health during the operation and maintenance phases.
Chemicals and Other Dangerous Substances			
Regulation on Classification, Labelling, and Package of the Materials and Mixtures	28848	11.12.2013	Taking measures for chemicals and mixtures to be used during construction and operation phases.
Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals	30105	23.06.2017	Determination of chemicals to be used during the operation phase.
Regulation on Persistent Organic Pollutants	30595	14.11.2018	Determination of chemicals to be used during the operation phase.
Regulation on the Control of Polychlorinated Biphenyls (PCBs) and Polychlorinated Terphenyls (PCTs)	26739	27.12.2007	Usage of transformers, capacitors, electrical equipment including voltage regulators, switches, oil used in motors, old electrical devices or appliances containing PCB capacitors, fluorescent light ballasts during the operational phase.
Noise			
Environmental Noise Control Regulation	32029	30.11.2022	Determination of noise emissions and measures to be taken at construction and operation phases.
Regulation on the Environmental Noise Emissions Caused by Equipment Used Outdoors	26392	30.12.2006	Regulating the noise levels caused by noise sources within the Project site at the construction and operation phases.
Regulation on the Protection of Employees from Risks About Noise	28721	28.07.2013	Minimum requirements to protect workers from the health and safety risks that may arise from exposure to noise, especially hearing-related risks during the construction phase.
Soil and Land Use			
Regulation on the Control of Soil Pollution and Lands Contaminated by Point Sources	27605	08.06.2010	Determination of risks of soil contamination at construction and operation phases.

Regulations / Communiqués	OG Number	OG Date	Relevance/Implication for the Project
Regulation on Control of Excavated Soil, Construction and Demolition Wastes	25406	18.03.2004	Management of excavated soil and construction and demolition wastes at the source.
Regulation on Protection, Use, and Planning of Agricultural Lands	30265	09.12.2017	Management of change in the land use during the planning phase of the Project.
Waste			
Regulation on Waste Management	29314	02.04.2015	Management of waste from generation to disposal without harming the environment and human health during construction and operation phases.
Zero Waste Regulation	30829	12.07.2019	General principles regarding the establishment, development, monitoring, financing, recording and certification of the zero waste management system in line with sustainable development goals during construction and operation phases.
Regulation on Packaging Waste Control	30283	27.12.2017	Preventing the formation of packaging waste, reducing the amount of unavoidable packaging waste to be disposed of using reuse, recycling and recovery methods in construction and operation phases.
Regulation on Waste Oil Management	30985	21.12.2019	Waste oils included in the definition of waste oil and the management, recovery, disposal of these wastes, precautions to be taken and notifications to be made
Regulation on Medical Waste Control	29959	25.01.2017	Collection of medical waste in the places where it is produced, temporary storage, transportation to the medical waste processing facilities and disposal
Regulation on Control of Waste Electrical and Electronic Equipment	28300	22.05.2012	Management of electrical and electronic equipment wastes during construction and operation phases.
Regulation on Control of Waste Batteries and Accumulators	25569	31.08.2004	Establishment of a collection system and management for the recovery or final disposal of waste batteries and accumulators.
Regulation on Control of End-of-life Tires	26357	25.11.2006	Establishing a collection and management system for ensuring the necessary regulations and

Regulations / Communiqués	OG Number	OG Date	Relevance/Implication for the Project
			standards in the management of end-of-life tires during the construction and operation phases.
Water and Wastewater			
Regulation on Management of Surface Water Quality	28483	30.11.2012	Regulating discharge of treated effluent and monitoring of water quality at receiving body during operation phase.
Regulation on the Monitoring of Surface Waters and Groundwater	28910	11.02.2014	Monitoring of water quality at receiving body during operation phase.
Regulation on Water Pollution Control	25687	31.12.2004	Discharge of treated effluent during operation phase of the Project.
Regulation on the Protection of Ground Waters against Pollution and Deterioration	28257	07.04.2012	Protection of groundwater sources against pollution during construction and operation phases.
Regulation on the Control of Pollution Caused by Hazardous Substances in and around Water Environment	26005	26.11.2005	Management of hazardous substances during construction and operation phases.
Regulation on Water Intended for Human Consumption	25730	17.02.2005	Management of drinking water supplied during construction and operation stages.
Regulation on Quality and Treatment of Potable Water to be Supplied	30823	06.07.2019	Determination and monitoring of quality of water to be supplied during the operation phase.
Regulation on Wastewater Collection and Remote Systems	29940	06.01.2017	Procedures and principles regarding the planning, design and project design, construction and operation of wastewater collection and removal systems.
Regulation on Control of Water Loss in Water Supply and Distribution Systems	28994	08.05.2014	Procedures and principles regarding the duties and responsibilities of water administration for reducing water losses in water supply, storage, transmission, distribution and consumption.
Regulation on the Procedures and Principles to Be Followed in the Determination of Wastewater Infrastructure and Domestic Solid Waste Disposal Plant	27742	27.10.2010	Establishment, maintenance, repair, operation, closure and monitoring of wastewater infrastructure facilities, determination of full cost-based tariffs that can cover all services, adjustment and implementation of

Regulations / Communiqués	OG Number	OG Date	Relevance/Implication for the Project
			wastewater infrastructure management by metropolitan municipalities and municipalities
Structural Safety			
Regulation on Structures to be Built in Natural Disaster Areas	26582	14.07.2007	Management of construction works within the scope of the Project.
Regulation on Building Constructions in Earthquake Zones	26454	06.03.2007	Management of construction works within the scope of the Project.
Regulation on Building Earthquake of Türkiye	30364	18.03.2018	Measures to be taken for the design and construction works under the impact of earthquakes and the evaluation of the performance of existing buildings under the impact of earthquakes.
Regulation on the Protection of Buildings from Fire	26735	19.12.2007	Measures to be taken for fire protection during construction and operation phases.
Traffic			
Regulation on the Road Transportation of Hazardous Goods	28801	24.10.2013	Hazardous goods to be transported during construction and operation phase.
Regulation on Highway Traffic	23053	18.07.1997	Regulating speed limits of vehicles and machinery used during construction and operation phases.
Regulation on Traffic Signs	18789	19.06.1985	Regulating the traffic signs to be used during the construction and operation phases
Health and Safety and Labor			
Regulation on Emergency Situations in Workplaces	28681	18.06.2013	Preparation of emergency plans, prevention, protection, evacuation, firefighting, first aid and similar studies in workplaces.
Regulation on duties and responsibilities of OHS Specialists	28512	29.12.2012	Defines roles and responsibilities of OHS specialists
Regulation on duties and responsibilities of Occupational Physicians and other medical personnel	28713	20.07.2013	Defines roles and responsibilities of Occupational physicians and the medical personnel
Regulation on Health and Safety at Construction Works	28786	05.10.2013	Measures to be taken during construction phase.

Regulations / Communiqués	OG Number	OG Date	Relevance/Implication for the Project
Regulation on Health and Safety Conditions Regarding Use of Work Equipment	28628	25.04.2013	Measures to be taken during construction phase related to use of equipment.
Regulation on Health and Safety Precautions Regarding Working with Chemicals	28733	12.08.2013	Measures to be taken during construction and operation phase related to use of chemicals.
Regulation on Protection of Employees from the Hazards of Explosive Environments	28633	30.04.2013	It regulates the procedures and principles regarding the precautions to be taken in order to protect the employees from the dangers of explosive atmospheres that may occur in the workplaces in terms of health and safety.
Regulation on Health and Safety Regarding Temporary and Time-Limited Works	28744	23.08.2013	Protection of employees with a temporary or fixed-term employment contract at the same level as other employees in the workplace in terms of health and safety.
Regulation on Health and Safety Signs	28762	11.09.2013	Measures to be taken during construction and operation phases.
Regulation on Management of Dust	289812	05.11.2013	Measures to be taken to combat dust in terms of occupational health and safety to prevent the risks that may arise from dust in the workplaces and to ensure that the workers are protected from the effects of dust.
Law on Occupational Health and Safety (6331)	28339	20.06.2012	Health and safety measures to be taken during construction and operation stages.
Regulation on Personal Protective Equipment	30761	01.05.2019	Measures to be taken during construction and operation phases to ensure the health and safety of employees.
Regulation on Protection of Workers from Risks Created by Noise	28721	28.07.2013	Measures to be taken during construction and operation phases to ensure the health and safety of employees.
Regulation on Risk Assessment for Occupational Health and Safety	28512	29.12.2012	Determination of occupational health and safety risks occurring during construction and operation phases.
Regulation on Sub-contractors	27010	27.09.2008	Management of contractors/sub-contractors during construction and operation phases.

Regulations / Communiqués	OG Number	OG Date	Relevance/Implication for the Project
Regulation on Use of Personal Protective Equipment in Workplaces	28695	02.07.2013	Measures to be taken during construction and operation phases to ensure the health and safety of employees.
Regulation on Vocational Training of the Employees Working in Dangerous and Highly Dangerous Workplaces	28706	13.07.2013	Measures to be taken during construction and operation phases to ensure the health and safety of employees.
Regulation on the Procedures and Principles of Employee Health and Safety Training	28648	15.05.2013	Measures to be taken during construction and operation phases to ensure the health and safety of employees.
Regulation on High Current Electrical Facilities	24246	30.11.2000	Covers measures regarding the safe installation, construction, operation and maintenance of high current electrical facilities.
Regulation on Manual Handling	28717	24.07.2013	Defines the safe procedures for safe handling of goods and equipment using manual manpower.
Regulation on Health and Safety at Construction Works	28786	05.10.2013	Specifies requirements for high-risk activities, critically including work in confined spaces. WWTPs have numerous confined spaces (wells, tanks, pipelines) with lethal atmospheric hazards (H ₂ S, CH ₄ , O ₂ deficiency). This regulation mandates safe entry procedures, including gas measurement, permit-to-work systems, and rescue plans.
Cultural Heritage			
Law on Protection of Cultural and Natural Assets	18113	23.07.1983	During chance finds at the construction phase, determination of measures to be taken.
Regulation on Researches, Drillings and Excavations in relation to the Cultural and Natural Assets	18485	10.08.1984	Defining the procedures and obligations concerning the cultural and natural assets found out during construction.

Table 5-33.Key Gaps Between WB ESSs And Turkish E&S Legislation

GFC is subject to İLBANK ESMS. Thus, WB's environmental and social assessment procedures and Turkish legislation, and key gaps and ways to close these gaps are presented in the ESMS. Under the ESMS, the processes of WB ESS and Turkish EIA Regulation are separately discussed in terms of screening, environmental assessment, public consultation, scoping, review of environmental and social impact assessment, disclosure, monitoring and inspection. The Turkish EIA procedures are, with some exceptions, in line with the WB's ESSs. The primary exceptions are in project categorization, scope of environmental and social assessment, and public consultation. In cases where the Turkish legislation differ from the ESSs, the more stringent one will be applied to the project implementation.

Gaps between WB ESSs and Turkish Environmental and Social Legislation, and actions taken in this ESMP (having Moderate E&S risks) to fill those gaps are summarized in the Table 5-34 below:

Table 5-34 Key Gaps Between WB ESSs And Turkish E&S Legislation

WB Environmental and Social Standards (ESS)	Gaps	Actions taken to fill gaps
ESS1: Assessment and Management of Environmental and Social Risks and Impacts	The social impact assessment is not fully integrated into the Turkish EIA, resulting in a lack of assessment of the project that triggered the social impacts, including impacts on the disadvantaged or vulnerable and impacts on gender-related issues,	With this ESMP prepared for the Project, the social impacts as well as the environmental impacts of the Project were evaluated and the gap was filled. Depending on the level of risks/impacts to be identified on a case-by-case basis, sub-management plans (e.g. OHS management, Traffic Management, etc.) is addressed to be developed as part of the ESMP.
ESS2: Labor and Working Conditions	In general, Turkish national laws and regulations regarding labor and working conditions meet the requirements of ESS2. The worker grievance mechanism is a key gap between national legislative requirement and ESS2. According to the Turkish national labor and working conditions legislation, there are no specific requirements regarding the grievance mechanism allowing workers to lodge their grievances with the employer.	A SEP has been prepared under the project and the grievance mechanism is defined in this plan. In accordance with the prepared SEP, the channels through which stakeholders can submit their grievances are explained.
ESS3: Resource Efficiency and Pollution Prevention and Management	Most of the relevant national legislation regarding laws and regulations is in line with EU directives. There is not a big gap between ESS3 and legal requirements. The absence of GHG forecasts for the configuration and operation phases is defined as the main gap.	In cases where the Turkish requirements differ from the levels and measures presented in the WB EHSs, the more stringent one will be applied in the project specifications.
ESS4: Community Health and Safety	In general, there is no gap in terms of policy level. On the other hand, project-level management of certain risks such as labor influx, sexual exploitation, abuse and sexual harassment are key gaps of ESS4.	In this ESMP prepared for the Project, labor influx, sexual exploitation, abuse and sexual harassment issues were determined as an impact and mitigation measures and monitoring methods were included in these impacts.

WB Environmental and Social Standards (ESS)	Gaps	Actions taken to fill gaps
ESS5: Land Acquisition, Restrictions on Land Use and Involuntary Resettlement	Turkish legislation on land acquisition mainly corresponds to the requirements stipulated by ESS5.	As there will be no expropriation within the scope of the Project, ESS5 will not be triggered.
ESS6: Biodiversity Conservation and Sustainable Management of Living Natural Resources	There is no gap in terms of policy level. On the other hand, in some cases, level of the considerations of not legally protected sensitive ecological areas such as Key Biodiversity Areas in local EIA Process are not sustain the requirements stipulated by ESS6. Furthermore, management and monitoring of potential impacts, mitigation measures and residual impacts are not detailed in general.	Assessments were conducted in compliance to ESS6. The management, mitigation measures and monitoring of potential impacts on sensitive ecological areas are detailed within the ESMP.
ESS10: Stakeholder Engagement and Information Disclosure	Effective and transparent stakeholder engagement is a key gap for the ESS 10 requirement. In this context, a Stakeholder Engagement Plan is required to identify the different stakeholders (project affected parties and other interested parties, including the disadvantaged or vulnerable). Stakeholder engagement should be an ongoing process.	Within the scope of the Project, a Stakeholder Engagement Plan have been prepared, which includes the subjects of stakeholder engagement activities and grievance mechanism. Vulnerable/disadvantaged groups and individuals have been identified in the SEP prepared under the project and disclosure and stakeholder engagement activities on the channels through which these groups and individuals can submit their grievances have been included.

International Agreements and Conventions:

The international agreements, and conventions, that Türkiye ratified, are provided as in below:

Paris Agreement (2021),

UN Framework Convention on Climate Change (UNFCCC) (2004),

Rio Declaration on Environment and Development and Statement on Forest Principles (1992),

Convention on Biological Diversity (Rio Convention) (1992),

Paris Convention on the Protection of the World Cultural and Natural Heritage (1975),

Barcelona Convention on the Protection of the Mediterranean Sea Against Pollution (1976),

The Convention for the Protection of Marine Environment and the Coastal Region of the Mediterranean (Barcelona Convention) (1981),

Bern Convention on Protection of Europe's Wildlife and Living Environment (1982),

Vienna Convention for the Protection of the Ozone Layer (1988),

Montreal Protocol on Substances Depleting the Ozone Layer (1990),

Convention on Wetlands of International Importance, Especially as Waterfowl Habitat (1994),

Convention on International Trade in Endangered Species of Wild Fauna and Flora (1996),

UN Convention to Combat Desertification (1998),

United Nations Europe Economic Commission Convention on Transboundary Effects of Industrial Accidents (2000),

Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters (Aarhus Convention) (2001),

Stockholm Convention on Persistent Organic Pollutant (2010),

Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention) (1972),

Mediterranean Sea Protocol Concerning Specially Protected Areas and Biodiversity (1988), including related protocols,

International Labor Organization (ILO) Convention on Forced Labor (1930),

ILO Convention on Freedom of Association and Protection of the Right to Organize (1948),

ILO Convention on Right to Organize and Collective Bargaining (1949),

ILO Convention on Equal Remuneration (1951),

ILO Convention on Abolition of Forced Labor (1957),

ILO Convention on Discrimination (Employment and Occupation) (1958),

ILO Convention on Worst Forms of Child Labor (1999).

The Project will comply with both national legislation and international standards. In case those differ, the most stringent requirement will be met. Moreover, the up-to-date legislation will be followed.

Annex M Agreement Documents

KOSKİ GENEL MÜDÜRLÜĞÜNE

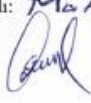
Konya İli Hüyük İlçesi Köşk Mahallesi 2308, 6564 ve 6569 numaralı parsellerde yapılması planlanan Köşk Atıksu Arıtma Tesisi sahasına, sehven 6567 ve 6566 parsel nolu arazilerimden taşmış olduğumu öğrenmiş bulunmaktayım.

Herhangi bir zorlama olmaksızın ve herhangi bir ekonomik kayba uğramaksızın, taşmış olduğum kısmı kendi parsel sınırlarıma çekeceğimi bilgilerinize arz ederim.

Adı-Soyadı: Mahmut KAYAR (Varis)

Tarih: 28.11.2025

İmza



KOSKİ GENEL MÜDÜRLÜĞÜNE

Konya İli Hüyük İlçesi Köşk Mahallesi 2308, 6564 ve 6569 numaralı parsellerde yapılması planlanan Köşk Atıksu Arıtma Tesisi sahasına, sehven 2575 parsel nolu arazimden taşmış olduğumu öğrenmiş bulunmaktayım.

Herhangi bir zorlama olmaksızın ve herhangi bir ekonomik kayba uğramaksızın, taşmış olduğum kısmı kendi parsel sınırlarıma çekeceğimi bilgilerinize arz ederim.

Adı-Soyadı: *FAHRETTİN SAYAR (vekil)*

Tarih: *08-12-2023*

İmza *Faruk*

KOSKİ GENEL MÜDÜRLÜĞÜNE

Konya İli Hüyük İlçesi Köşk Mahallesi 2308, 6564 ve 6569 numaralı parsellerde yapılması planlanan Köşk Atıksu Arıtma Tesisi sahasına, sehven **2576** parsel nolu arazimden taşmış olduğumu öğrenmiş bulunmaktayım.

Herhangi bir zorlama olmaksızın ve herhangi bir ekonomik kayba uğramaksızın, taşmış olduğum kısmı kendi parsel sınırlarıma çekeceğimi bilgilerinize arz ederim.

Adı-Soyadı: *Ayhan AKGÜL (Kiracı)*

Tarih: *08.12.2025*

İmza



KOSKİ GENEL MÜDÜRLÜĞÜNE

Konya İli Hüyük İlçesi Köşk Mahallesi 2308, 6564 ve 6569 numaralı parsellerde yapılması planlanan Köşk Atıksu Arıtma Tesisi sahasına, sehven **2312** parsel nolu arazimden taşmış olduğumu öğrenmiş bulunmaktayım.

Herhangi bir zorlama olmaksızın ve herhangi bir ekonomik kayba uğramaksızın, taşmış olduğum kısmı kendi parsel sınırlarıma çekeceğimi bilgilerinize arz ederim.

Adı-Soyadı: *Ayhan AKGÜL (Kırag)*

Tarih: *08.12.2025*

İmza

