

GREEN AND FUTURE CITIES (GFC) PROJECT

ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN (ESMP)

KIRELİ WASTEWATER TREATMENT PLANT CONSTRUCTION PROJECT of KONYA WATER AND SEWERAGE ADMINISTRATION

September, 2026



Document History

Revision	Submitted to	Issue Date	Revision Details
v0	İLBANK INC. (İLBANK)	07.10.2025	Draft
v1	İLBANK INC. (İLBANK)	06.02.2026	Draft
v2	İLBANK INC. (İLBANK)	19.06.2026	Draft
v3	İLBANK INC. (İLBANK)	06.07.2026	Draft Final
v4	İLBANK INC. (İLBANK)	04.09.2026	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



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ABBREVIATIONS

AF	Associated Facility
AFAD	Disaster and Emergency Management Presidency
AoI	Area of Influence
AQI	Air Quality Index
BOD ₅	Biological Oxygen Demand
C-AQMP	Contractor's Air Quality Management Plan
C-OHSMP	Contractor's Occupational Health and Safety Management Plan
C-TMP	Contractor's Traffic Management Plan
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
COD	Chemical Oxygen Demand
CR	Critically Endangered
ÇGDYY	Regulation on the Assessment and Management of Environmental Noise
ÇŞİDB	Ministry of Environment, Urbanization and Climate Change
dBA	A-weighted Decibels
DCC	Document Control Center / System
DG	Directorate General
DKMP	Nature Conservation and National Parks
DSİ	State Hydraulic Works
E&S	Environmental and Social
EHS	Environmental, Health and Safety
EHSg	Environmental, Health and Safety Guidelines
EIA	Environmental Impact Assessment
EKED	Lockout / Tagout (Etiketleme, Kilitleme, Emniyete Alma, Deneme)
EN	Endangered
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
ESMRs	Environmental and Social Monitoring Reports
ESMS	Environmental and Social Management System
ESP	Environmental and Social Policy
ESS / ESSs	Environmental and Social Standards
ETL	Energy Transmission Line
EU	European Union
FI	Financial Intermediary
GBV	Gender-Based Violence
GFC	Green and Future Cities
GFI	Ground Fault Interrupter
GHG	Greenhouse Gas
GIIP	Good International Industry Practice
GM	Grievance Mechanism
GMCP	Grievance Mechanism Contact Person
GMP	Grievance Mechanism Procedure
GN	Guidance Notes
GPS	Global Positioning System

HCl	Hydrogen Chloride
HD	High Definition
HDPE	High-Density Polyethylene
HF	Hydrogen Fluoride
HS	Health and Safety
ICSC	International Chemical Safety Cards
IFC	International Finance Corporation
IFIs	International Financial Institutions
ILO	International Labour Organization
İLBANK	İller Bankası A.Ş.
İRAP	Provincial Disaster Risk Reduction Plan
ISO	International Organization for Standardization
IUCN	International Union for Conservation of Nature
KOSKİ	Konya Water and Sewerage Administration
KPI	Key Performance Indicator
LC	Least Concern
LEL	Lower Explosive Limit
LOTO	Lock-Out, Tag-Out, Try-Out
MAK	Central Hunting Commission
MoEUCC	Ministry of Environment, Urbanization and Climate Change
MSDS	Material Safety Data Sheets
NO₂	Nitrogen Dioxide
NO_x	Nitrogen Oxides
OG	Official Gazette
OHS	Occupational Health and Safety
OHSMP	Occupational Health and Safety Management Plan
PAP	Project Affected People
Pb	Lead
PCB	Polychlorinated Biphenyls
PCT	Polychlorinated Terphenyls
PE	Polyethylene
PGA	Peak Ground Acceleration
PIF	Project Information File
PIU	Project Implementation Unit
PLN	Plan
PM	Particulate Matter
PMU	Project Management Unit
POSEİDON	POSEİDON Environmental Social Consulting Engineering Trade Ltd. Co.
PPE	Personal Protective Equipment
Project	Green and Future Cities Project
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
RCA	Root Cause Analysis
RCIAP	Regulation on Control of Industrial Air Pollution
RD	Regional Directorate
RE	Renewable Energy
SCBA	Self-Contained Breathing Apparatus
SDS	Safety Data Sheets

SEA/SH	Sexual Exploitation and Abuse / Sexual Harassment
SEP	Stakeholder Engagement Plan
SOP	Standard Operating Procedures
SO₂	Sulfur Dioxide
SO_x	Sulfur Oxides
SoW	Scope of Work
SRS	Social Responsibility Staff
Sub-project	Kireli Wastewater Treatment Plant Construction Subproject of KOSKI
TMP	Traffic Management Plan
TOC	Total Organic Compounds
TS/EN	Turkish Standard / European Norm
TSS	Total Suspended Solids
TurkStat	Turkish Statistical Institute
UGR	Unlicensed Generation Regulation
UN	United Nations
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFCCC	United Nations Framework Convention on Climate Change
VOC	Volatile Organic Compounds
VU	Vulnerable
WB	World Bank
WBG	World Bank Group
WHO	World Health Organization
WPCR	Water Pollution Control Regulation
WWTP	Wastewater Treatment Plant

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 project; (b) carried out, or planned to be carried out, contemporaneously with the project; and (c) necessary for the project to be viable and would not have been constructed, expanded or conducted if the project 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 Kireli Wastewater Treatment Plant Construction Subproject (the Subproject) is being developed by the Konya Water and Sewerage Administration (KOSKİ) under the Green and Future Cities (GFC) Project, financed by the World Bank (WB) with İller Bankası A.Ş. (İLBANK) acting as the Financial Intermediary. The Subproject is located in Kireli Neighborhood, Hüyük District, Konya Province, on Block 216, Parcel 32, and has been classified as a Moderate Risk project under İLBANK's Environmental and Social Management System (ESMS) and the World Bank Environmental and Social Framework (ESF).

The Subproject involves the construction and operation of a wastewater treatment plant (WWTP) designed to treat domestic wastewater generated from Kireli, Çavuş, İlmen, Tolca and Göçeri neighborhoods. The facility will be constructed on a land parcel of 5,006.11 m², which is fully owned by KOSKİ. An existing reinforced concrete structure belonging to a previously initiated but unfinished Wastewater Treatment Plant (WWTP) is present on the site, and this structure will be demolished within the scope of the Subproject, with the new WWTP to be constructed in its place. In addition, within the scope of the Subproject, collector lines with a total length of approximately 10.013 meters will be constructed to convey wastewater from Çavuş, Göçeri, Tolca and Kireli settlements to the treatment plant. İlmen Neighborhood is currently connected to the Çavuş Neighborhood sewer network; therefore, no new collector line will be constructed for İlmen under the Subproject. Wastewater generated in İlmen Neighborhood will continue to be conveyed to the Kireli WWTP through the existing sewer infrastructure. As further detailed in Section 3.2.1 and the Operation ESMP Matrix, approximately 15 tons/day of raw sludge generated during WWTP operation will be thickened and dewatered in the sludge dewatering building to produce 1.47 tons/day of sludge cake with a dry solids content of 22%, temporarily stored on site as sludge cake under controlled conditions, and transported to Konya WWTP for further treatment, disposal and/or reuse in accordance with applicable national regulations and sludge quality criteria. No energy transmission line (ETL) will be constructed as part of the Subproject; only the transformer connection will be established.

Accordingly, the Subproject does not include any Associated Facilities as defined under international lender standards, and all activities remain limited to the main project footprint.

The land allocated for the Wastewater Treatment Plant facility is owned by the Konya Water and Sewerage Administration (KOSKİ). Therefore, no land acquisition, expropriation, or involuntary resettlement is required for the construction of the main facility. Accordingly, ESS5 (Land Acquisition, Restrictions on Land Use and Involuntary Resettlement) is not triggered for the Subproject.

The routes selected for the sewer collector lines and the discharge line have been planned in a manner that avoids private properties and, to the extent possible, follows publicly owned lands and existing road and infrastructure corridors. In this context, it is assessed that no public benefit decision, expropriation, or accelerated expropriation decision is required for the Subproject.

Permitting processes under national legislation have been addressed within the scope of the Subproject preparation. Relevant environmental permits and approvals, including the EIA decision and other applicable land use and institutional permits, are obtained or are in progress in line with Turkish legislation. The Subproject has been designed to comply with national regulatory requirements as well as World Bank Environmental and Social Standards and World Bank Group Environmental, Health, and Safety Guidelines.

Construction activities are planned to be implemented over a period of approximately 16 months following the completion of permitting and mobilization processes. Operation activities will commence after completion of construction and commissioning of the facility and will be carried out by KOSKİ in compliance with the Operation ESMP Matrix and national regulatory requirements.

Key environmental risks during the construction phase include temporary and localized impacts related to air quality, noise, traffic and road safety, soil disturbance, waste generation, and occupational health and safety. These impacts are expected to be short-term and manageable through the implementation of good international industry practices and the mitigation measures defined in the Construction ESMP Matrix. During the operation phase, potential risks are mainly associated with sludge management, odor, chemical handling, wastewater discharge quality, and worker health and safety. These risks are addressed through operational controls, monitoring activities, and institutional arrangements defined in the Operation ESMP Matrix.

The ESMP establishes mitigation and monitoring measures for both construction and operation phases, defines the roles and responsibilities of KOSKİ, contractors, and supervision consultants, and sets out monitoring, reporting, and corrective action mechanisms. A grievance mechanism is in place to receive and address concerns from workers and local communities throughout the Subproject lifecycle.

Overall, the Kireli WWTP Subproject is expected to deliver significant environmental and social benefits by improving wastewater management and protecting sensitive water resources within the Beyşehir Lake Basin. With the effective implementation of the ESMP, identified risks can be reduced to acceptable levels, and the Subproject can be implemented in compliance with applicable national legislation and World Bank requirements.

1. INTRODUCTION

1.1. Background

Türkiye has ambitious climate goals to reach net zero emissions by 2053. Türkiye ratified the Paris Agreement in October 2021. Cities play a major role in Türkiye's development and will be critical for achieving stronger, more sustainable growth driven by productivity improvements, and green transition for meeting national mitigation and resilience goals. Türkiye's cities are key to ensuring the resilience of people, productive activity, and public finances under mounting climate risks. Türkiye's people and assets are increasingly concentrated in cities, with above-average exposure to climate risks exacerbated by inadequate infrastructure and services. Rapid urban growth paired with insufficient consideration of climate risks in spatial planning, investment prioritization, and construction have resulted in urban populations and assets that are increasingly concentrated in areas exposed to climate hazards, with inadequate provisions for resilience, and rising associated damage estimates.

The Green and Future Cities Project (GFC), supported by the World Bank and implemented in Türkiye through İller Bankası A.Ş (İLBANK). İLBANK, is a strategic initiative aimed at fostering climate-resilient and sustainable urban development. As urbanization accelerates, cities face increasing challenges related to greenhouse gas emissions, environmental degradation, and vulnerability to climate-related risks. GFC seeks to address these challenges by providing municipalities with the financial, technical, and institutional support needed to implement green infrastructure and low-carbon solutions. Konya, one of Türkiye's largest and fastest-growing cities, has been selected under GFC due to its rapid urbanization, high energy consumption, and significant exposure to climate-related challenges, including water scarcity and heat stress. By targeting Konya, the project aims to demonstrate how comprehensive climate-resilient urban planning and sustainable infrastructure investments can be effectively implemented in a major urban center.

GFC will be financed by World Bank (WB) to support participating municipalities and utilities in Türkiye to plan for and invest in climate resilience and greenhouse gas (GHG) reductions. İLBANK will be acting as the Financial Intermediary (FI).

İLBANK has established an Environmental and Social Management System (ESMS) effective on 24th of Dec 2023. The ESMS is aimed at ensuring systematic identification, assessment, management, monitoring, and reporting of the environmental and social (E&S) risks and impacts of the projects and subprojects financed by the International Finance Institutions (IFIs). This process should be implemented on an ongoing basis throughout their loan duration in line with the requirements of the national legislation, international agreements and conventions ratified by Türkiye and E&S standards of lending IFIs (World Bank for the GFC). As a critical element of the ESMS, İLBANK has adopted and published an E&S Policy applicable to all İLBANK projects and subprojects financed through IFIs.

Within the scope of the İLBANK's ESMS and World Bank Environmental and Social Framework (ESF), projects are classified as either High Risk, Substantial Risk, Moderate Risk or Low Risk taking into account relevant potential risks and impacts, such as the type, location, sensitivity and scale of the project; the nature and magnitude of the potential E&S risks and impacts; the capacity and commitment of the Borrower; and other relevant areas of risks that may result in unintended impacts.

" Kireli Wastewater Treatment Plant Construction Subproject" (Subproject) is planned to be implemented by Konya Water and Sewerage Administration General Directorate in Konya province, Beyşehir district, Kireli neighborhood Block 216, Parcel 32.

The implementation of the Kireli Wastewater Treatment Plant Subproject will generate significant environmental, social, and economic impacts. Primarily, through the advanced biological treatment of domestic wastewater, the water quality of Lake Beyşehir will be preserved, the risk of eutrophication will be reduced, and biodiversity will be safeguarded. This will not only improve the ecological balance of the lake but also contribute to the protection of groundwater resources.

The Subproject is categorized as of Moderate Risk as per the Risk Screening conducted under İLBANK ESMS and World Bank ESF. One of the tasks under the scope of the Subproject is the preparation of an Environmental and Social Management Plan (ESMP) in accordance with İLBANK's ESMS and WB ESF including applicable Environmental and Social Standards (ESSs), World Bank Group (WBG) General Environment Health and Safety (EHS) Guidelines and Industry Sector Guidelines, and the national legislation in force in Türkiye.

This ESMP has been prepared by POSEİDON Environmental Social Consultancy Trade Ltd. Co. (POSEİDON) based on the environmental and social impact and risk assessment studies conducted for the Subproject, which addresses site-specific mitigation, monitoring, and institutional measures to be taken during pre-construction, land preparation, construction, and operation phases of the Subproject to either eliminate or reduce these adverse environmental and social impacts to acceptable levels. Moreover, a Stakeholder Engagement Plan (SEP) is also prepared for the Subproject.

SubprojectThis ESMP provides instructions, responsibilities, and guidelines to the responsible parties with a set of mitigations, monitoring, and institutional measures to be taken during the implementation (construction) and operation of the Subproject to avoid potential adverse environmental and social impacts or reduce to acceptable levels. For all monitoring requirements, the technical parameters are defined along with the appropriate responsibilities and reporting procedures. Moreover,

a grievance mechanism for receiving and addressing all grievances, complaints, and comments related to the Subproject is set out in this ESMP.

The ESMP has identified mitigation measures and monitoring activities to reduce and avoid impacts and risks associated with the Subproject. A summary of the mitigation measures is given in **Table 4-2**.

KOSKİ is the owner of the proposed Subproject. During operation phase, an operator team assigned by KOSKİ, will ensure compliance of the national and international legislation.

A stand-alone Stakeholder Engagement Plan (SEP) has also been developed 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),
- Fundamental Conventions of the International Labour Organization (ILO) ratified by Türkiye,
- Council Directive 91/271/EEC concerning urban waste-water treatment

Table 1-1 outlines the relevance of the WB ESSs to the Subproject.

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

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 K.

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.

This ESMP was initially submitted on 07.10.2025 and has been updated as part of this report in line with revisions to the format and content requirements.

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 matrix 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 primary objective of the Kireli Wastewater Treatment Plant Project is to protect the water quality of Lake Beyşehir—a critical drinking water source and a sensitive ecological area—by treating domestic wastewater originating from Kireli, Çavuş, Tolca, Göçeri, and İlmen neighborhoods in Hüyük District. Although no new wastewater collector line will be constructed in İlmen Neighborhood under the Project, the neighborhood will continue to be served through its existing connection to the Çavuş sewer network. This initiative, under the responsibility of the KOSKİ General Directorate in accordance with Law No. 6360, aims to reduce public health risks and safeguard the region's ecological balance. The project is specifically designed to prevent the inflow of pollutants, particularly nutrients like nitrogen and phosphorus, to mitigate eutrophication risks in Lake Beyşehir, which is designated as a "Sensitive Area" under national regulations and subject to the Provisions Regarding Beyşehir Lake Special Environmental Protection Area.

Kireli WWTP Subproject is designed as an advanced biological wastewater treatment system with an additional final disinfection. The facility will be constructed in Konya Province, Hüyük District, within the boundaries of Kireli Neighborhood, on Block 216, Parcel 32, covering a total area of 5,006.11 m². An existing reinforced concrete structure belonging to a previously initiated but unfinished Wastewater Treatment Plant (WWTP) is present on the site, and this structure will be demolished within the scope of the Subproject, with the new WWTP to be constructed in its place. The WWTP will have a daily capacity of 800 m³ for Phase 1 with a design target year of 2048, and it is expected to serve a population of 7,585. The resulting raw sludge, estimated at approximately 15 tons/day, will be transferred to the sludge handling line within the WWTP, where it will undergo thickening and dewatering to produce approximately 1.47 tons/day of sludge cake with a dry solids content of 22 by centrifugal decanter. The resulting sludge cake will be temporarily stored on site under controlled conditions and then transported to Konya WWTP for further treatment, disposal and/or reuse, subject to compliance with applicable national regulations and sludge quality standards.

For the wastewater collection system, dedicated collector lines will be constructed to convey wastewater from the service areas to the treatment plant. A 4,871-meter-long collector line will be constructed to convey wastewater from Göçeri Neighborhood directly to the wastewater treatment plant. This line will consist of 4,162 meters of 200 mm diameter and 709 meters of 400 mm diameter corrugated pipes. The 300 mm diameter collector line with a total length of 5,142 meters that will convey wastewater from Çavuş Neighborhood will be connected to the existing Kireli wastewater collection infrastructure, from where the wastewater will be conveyed to the treatment plant.

Since an existing 4,045-meter wastewater collection line is already in place in Tolca Neighborhood, no new collector line will be constructed for this neighborhood. Similarly, in Kireli Neighborhood, an existing wastewater collection line with a total length of 2,552 meters is available, and therefore no additional collector line is planned. Likewise, no new collector line will be constructed for İlmen Neighborhood, as it is currently connected to the Çavuş Neighborhood sewer network. Wastewater generated in İlmen Neighborhood will continue to be conveyed to the Kireli WWTP through the existing sewer infrastructure. The discharge of the treated wastewater will be carried out to a dry creek bed via a discharge line to be constructed with an approximate length of 350 meters.

Access to the Subproject site will be provided via existing roads connected to the D350 highway (Konya–Beyşehir route), and no new road construction will be required.

In the Kireli Wastewater Treatment Plant, the immediate receiving body for the treated effluents is the dry creek bed, and the final receiving body is Lake Beyşehir. The discharge standards to be applied in the plant design have been determined by taking into account both national and international regulations. In particular, the Urban Wastewater Treatment Regulation, the Water Pollution Control Regulation, and the European Union Directive 91/271/EEC on Urban Wastewater Treatment have been considered.

Since the Kireli Wastewater Treatment Plant is located within the catchment area of Lake Beyşehir and operates under the Special Environmental Protection Provisions, the receiving body has been evaluated as a sensitive water body. Therefore, it has been deemed necessary that the treatment process applied in the plant should not be limited to secondary treatment only, but should be designed based on advanced biological treatment, including nitrogen and phosphorus removal.

The units included in the WWTP will consist of the following:

- o Inlet structure,
- o Basket screen,
- o Inlet pumping station,
- o Packed grit chamber and fine screen unit,
- o Biological phosphorus removal tanks,
- o Aeration tanks,
- o Final sedimentation tanks,
- o Disinfection unit,
- o Effluent flowrate measurement structure,
- o Sludge dewatering unit,
- o Operation Building.

The flow chart of the units is presented in Figure 3-2. Detailed technical information about the units is provided in Section 3.2.2. Additional information on the construction and operation phase activities and facilities, as well as Associated Facilities (AFs), is provided in the subsequent sections of this Chapter.

Table 2-1. Key Technical Information on the Subproject

Component	Features
Drinking Water Supply	
Water Source for Drinking Water Supply System	N/A
Water Treatment Facilities	N/A
Treated Water Storage Facilities	N/A
Distribution System	N/A
Pumping and Lifting Stations	N/A
Others	N/A
Sanitation	
Sewerage	Construction of a new sewer collector network to collect domestic wastewater from Kireli, Çavuş, and Göçeri neighborhoods. - Type of sewer: Collector Network (collecting domestic wastewater to a central facility) - Length: 10 km - Diameter: Ø300 mm (from Çavuş to Kireli collector line) , 200 mm and 400 mm (from Göçeri to WWTP collector line) - Material: Corrugated sewer pipe - Primarily gravity-feed system designed to minimize pumping energy needs. - Pressure rating: N/A (Gravity lines) -
Wastewater Treatment Facilities	Construction of a new Advanced Biological Wastewater Treatment Plant (WWTP) using Simultaneous Nitrification–Denitrification (SNDN) process. - Process: Physical treatment (screening, grit removal) followed by Advanced Biological Treatment (Bio-P Tank for anaerobic phosphorus removal + Aeration Tank for

Component	Features
	nitrification/denitrification) and Final Sedimentation. Includes Disinfection (Chlorine Contact) before discharge. - Capacity: 800 m ³ /day (Phase 1, serving a population of 7,585). - Design Year: 2048. - Sludge Management: Sludge dewatering using a centrifugal decanter to produce sludge cake; disposed of at Konya WWTP. - Automation: SCADA system for continuous monitoring; VFDs (Variable Frequency Drives) on pumps/blowers for energy efficiency. - Reuse: Portion of treated effluent reused for on-site landscape irrigation and process cleaning.
Pumping and Lifting Stations	-Located at the inlet of the facility to lift incoming wastewater into the treatment units (Fine Screen/Grit Chamber)
Others	-Discharge Line: Construction of a discharge line (approximately 350 meters) to convey treated effluent to the dry stream bed (leading to Kireli Stream/Lake Beyşehir). - Demolition: Demolition of an existing, abandoned reinforced concrete structure on the site prior to construction. - Access: Use of existing D350 highway; no new access roads required. - Site Works: Fencing, security gate, and 21 m ² administrative/operation building

2.2. Subproject Location

The Subproject is located in Konya Province, Hüyük District, Kireli Neighborhood, Köroğlu Locality, on Block No. 216 and Parcel No. 32. The parcel has a total area of 5,006.11 m² and is registered as a wastewater treatment plant area. According to the title deed, the parcel is registered under the ownership of Konya Water and Sewerage Administration General Directorate (see Annex C). Information on the parcels overlapping with the Subproject is presented in Table 2-2.

The collector lines for the Kireli WWTP will be constructed along existing road alignments and public road corridors. The Göçeri–WWTP collector line will be approximately 4,871 m long, while the Çavuş–Kireli collector line will be approximately 5,142 m long. Existing wastewater collection lines in Tolca and Kireli will be utilized, and no new collector line construction is planned for these sections. Based on the current route information, no additional land acquisition, expropriation, or permanent land use restriction is anticipated for the collector lines.

The discharge line of the Kireli WWTP will be approximately 350 m long and will convey treated effluent to the designated dry creek bed. Based on the current design information, the discharge line is planned to follow public land and/or existing infrastructure corridors to the extent practicable, and no additional land acquisition is anticipated.

No new Energy Transmission Line (ETL) is planned for the Kireli WWTP. Electricity supply will be provided through the existing medium-voltage distribution network. The existing 50 kVA transformer will be replaced with a 160 kVA transformer to meet the operational power demand of the facility. This activity will be carried out within the existing KOSKİ-owned parcel and/or existing utility infrastructure, and no additional land acquisition or land use restriction is anticipated. The assessment will be updated if any additional energy infrastructure requirement arises during detailed design or implementation.

No additional land outside this parcel will be required for the WWTP facility. The coordinates of the site is provided in Annex B. Photographs of the site are provided in Annex E.

A map of the Subproject location, access roads, and collector lines is presented in Figure 2-1, the discharge line is shown in Figure 2-2.

Table 2-2. Parcels Overlapping with the Kireli Wastewater Treatment Plant Subproject

District	Neighborhood/Village	Block/ Parcel No.	Land Registry Type	Current Land Use
Facility A				
Hüyük District	Kireli Neighborhood	Block: 216 / Parcel: 32	Wastewater Treatment Plant Area	The site is not currently in use and is planned to be used as a wastewater treatment plant area.
Linear Subproject				

District	Neighborhood/Village	Block/ Parcel No.	Land Registry Type	Current Land Use
Facilities (e.g. Water Supply Network, Sewerage, etc.)				
Hüyük District	Çavuş to Kireli Collector Line	Public roads / Easement corridors	Public roads / Easement corridors	5142 m Sewer collector network
Hüyük District	Göçeri to WWTP Collector Line	Public roads / Easement corridors	Public roads / Easement corridors	4871 m Sewer collector network
Hüyük District	WWTP Discharge Line	Public land / existing drainage or infrastructure corridor	Public land / existing drainage or infrastructure corridor	Approximately 350 m discharge line to convey treated effluent from the WWTP to the designated dry creek bed. Based on the current design information, no additional land acquisition is anticipated.

The subproject area is located in a predominantly rural and agricultural setting. There are no major industrial zones in the immediate vicinity. However, the Fisheries and Aquaculture Facility is located approximately 400 meters away from the project site. The surrounding land is primarily used for agricultural activities (farming and livestock). No other commercial or industrial activities, previously operated or planned by public or private third parties, have been identified within the immediate Area of Influence (500m radius).

Figure 2-1. Map of Subproject Location

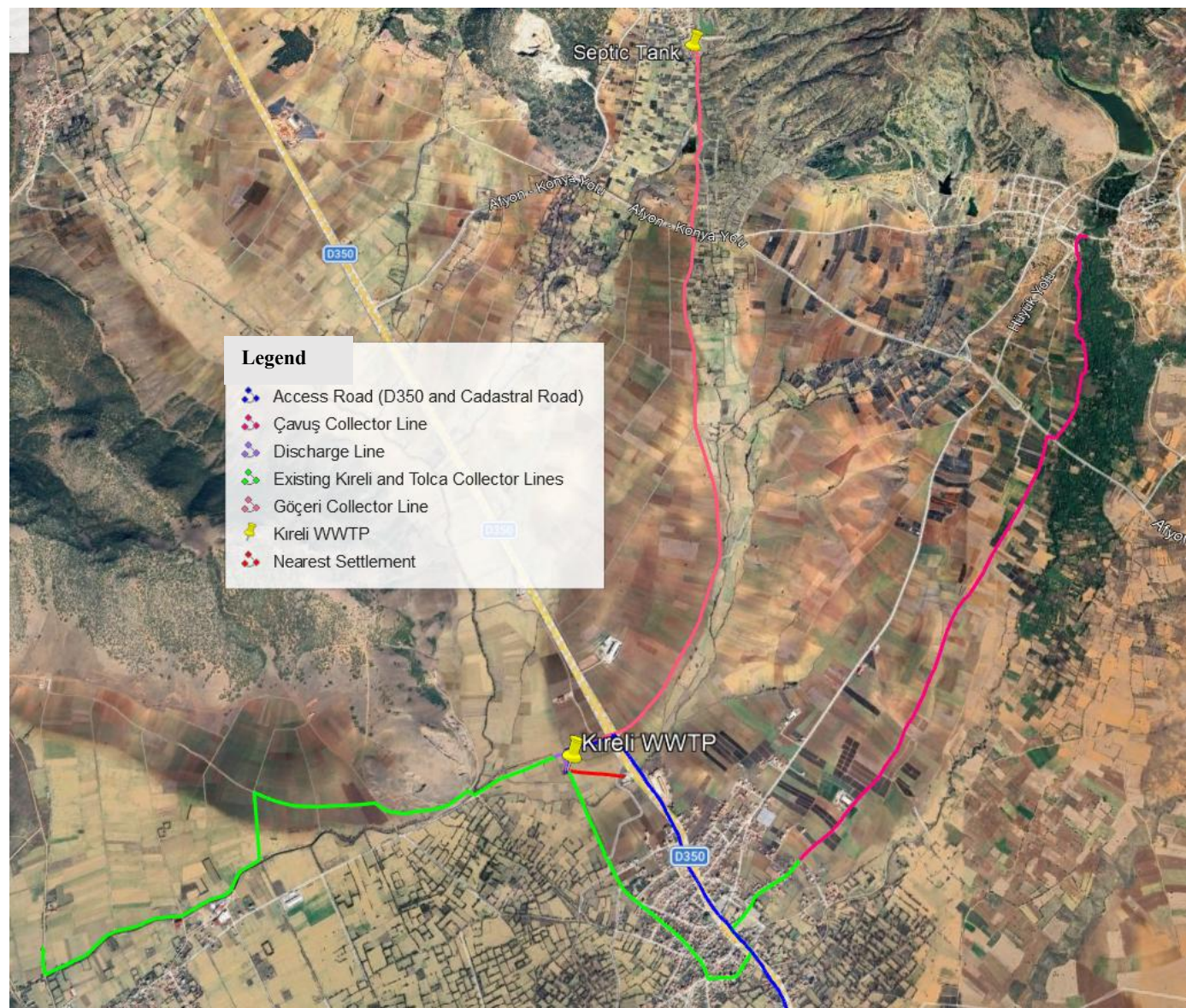
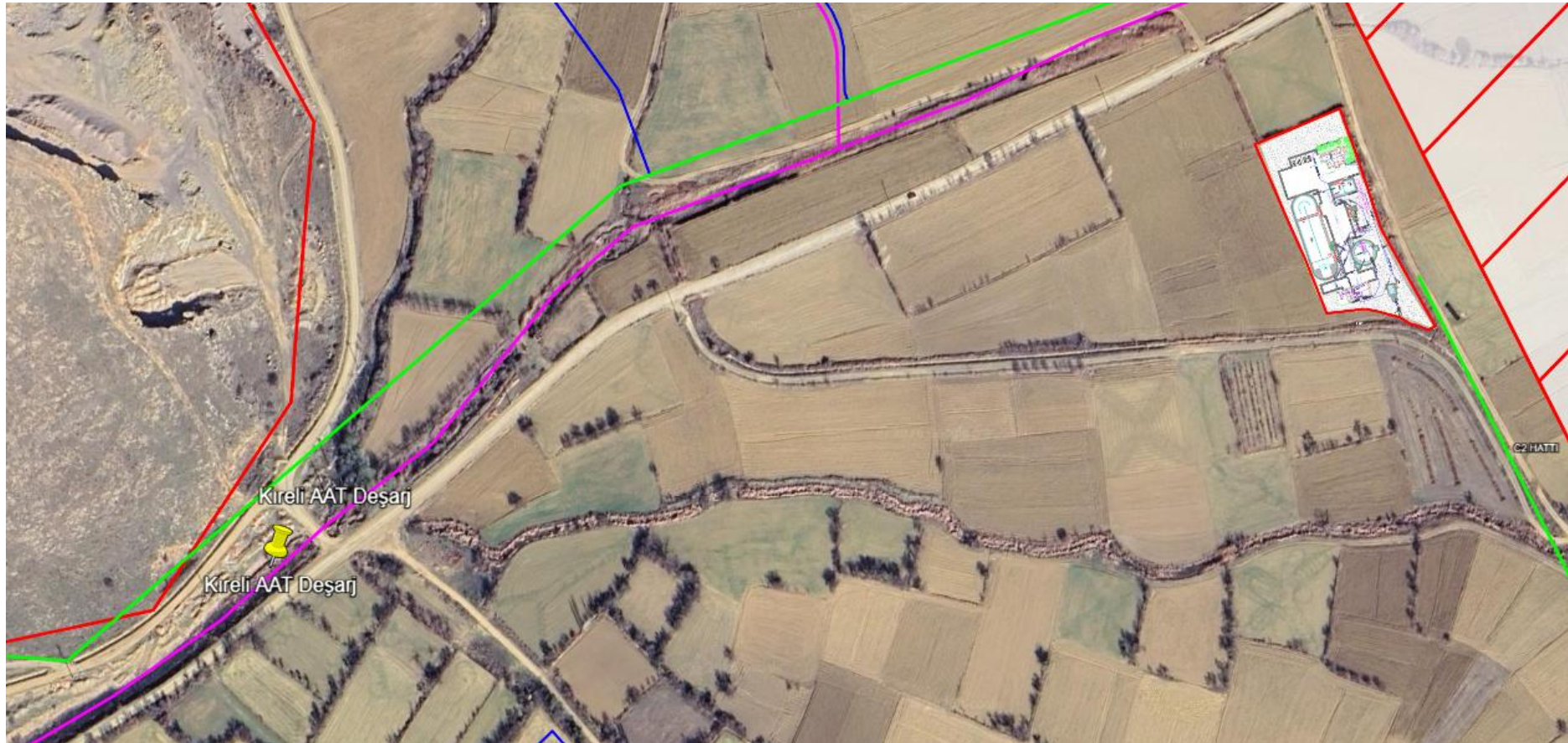


Figure 2-2 Discharge Line and its Location of Kireli WWTP



2.3. Site Access Route

Access to the Kireli WWTP site will be provided via the existing D350 (Konya-Isparta) Highway, which passes near the project area (see Figure 2-3). From the main highway, the site is reached through existing stabilized municipal roads and village tracks.



Figure 2-3 Main and Alternative Access Roads

Within the scope of the Subproject, no new permanent access roads will be constructed. The existing road network is sufficient for the transportation of construction machinery and materials. During the land preparation and construction phase, only minor leveling or temporary maintenance (such as gravel surfacing) of the existing dirt track leading to Parcel 32 may be required to ensure safe passage for heavy vehicles. For the linear components (sewerage and collector lines), the work will be carried out within the existing right-of-way of neighborhood streets; therefore, no new service roads are needed for the network installation.

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 project but is directly and significantly related to it, carried out or planned to be carried out contemporaneously, and necessary for the project to be viable.

Associated Facilities (AF) that are not funded as part of the Subproject are listed in Table 2-3.

The Kireli WWTP Subproject is designed as an integrated investment that encompasses both the construction of the Wastewater Treatment Plant (WWTP) and the installation of the entire sewerage collector network (10.013 m). Since both the treatment component and the collection system are funded under the same financing package and implemented simultaneously as parts of a single subproject, they are considered primary components rather than associated facilities.

Based on the assessment of the project's technical requirements, no third-party facilities (such as dedicated energy transmission lines requiring major new construction, separate access roads, or additional off-site treatment units) are needed for the viability of this Subproject. All necessary infrastructure for the functional operation of the system is included within the scope of the Subproject.

Existing regional infrastructure will be used for routine utility connections without requiring significant expansion or new construction by third parties.

No new energy transmission line (ETL/ENH) or off-site electrical infrastructure will be constructed for the electricity supply of the WWTP. The facility will be connected to the existing medium-voltage (MV) distribution network at a voltage level of 31.5 kV. In order to meet the operational power demand, only a capacity upgrade at the existing connection point will be implemented, which involves the removal of the existing 50 kVA transformer and its replacement with a 160 kVA transformer. Accordingly, no new transmission line, new distribution line, or any project-specific third-party energy infrastructure will be developed.

Since this arrangement relies entirely on the existing grid infrastructure and does not require the construction of new dedicated or third-party facilities, the electrical connection does not meet the definition of an “associated facility” under the World Bank Environmental and Social Framework (ESF). Therefore, it is considered a standard utility connection and forms an integral part of the Subproject.

The technical specifications of the connection, including the approved connection capacity (increase from 50 kVA to 160 kVA at 31.5 kV) and the official utility approval, are documented in the MEDAŞ Connection Opinion and Capacity Increase Approval (see Annex D).

The approved site layout and electrical network drawings confirming the use of the existing distribution line and the absence of any new transmission line construction are provided in the OG/AG Network and Transformer Layout Plans (see Annex M).

Table 2-3. 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.	
None / Not Applicable	No	No	No	All components (WWTP and collector network) are already included in the main Subproject scope.

2.5. Other Institutions’ Infrastructure to be Displaced

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 project area. However, confirmation of this status is awaited via official responses from the relevant institutions.

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

The Area of Influence (AoI) of the Sub-Project has been defined as a 500-meter radius around the WWTP site, taking into account the spatial extent of potential environmental and social impacts that may arise during the construction and operation phases. The location of the sub project at the national and provincial levels is presented in Figure 2-4.

Figure 2-5 illustrates the sub project's potential Area of Influence (500-meter radius) together with the closest settlement area. During the determination of the Area of Influence, attention was given to the presence of sensitive receptors such as educational facilities, health services, places of worship, and residential areas. Based on the spatial assessment presented in Figure 2-5, no sensitive receptors are located within the defined 500-meter AoI boundary. The nearest settlement to the Subproject site is Kireli Neighbourhood. The Area of Influence (AoI) of the Subproject includes the wastewater treatment plant site located in Kireli Neighbourhood, the wastewater collector line routes extending through Kireli, Çavuş, Tolca, and Göçeri neighbourhoods, the discharge line, existing access roads to be used during construction, and the surrounding receptors that may be affected by construction and operation activities.

Although Çavuş, Tolca, and Göçeri neighbourhoods are not located in the immediate vicinity of the WWTP site, they are included within the Subproject's AoI due to the presence of wastewater collector line routes. Although no new wastewater collector line will be constructed in İlmen Neighbourhood, it is also included within the AoI as a beneficiary settlement, as wastewater generated in the neighbourhood will continue to be conveyed to the Kireli WWTP through its existing connection to the Çavuş sewer network.

Accordingly, domestic wastewater generated in Kireli, Çavuş, Tolca, Göçeri, and İlmen neighbourhoods will be treated at the Kireli WWTP. Therefore, these settlements are considered relevant project-affected and beneficiary communities and are included in stakeholder engagement activities under this SEP. Sensitive receptors and stakeholder-related receptors located within the vicinity of the Subproject area and along the associated infrastructure routes are identified in Figure 2-5. These include:

- Kireli Şehit Kadir Kayhan Primary and Secondary School,
- Kireli High School,
- Kireli Family Health Center,
- Yeni Mosque and Yunus Emre Mosque,
- Privately owned agricultural lands,
- Seafood processing facility operating in Kireli Neighbourhood,
- Çavuş Village Cemetery,
- Prayer room located in Göçeri Neighbourhood,
- Callut Agriculture, Tourism and Aquaculture facility in Tolca Neighbourhood.

Access to the Subproject site will be provided through the existing local road network. The site is located in Kireli Neighbourhood and can be accessed via existing public roads currently serving the surrounding agricultural lands and settlement areas. No new access road construction is envisaged within the scope of the Subproject.

During the construction phase, machinery, equipment, and material transportation will utilize the existing road network. In addition, construction activities related to the collector lines may cause temporary and localized disturbances along the existing road corridors in Kireli, Çavuş, Tolca, and Göçeri neighbourhoods. These impacts are expected to be short-term and limited to construction areas.

Relevant traffic management, road safety, and community health and safety measures will be implemented in accordance with the ESMP. These measures will include traffic planning, speed limits, warning signs where necessary, coordination with local authorities and mukhtars, and timely information disclosure to local communities regarding construction-related traffic movements.

No permanent widening, modification, or realignment of existing roads is planned under the Subproject. Any minor temporary arrangements required during construction will be implemented in coordination with the relevant local authorities and will be reinstated upon completion of the works.



Figure 2-4 Display of Konya Province on the Map of Türkiye

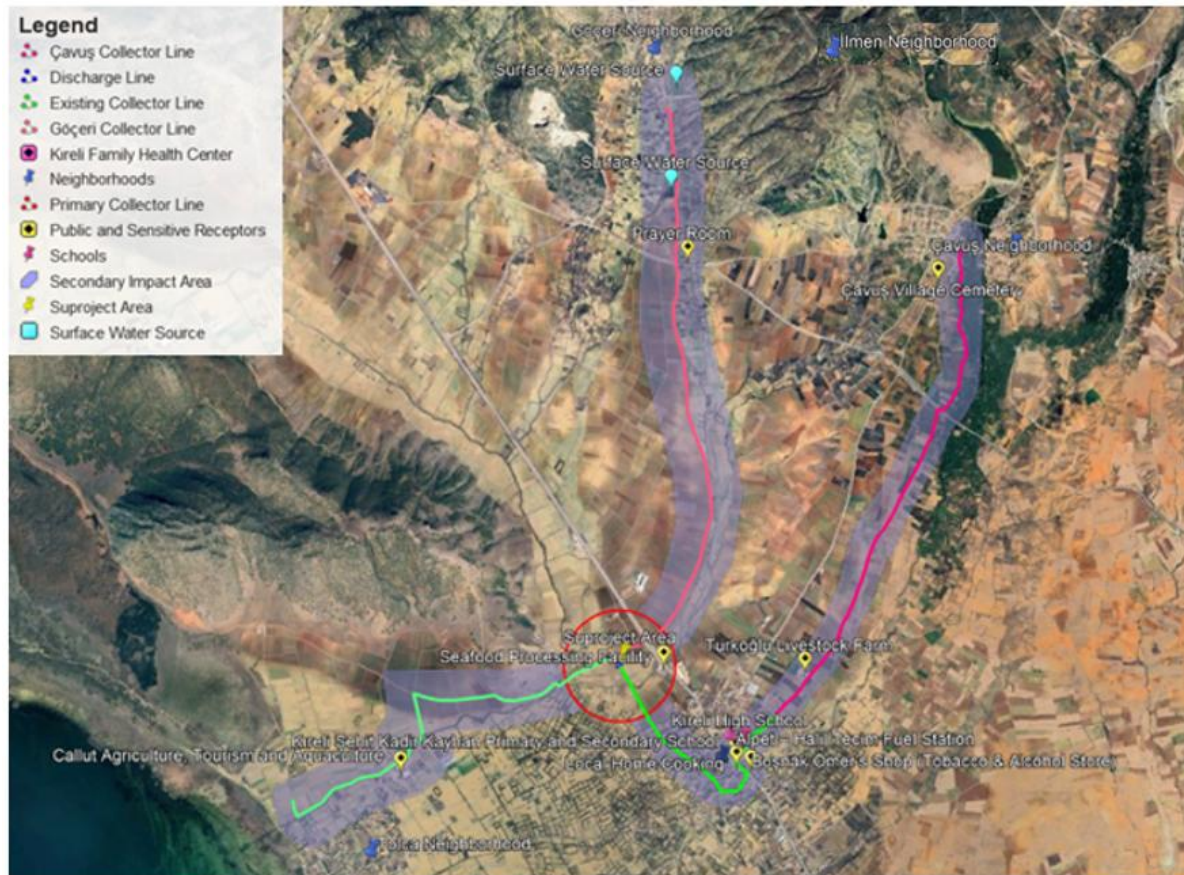


Figure 2-5 Project Potential AoI

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 2-4 presents a summary of the baseline field studies conducted as part of the ESMP study.

Table 2-4. 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 Beyşehir Lake basin, which is characterized by a closed-basin geomorphology. Across Konya Province, the dominant landforms consist of plains and plateau systems. Basin floors are generally flat to gently sloping, while higher elevations are mainly concentrated in the southern parts of the province.

Plateaus in the region are only slightly dissected by streams and present broad, gently sloping surfaces suitable for agricultural activities. The Beyşehir–Hüyük surroundings, where the Subproject is situated, are predominantly composed of low- to moderately sloped agricultural lands with mildly undulating terrain. Steep slopes, rugged mountainous formations, and significant topographic instabilities are limited¹.

Accordingly, topography-related natural hazard and construction risks are expected to be low within the Subproject area.

2.7.1.2. Geology

Konya Province is located between the Central Anatolian and Taurus tectonic units and exhibits a complex geological structure. Paleozoic and Mesozoic bedrock formations are widely observed across the region and are overlain by Tertiary and Quaternary sedimentary and volcanic deposits.

Within basin areas such as the Konya Plain and Beyşehir surroundings, thick alluvial deposits dominate the surface geology. These young sediments consist of lacustrine and terrestrial materials. From an engineering geology perspective, such formations may exhibit loose structure, compressibility, and susceptibility to deformation².

The locations of the faults in the Subproject area are presented on the map in Figure 2-6.

¹ Konya Provincial Disaster Risk Reduction Plan (İRAP), Module 1 – Natural Structure / Geomorphological Characteristics

² Konya Provincial Disaster Risk Reduction Plan (İRAP), Module 1 – General Geological and Hydrogeological Conditions

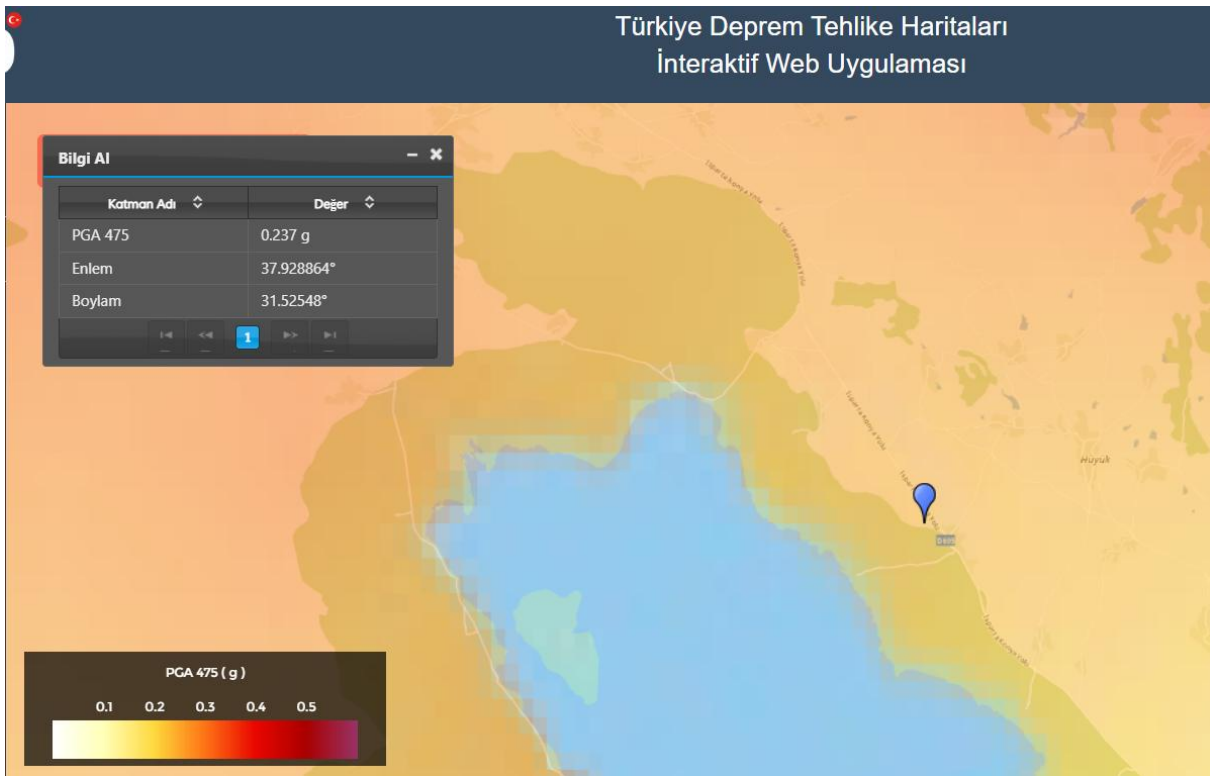


Figure 2-6. Earthquake Risk Map of Subproject Area

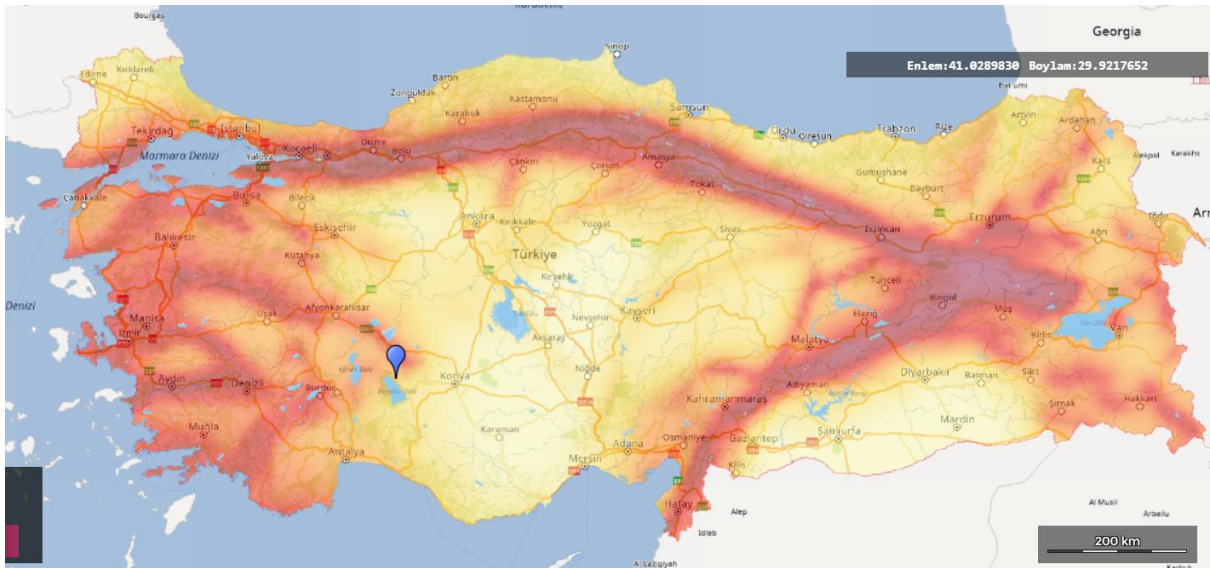


Figure 2-7. Active fault lines within the boundaries of the Subproject Area

Therefore, local ground conditions should be carefully considered during foundation design and construction planning.

2.7.1.3. Tectonics and Seismicity

According to the assessments provided in the Konya IRAP, the province is influenced by several active fault systems and is exposed to seismic hazard. Major regional seismic sources include:

- Akşehir Fault Zone
- Tuz Gölü Fault Zone
- Ecemiş Fault Zone

- Konya Fault Zone
- Normal faults bounding local graben structures

The Konya graben system and the Beyşehir Lake depression basin are directly controlled by these active tectonic structures. Consequently, the Subproject area is subject to regional seismic risk³.

In addition, due to the widespread presence of alluvial soils, secondary earthquake-related hazards such as ground amplification and soil liquefaction may increase potential damage levels. Therefore, seismic risks must be comprehensively considered during spatial planning, structural design, and construction phases.

2.7.1.4. Soil and Land Composition

The Konya Plain and Beyşehir surroundings are largely covered by Quaternary alluvial deposits. These young terrestrial and lacustrine sediments mainly consist of sand-, silt-, and clay-rich loose soils. While these soil types are generally suitable for agricultural use, they may present engineering challenges such as low bearing capacity, settlement potential, and increased liquefaction risk during seismic events.

The Subproject area and its immediate surroundings are predominantly composed of agricultural lands and rural settlements, with alluvial soils forming the main surface cover⁴.

2.7.1.5. Meteorology and Climatic Characteristics

Hüyük District and Kireli Neighborhood are located within the Konya Closed Basin and are influenced by a semi-arid continental climate regime. Summers are generally hot and dry, while winters are cold with occasional snowfall. Precipitation is irregular and mainly concentrated in the spring months.

Due to the proximity to Lake Beyşehir, relatively higher local humidity levels and more frequent fog formation may occur. In addition, the closed-basin topography limits air circulation, which further contributes to an increased number of foggy days. Low annual precipitation and high evaporation rates are the main climatic factors increasing drought risk in the area.

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 area⁵.

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 period⁶ is presented in the table below.

Table 2-5 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

³ Konya Provincial Disaster Risk Reduction Plan (İRAP), Module 2 – Earthquake Hazard and Risk Assessment / Active Fault Systems

⁴ Konya Provincial Disaster Risk Reduction Plan (İRAP), Module 1 – Geological Structure and Alluvial Deposits

⁵ Konya Provincial Disaster Risk Reduction Plan (İRAP) – Meteorological and Climatic Characteristics

⁶ Source: <https://www.mgm.gov.tr/veridegerlendirme/il-ve-ilceler->

Meteorological Parameters	January	February	March	April	May	June	July	August	September	October	November	December	Annual
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

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

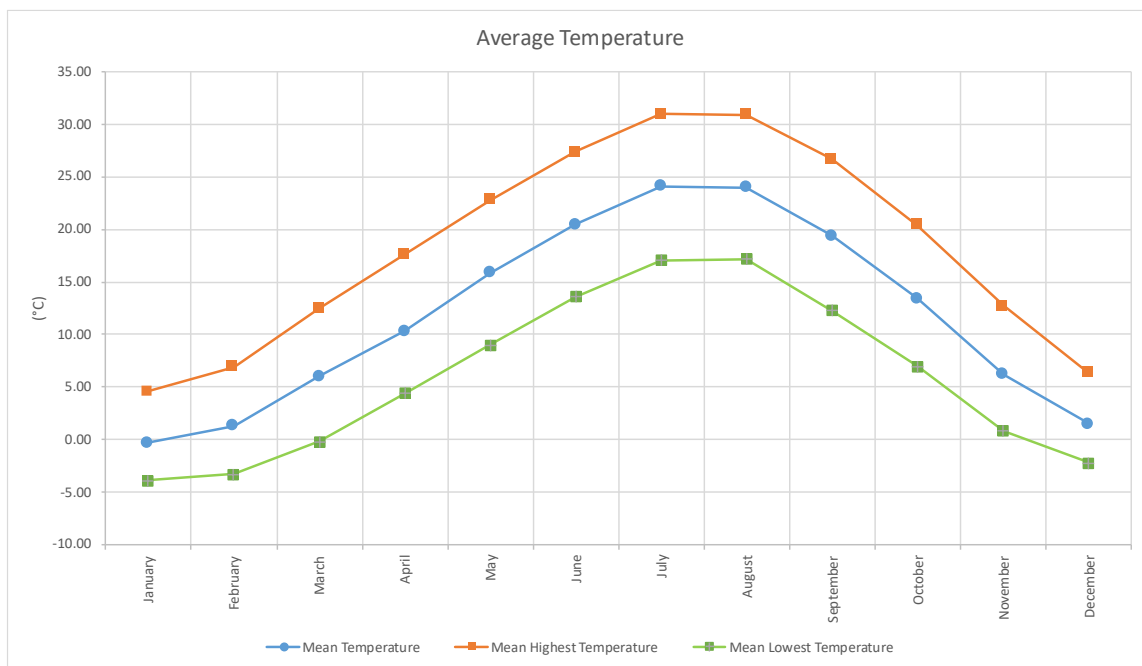


Figure 2-8 Average Temperatures

2.7.1.6. Air Quality

No site-specific ambient air quality measurements have been conducted within the Kireli WWTP area. However, the Subproject site is located in a predominantly rural and agricultural setting, with no major industrial zones or significant stationary emission sources in the immediate vicinity. The surrounding land is mainly used for agricultural activities, while a fisheries and aquaculture facility is located approximately 400 m from the WWTP site.

The primary Area of Influence does not include residential areas, educational facilities, or health facilities. The main receptors within the primary Area of Influence consist of the nearby fisheries and aquaculture facility and privately owned agricultural lands. Sensitive receptors such as schools, a family health center, mosques, residential areas, and small-scale commercial/agricultural facilities are located within the secondary Area of Influence along the collector pipeline routes.

Although access to the WWTP site will be provided via the existing D350 Highway and local stabilized roads, the area is not characterized by significant industrial or dense urban traffic-related emission sources. Therefore, baseline air quality conditions are considered to reflect typical background levels associated with low-density rural and agricultural settlements. Construction-related air quality impacts are expected to be temporary, localized, and manageable through the mitigation measures defined in the ESMP.

Since no baseline air quality measurements have been conducted directly at the Subproject 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 82 km east (92°C) of the Subproject site in Kireli District, were evaluated for the period between 26.07.2024 and 26.07.2025. The results of this assessment are summarized in Table 2-6. 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 2-6 Konya - Laboratory Air Quality Monitoring Station Measurement Results

Parameter	Annual (µg/m³)	Avg. Value	National Legislation (µg/m³)	Annual Limit Value	WHO Guideline (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 2-7. 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 Subproject site is generally characterized by low background air pollution levels.

Table 2-7 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 2-8 and Table 2-9:

Table 2-8 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	L _{Aeq} ,5min.	65 dB(A)	60 dB(A)	55 dB(A)
Workplaces(2)	L _{Aeq} ,5min.	Background + 5 dB(A)		Background + 3 dB(A)
In case of more than one workplace(3)	L _{Aeq} ,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 2-9 Noise Limit Values of WBG General EHS Guidelines (One-hour Leq-dBA)

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 Subproject 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 is located within the Konya Closed Basin, where surface water resources do not discharge to the sea and remain within the basin boundaries. The Subproject area lies within the Beyşehir Lake Basin, which represents the most significant surface water system in the region and constitutes a sensitive freshwater environment. Kireli WWTP is located approximately 4 km from the Lake.

In accordance with the official opinion letter obtained from the General Directorate of Water Management under the Ministry of Agriculture and Forestry (see Annex D), the Kireli WWTP is located within the Beyşehir Lake Basin and falls under the Special Environmental Protection Provisions of Lake Beyşehir. The Subproject area is located within the long-distance protection zone of the basin, and the final discharge point is associated with Beyşehir Lake Basin, which is identified as a nitrate-sensitive area.

Accordingly, the treatment plant design parameters for the Kireli WWTP, including total nitrogen (TN) and total phosphorus (TP) concentrations, have been determined based on population studies and in accordance with Table 2 of the Urban Wastewater Treatment Regulation and the basin-specific provisions. The Subproject has been designed to ensure compliance with sensitive area discharge standards and to prevent potential adverse environmental impacts arising from the collection, treatment, and discharge of domestic wastewater within the Beyşehir Lake Basin. Surface water resources in the Subproject area are mainly fed by seasonal precipitation and snowmelt, resulting in an irregular flow regime. Streams in the basin are generally seasonal and may dry up during summer months, while short-duration, high-intensity rainfall events in spring and autumn may cause temporary increases in surface runoff. Due to the closed-basin characteristics and increasing pressure from climate change and agricultural water use, protection of surface water quality is of critical importance (see Table 2-10).

The treated effluent from the Kireli WWTP will be managed in accordance with national legislation and relevant international guidelines, taking into account the sensitivity of the Beyşehir Lake Basin. The Subproject is expected to contribute positively to surface water quality by preventing the discharge of untreated domestic wastewater into the basin.

Table 2-10 Main Surface Water Bodies Relevant to the Kireli WWTP

Water Body	Type	Relevance to the Subproject
Beyşehir Lake	Freshwater lake	Main surface water body within the basin; environmentally sensitive receiving environment
Local drainage channels	Seasonal streams	Convey surface runoff from the Subproject area to the basin

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

The Subproject area is located in Kireli Neighborhood of Beyşehir District, Konya Province, within a predominantly rural setting characterized by gently sloping terrain and agricultural land use. Based on available topographical, hydrological, and climatic characteristics of the area, no significant natural hazards that could pose a high risk to the Subproject have been identified.

Flooding:

The Subproject area is not located within an officially designated floodplain and is situated at a relatively elevated position compared to Lake Beyşehir and its surrounding low-lying areas. There are no major rivers or permanent surface water bodies passing directly through the Subproject area. Therefore, the risk of large-scale flooding is considered low. However, localized surface runoff and temporary ponding may occur during periods of intense rainfall, particularly in areas with compacted soils or inadequate drainage. The opinion of the General Directorate of State Hydraulic Works (DSİ) has been obtained for the Kireli WWTP (Annex D). According to the DSİ opinion, the facility is required to be constructed at least 1.50 m above the natural ground level, and the planned facility ground elevation of 1,140 m has been considered appropriate. DSİ also states that no intervention should be made that may obstruct the free flow of water, narrow the creek bed section, or disturb the natural flow regime. In addition, no construction or excavated material shall be disposed of into the creek bed, and materials used or generated during construction shall be stored in suitable areas in a manner that prevents their transport to the creek bed by heavy rainfall or wind.

Accordingly, flood and surface water-related risks are expected to be manageable through compliance with DSİ requirements, appropriate site drainage, erosion and sediment control measures, proper material storage, and the implementation of all necessary technical measures against flood and surface water risks during construction and operation.

Landslides and Soil Instability:

The local topography is characterized by low to moderate slopes, with no steep escarpments or unstable geological formations observed within or near the Subproject area. The soil structure is generally composed of stable sedimentary materials, and no records of historical landslide events have been identified in the vicinity. Accordingly, the risk of landslides or slope instability is assessed as low.

Seismic Activity:

Beyşehir District is located in a region with moderate seismicity according to national seismic hazard classifications. While earthquakes constitute a regional natural hazard, the Subproject area is not situated directly on an active fault line. Seismic risks will be managed through the application of site-specific geotechnical assessments and the implementation of structural design measures in full compliance with the Turkish Seismic Code and other applicable national building regulations. Provided that these standards are applied, seismic risks are considered manageable for the Subproject.

Fire:

The Subproject area and its surroundings are dominated by agricultural lands and scattered rural vegetation, with limited forested areas in the immediate vicinity. As such, the risk of large-scale forest fires is considered low to moderate. Nevertheless, during dry and hot summer periods, there is a potential risk of grass or stubble fires. This risk can be mitigated through good housekeeping practices, controlled vegetation management, and emergency preparedness measures.

Overall, natural hazards in the Subproject area are considered to pose a low risk to the construction and operation phases of the Subproject. With the implementation of standard good international industry practices (GIIP) and site-specific 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-Subproject area and its immediate surroundings; to identify flora and fauna components; to examine the presence of endemic, rare, or threatened species; and to ensure that the identified biotic elements are evaluated within the framework of World Bank Environmental and Social Standard 6 (ESS6): Biodiversity Conservation and Sustainable Management of Living Natural Resources.

Within the scope of 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, where human activities have not substantially altered the area's primary ecological functions and species composition.

Critical habitats, on the other hand, are defined as areas of high biodiversity value that meet one or more of the following criteria:

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

The main objectives of ESS6 are to protect and conserve biodiversity and natural habitats, to apply the mitigation hierarchy in projects that may affect biodiversity, to promote the sustainable management of living natural resources, and to support the livelihoods of local communities through practices that integrate conservation requirements with development priorities.

The biodiversity and ecosystem assessment for the Sub-Subproject was conducted based on a predefined AoI established prior to the field studies. In accordance with the World Bank ESSs, environmental and social impacts arising from project activities are not limited solely to the project footprint but also include adjacent areas that may be environmentally affected. In this context, the term "Sub-Subproject area and its immediate surroundings" refers to the primary Area of Influence where potential impacts such as dust, noise, traffic, and habitat disturbance may occur.

Based on field surveys conducted by a biodiversity specialist, existing condition analyses, and desktop reviews of national biodiversity databases and IUCN sources, it has been determined that the Sub-Subproject area and the defined Area of Influence predominantly consist of areas that have largely lost their semi-natural character due to agricultural activities, human use, and infrastructure elements. The area exhibits a mosaic of fragmented habitats shaped by anthropogenic pressure and is considered to have low ecological value.

During the field surveys, no trees or woody vegetation elements were identified within the Sub-Subproject area. The project site is primarily characterized by open areas under agricultural use and ruderal herbaceous vegetation. The nearest tree-covered areas were identified outside the project site, particularly in the vicinity of the discharge point, and these areas do not fall within the boundaries of the Sub-Subproject area or the defined Area of Influence.

The existing concrete structure observed within the Sub-Subproject area and reported by local residents to belong to the municipality, together with its immediate surroundings, has been subjected to long-term human intervention and is therefore evaluated as an artificial and degraded environmental element lacking natural habitat functions. This structure and its surroundings do not play a critical role in terms of habitat continuity, ecological integrity, or sensitivity for biodiversity.

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

- (a) No habitats of significant importance for species classified as Critically Endangered (CR) or Endangered (EN) according to the IUCN Red List have been identified within the AoI. This conclusion is supported by field surveys and literature sources.
- (b) No habitats of known importance for endemic or restricted-range species have been observed. The flora within the AoI is predominantly composed of widespread, non-endemic species tolerant to human disturbance.
- (c) The AoI does not support migration corridors, stopover sites, or aggregation areas for migratory or congregatory species.

(d) No highly threatened or unique ecosystems are present within the AoI. Existing habitat types are common in the region and characterized by low ecological value.

(e) No critical ecological functions or features required to maintain the biodiversity values defined under items (a)–(d) have been identified within the AoI.

During the field surveys, no direct or indirect evidence was found indicating that the existing biotic or abiotic elements within the Sub-Subproject area and the AoI are used by protected, endemic, rare, or threatened species for breeding, feeding, or permanent shelter.

In conclusion, the Sub-Subproject area and the defined AoI are classified as “Modified Habitat” under ESS6 and do not meet the criteria for natural or critical habitats. The flora and fauna components within the area are predominantly composed of widespread species tolerant to human disturbance. It is not expected that the Sub-Subproject activities will result in significant, permanent, or irreversible impacts on biodiversity.

2.7.2.1. Legally Protected and Internationally Recognized Areas

An assessment of the presence of legally protected areas designated under national legislation (such as national parks, nature parks, strict nature reserves, wildlife development areas, wetlands, etc.) and nationally and internationally recognized areas (including Ramsar Sites, Important Nature Areas – INAs, Important Bird Areas – IBAs, Key Biodiversity Areas – KBAs, etc.) within the Sub-Subproject area and the defined Area of Influence (AoI) was conducted using official databases of relevant public authorities, up-to-date spatial datasets, available literature sources, and supporting desktop analyses. Within this scope, 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-Subproject area is located within the boundary of the Beyşehir Lake Wetland Buffer Zone. Buffer zones are defined as transitional areas intended to protect core wetland ecosystems from external pressures and do not constitute the core wetland ecosystem itself. While buffer zones contribute to maintaining the ecological integrity of wetlands, they do not necessarily exhibit the same ecological characteristics as core wetland areas.

Field surveys conducted within the buffer zone where the Sub-Subproject area is located indicate that the area has been under the influence of agricultural activities, infrastructure interventions, and human use for a prolonged period, has largely lost its natural character, and exhibits a significantly degraded ecological structure. Due to agricultural land use, existing road and fence lines, irrigation and drainage activities, and the presence of artificial elements (such as concrete structures), the project area does not contain hydromorphological features specific to natural wetlands, natural hydrological regimes, original vegetation communities, or sensitive ecological functions associated with wetland ecosystems. Accordingly, no natural wetland habitat characteristics were identified within the Sub-Subproject area or the defined Area of Influence.

The nearest area recognized at both national and international levels is the Beyşehir Lake Important Nature Area (INA), located approximately 3.24 km west of the Sub-Subproject area in straight-line distance. Although the Beyşehir Lake INA is an area of high biodiversity importance, there is no direct habitat continuity, ecological corridor, or hydrological connection between the Sub-Subproject area and this area. Existing land use patterns, topographic conditions, and anthropogenic interventions are considered the main limiting factors restricting ecological interaction between the project area and the INA.

Within the framework of World Bank Environmental and Social Standard 6 (ESS6), it has been concluded that no critical habitat is present within the Sub-Subproject area or the defined Area of Influence. In accordance with the criteria set out under ESS6, the project 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 project activities will result in significant indirect impacts on the core Beyşehir Lake wetland ecosystem or the Beyşehir Lake Important Nature Area through mechanisms such as dust, noise, surface runoff, traffic, or similar pathways. 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-Subproject area is located within the Beyşehir Lake Wetland Buffer Zone. Kireli WWTP is designed as an advanced biological wastewater treatment system with additional final disinfection, ensuring that the collected wastewater will be fully treated and the resulting sludge, estimated at approximately 15 tons/day, will be thickened and dewatered on site to dry solid content of 22%, then transported to Konya WWTP for further treatment, disposal and/or reuse, subject to compliance with national regulations and quality standards.

Based on existing environmental conditions, habitat characteristics, and the level of anthropogenic disturbance, the area does not meet the definition of natural habitat or critical habitat under ESS6. Accordingly, the Sub-Subproject is not expected to result in any significant direct or indirect adverse impacts on legally protected areas or nationally and internationally recognized ecological areas.

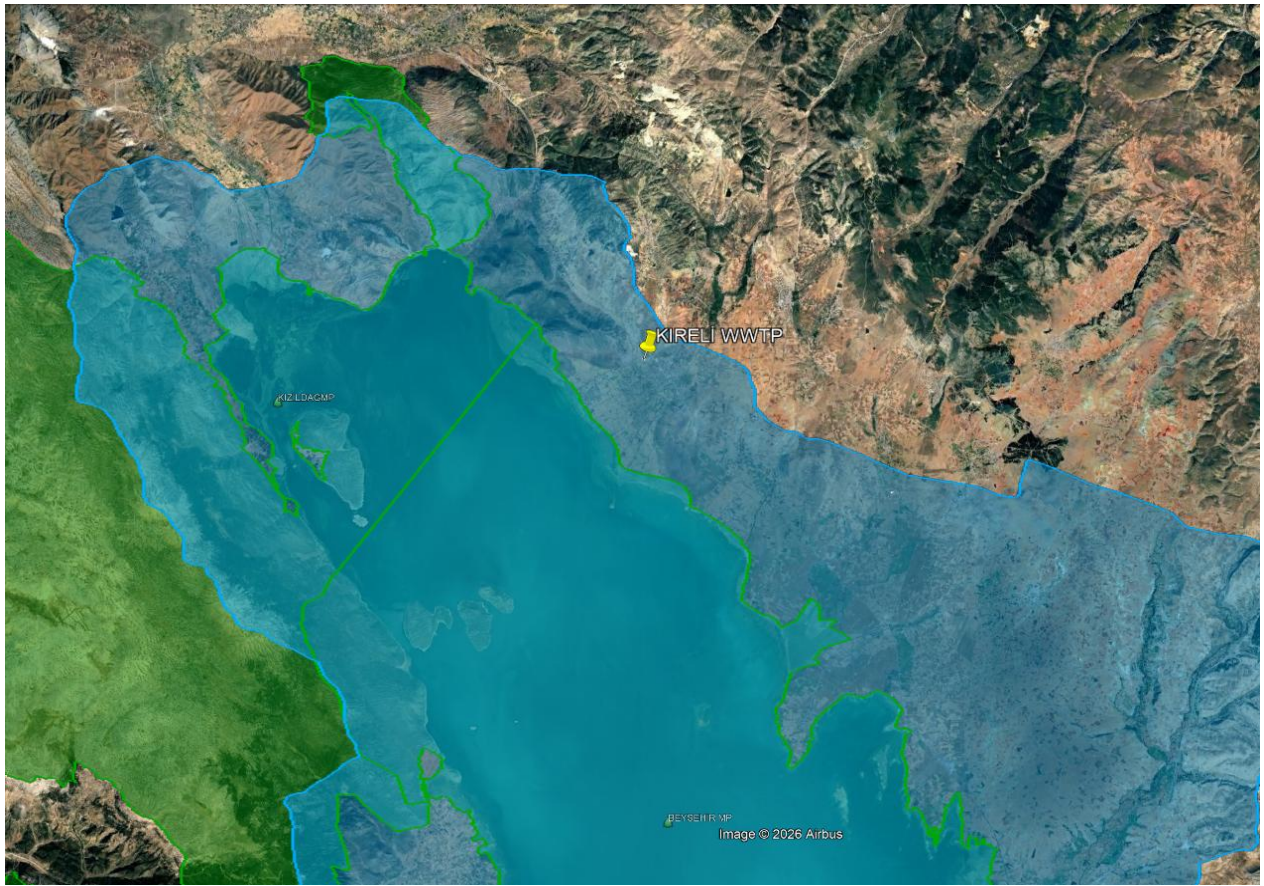


Figure 2-9. Image of the Nearest Legally Protected Area to the Subproject Area

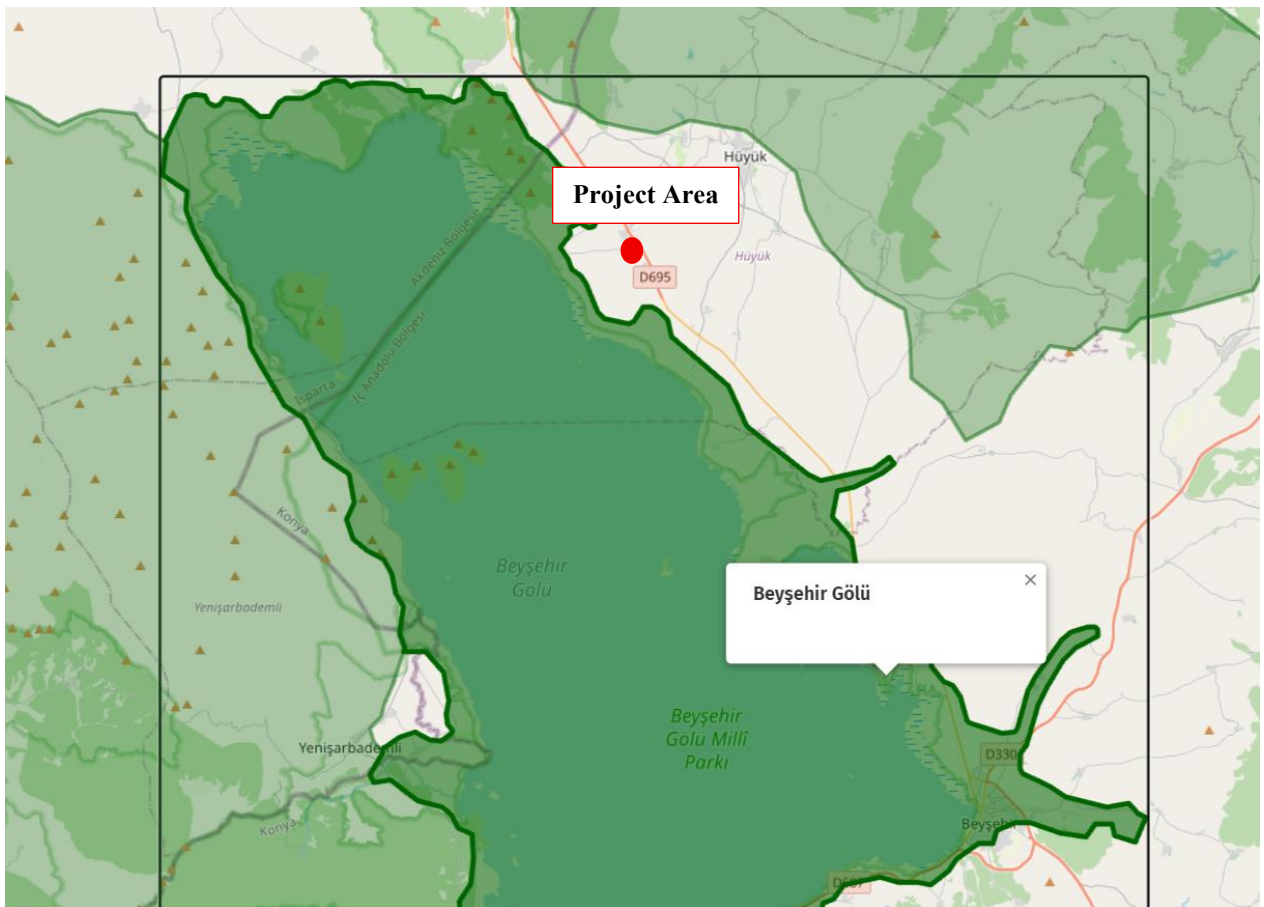


Figure 2-10. Image of the Nearest Internationally and Nationally Recognized Key Biodiversity Area to the Subproject Area

2.7.2.2. Habitats

Based on the field surveys conducted, existing condition analyses, and supporting desktop assessments, it has been determined that the Sub-Subproject area and the defined Area of Influence (AoI) predominantly consist of habitats that have been affected by human activities, have largely lost their semi-natural character, and have been modified.

During the field surveys, the project area and its immediate surroundings were observed to be characterized by areas influenced by agricultural activities, fragmented by temporary access roads and fence lines, and locally used for irrigation and drainage purposes. Across the area, no natural habitat continuity, structural diversity, or functional ecological corridors that would support ecological integrity were identified.

The dominant habitat structure within the Sub-Subproject area consists of:

- Open areas modified as a result of agricultural activities and human use,
- Ruderal and herbaceous vegetation developed around roads and facility surroundings,
- Areas exhibiting locally temporary moist conditions due to irrigation and drainage influences, but not possessing the characteristics of natural wetlands,
- Artificial elements such as the existing concrete structure stated to belong to the municipality and its immediate surroundings.

The aforementioned concrete structure and its surrounding area have been subject to long-term human intervention and are considered artificial and degraded environmental elements that do not provide a natural habitat function. This structure and its vicinity do not play a significant role in terms of habitat continuity or ecological integrity.

With these characteristics, the habitats within the Sub-Subproject area and the AoI are classified as “Modified Habitat” under the World Bank Environmental and Social Standard 6 (ESS6). No areas meeting the criteria of natural habitat or critical habitat as defined under ESS6 have been identified within the project area.

2.7.2.3. Species

2.7.2.3.1. Flora

Based on the field surveys conducted, existing condition analyses, and the evaluation of supporting secondary data sources, it has been determined that the dominant floristic structure within the Sub-Subproject area and the defined Area of Influence (AoI) consists of widely distributed, ruderal, and herbaceous plant species tolerant to agricultural activities. The long-term influence of human activities, the existing land-use pattern, and the fragmented nature of habitats are considered the main factors limiting floristic diversity within the area.

The vegetation observed during the field surveys exhibits a structure characterized by low density, largely single-layered composition, and a lack of ecological integrity and habitat continuity. The floristic composition is predominantly composed of herbaceous species commonly found in disturbed areas, agricultural field margins, roadside environments, and temporarily unused open lands.

The main herbaceous plant species observed or likely to occur within the Sub-Subproject area and the AoI are presented below with their Latin names:

- *Cynodon dactylon*
- *Bromus tectorum*
- *Chenopodium album*
- *Convolvulus arvensis*
- *Cirsium arvense*

The listed species are taxa with wide distribution across Türkiye, highly tolerant to anthropogenic disturbance, and commonly associated with agricultural and ruderal environments. These species are not endemic and are not classified as threatened under the IUCN Red List. They are not considered ecologically sensitive, rare, or of conservation priority.

No areas characterized by natural forest ecosystems, dense tree formations, or mature woody vegetation were identified within the Sub-Subproject area. No tree or shrub individuals were identified within the Sub-Subproject area during the field surveys. The nearest tree-covered areas are located outside the project boundaries, particularly in the vicinity of the discharge point, and therefore do not constitute part of the Sub-Subproject area or the defined Area of Influence.

Within this context, no tree cutting, removal, or transplantation is anticipated under the scope of the Sub-Subproject activities. The existing floristic structure does not meet the criteria for natural habitat or critical habitat as defined under the World Bank Environmental and Social Standard 6 (ESS6).

In conclusion, the Sub-Subproject area is characterized by low floristic diversity and is dominated by degraded, human-adapted herbaceous species. Accordingly, no significant or irreversible impacts on flora are expected as a result of the project activities. Therefore, no additional protection measures, species-specific monitoring programs, or special mitigation actions are required with respect to flora.

2.7.2.3.2. Fauna

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

During the field surveys, not only direct wildlife observations but also indirect indicators of presence such as hair, feathers, feces, footprints, nest remnants, soil burrows, and similar signs were systematically assessed; through these indicators, the presence of species or their potential habitat use was interpreted within an ecological context.

As a result of the field studies, no direct or indirect evidence of significant fauna presence, active nesting, breeding, or long-term sheltering activity was recorded within the Sub-Subproject area and the AoI. The long-term exposure of the area to agricultural activities and human use, the fragmented structure of habitats, and the weak ecological connectivity significantly limit faunal diversity.

There are no densely wooded areas, multi-layered vegetation, or vertical habitat structures within the project area. This condition 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 herbaceous character of the existing vegetation further limits sheltering, hiding, and foraging opportunities for fauna.

The existing concrete structure located within the Sub-Subproject area, which is reported to belong to the municipality, and its surroundings were evaluated during the field surveys. This structure has been exposed to anthropogenic influence for a long period and is considered an artificial environmental element lacking natural habitat functions. Although local residents reported that snakes may inhabit this structure or its vicinity, no snake observations, shed skins, feces, or other indicators of active use were recorded during the field surveys. Therefore, the structure and its immediate surroundings are not considered to constitute a permanent, intensive, or sensitive fauna use area.

The soil surface burrows and cavities observed during the field surveys were evaluated as microhabitats that may have been temporarily used 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 density or biologically significant fauna use within the area.

No natural wetland ecosystem is present within the Sub-Subproject area. However, temporary moist areas and surface water accumulations associated with irrigation and drainage activities may be used on a limited and temporary basis by some common and human-tolerant bird species. This use is considered irregular and short-term, and it has been concluded that no aquatic habitat with permanent nesting, breeding, or colonization functions exists within the area.

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

Furthermore, no fauna use areas considered sensitive under the World Bank Environmental and Social Standard 6 (ESS6), such as migration corridors, aggregation areas, breeding sites, or nursery areas, were identified within the Area of Influence.

In conclusion, the Sub-Subproject area is characterized by limited species diversity, temporary and low-intensity fauna use, and degraded habitat conditions, and it is not expected that project 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 the presence of invasive alien species within the Sub-Subproject area and the defined Area of Influence (AoI) was carried out based on field surveys conducted by biodiversity specialists, national biodiversity databases of the Ministry of Agriculture and Forestry, available literature, and supporting desktop analyses. In this context, literature review and data screening were also conducted using the Türkiye Invasive Alien Species Information System (TURİST) operated by the Ministry of Agriculture and Forestry (<https://turist.tarimorman.gov.tr/Map>).

During the field surveys, not only live individuals but also indirect indicators of presence such as tracks, nests, remains, feces, feathers, shed skins, and similar signs were systematically evaluated; however, no evidence indicating the permanent or temporary presence of invasive alien species within the Sub-Subproject area or the AoI was identified.

As a result of the assessments, no direct or indirect records indicating the presence of any flora or fauna species classified as Invasive Alien Species (IAS) were obtained within the Sub-Subproject area and the AoI boundaries. The long-term exposure of the area to agricultural activities and human use, together with the fragmented and degraded habitat structure and the lack of natural ecosystem continuity, do not provide suitable conditions for the establishment of invasive alien species.

Although it is known that some invasive alien species recorded in national databases, particularly fish species associated with aquatic ecosystems, may occur at certain distances from the Sub-Subproject area, there is no direct hydrological connection, habitat continuity, or ecological corridor linking these species to the project area. The absence of a natural and permanent aquatic habitat within the Sub-Subproject area, combined with the temporary nature of existing surface water accumulations, makes the access to or establishment of invasive aquatic species within the area ecologically unlikely.

Within this framework, no direct or indirect interaction, spread risk, or adverse impact mechanism is anticipated between the Sub-Subproject activities and invasive alien species. Under the existing conditions, no additional monitoring, control, or management measures related to invasive alien species are required.

2.7.2.5. Ecosystem Services

World Bank Environmental and Social Standard 1 (ESS1) emphasizes the importance of identifying and analyzing biodiversity and ecosystem services within the scope of environmental and social risk and impact assessments. Accordingly, as part of the biodiversity assessment carried out for the Sub-Subproject, ecosystem components, habitat characteristics, species presence, and ecosystem services within the defined Area of Influence (AoI) that could potentially be affected by project activities were evaluated.

Within this framework, ecosystem services were assessed under the categories of provisioning, regulating, cultural, and supporting services as defined in World Bank Environmental and Social Standard 6 (ESS6). The assessment was supported by field surveys, review of satellite imagery, national biodiversity data sources, and desktop analyses based on literature review.

Provisioning Services

As a result of the assessments, no provisioning ecosystem services based on natural resources directly used or economically utilized by local communities (such as fuelwood, drinking and domestic water, fisheries, or medicinal and aromatic plants) were identified within the Area of Influence. The existing land use pattern, dominance of agricultural activities, and degraded habitat conditions of the area are not suitable for the provision of such services.

Regulating 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 Area of Influence. Surface moisture areas and temporary water accumulations associated with existing irrigation and drainage activities do not possess natural wetland functions and therefore lack the capacity to deliver regulating services. The topographic structure, hydrological characteristics, and current land use pattern of the area do not support the active provision of regulating ecosystem services.

Cultural Services

No evidence was found indicating that the Area of Influence is used for recreational, tourism, aesthetic, spiritual, or cultural purposes. The area does not hold significance in terms of cultural ecosystem services with respect to accessibility, landscape value, or existing usage patterns.

Supporting Services

Due to the degraded and fragmented nature of habitats, low floristic and faunal diversity, and the lack of continuity in ecological processes, no functional supporting ecosystem services—such as pollination, provision of natural breeding or nesting areas, support to food webs, or biological productivity—were identified. Field data indicate that the Area of Influence does not possess the ecological capacity required to provide such services.

Overall Assessment

In conclusion, no ecosystem services defined under ESS6 that could be directly or indirectly affected by the Sub-Subproject activities were identified within the Area of Influence. Therefore, the Sub-Subproject is not expected to result in significant, permanent, or irreversible impacts on ecosystem services, and no additional management or mitigation measures are required under this heading.

2.7.3. Socio-Economic Environment

The socio-economic baseline of the Subproject area reflects a predominantly rural settlement structure. At earlier planning stages, the wastewater treatment plant was envisaged to serve the neighbourhoods of Kireli, İlmen, Pınarbaşı, and Değirmenaltı, and these settlements were therefore considered within the broader stakeholder framework. However, based on the updated technical design and service coverage, the beneficiary settlements have been revised. Accordingly, the Area of Influence is defined as Kireli Neighbourhood, while the Area of Influence comprises Tolca, İlmen, Göçeri and Çavuş neighbourhoods only.

Kireli Neighbourhood has a seasonally fluctuating population of approximately 6,500 in summer and 2,000 in winter, while Göçeri İlmen and Çavuş neighbourhoods together have a combined population of approximately 2,495 people. Livelihoods across the Area of Influence are mainly based on agriculture, livestock breeding, and pension income, with limited non-agricultural employment opportunities and no significant unemployment reported. İlmen Neighbourhood, livelihoods are similarly based on agriculture, pension income, and limited livestock breeding.

Land ownership within the Subproject area is formal, with the wastewater treatment plant located on a publicly owned parcel, and surrounding areas consisting primarily of privately owned agricultural lands. No education or health facilities are located within the Area of Influence; the only identified receptor in this area is a seafood processing facility, together with privately owned farmland. Schools, a family health center, mosques, residential areas, and other sensitive receptors are located within the Area of Influence, along the collector pipeline routes.

Infrastructure services currently include water supply and solid waste management, while no centralized sewerage system exists under baseline conditions. Transportation relies on the existing rural road network, with generally low traffic volumes. No tangible or intangible cultural heritage assets are located within the Subproject footprint, and the nearest known heritage site, Eflatunpınar (Hittite Water Monument), is located approximately 17.4 km from the project area. Vulnerable groups identified within the Area of Influence include low-income households, elderly individuals, female-headed households, and unemployed persons, as summarized in the relevant tables.

2.7.3.1. Demography and Population

Konya Province

Konya is the largest province in Türkiye in terms of land area, covering approximately 38,257 km². According to the latest TurkStat data (2024), the provincial population is about 2.3 million, with a near-balanced sex ratio (~50% female / 50% male) and a population density of around 59 persons/km². The demographic profile reflects a mix of urban and rural settlements, with livelihoods shaped by agriculture, trade, and services.

Hüyük District

Hüyük is one of the rural districts of Konya Province, located northwest of Lake Beyşehir. The district has a total population of approximately 15,000 people and a relatively low population density compared to provincial averages. Agriculture and livestock breeding are the predominant livelihoods, and the demographic profile is characterized by a rural population with limited industrial activities.

Kireli Neighborhood

According to information provided by the neighborhood mukhtar, Kireli has a population that varies seasonally, reaching approximately 6,500 in summer and dropping to about 2,000 in winter.

In addition to Kireli Neighborhood, which constitutes the Area of Influence of the Subproject, the WWTP will also collect and treat wastewater from the nearby neighborhoods of Tolca, Göçeri, and Çavuş. These neighborhoods together form the Area of Influence, with a combined population of approximately 1,449 people (see Table 2-11).

Table 2-11 Population Indicators for the Area of Influence

Location	Female	Male	Total
Kireli Neighbourhood	819	786	1,605
Çavuş Neighbourhood	299	261	560
İlmen Neighbourhood	390	348	738
Göçeri Neighbourhood	220	214	434
Tolca Neighbourhood	257	244	501
Hüyük District	7,682	7,351	15,033
Konya Province	1,172,944	1,157,080	2,330,024

2.7.3.2. Land Ownership Status and Land Use by Affected People

The Subproject area is located entirely within a formally registered parcel that was purchased from Hüyük Municipality and transferred to the ownership of the KOSKİ General Directorate in 2017. The parcel is publicly owned and has been allocated for the construction of a new wastewater treatment plant under the Subproject. Based on field observations and desk-based studies, no informal land users, tenants, or third-party uses were identified within the boundaries of the project parcel.

Areas Previously Affected by Existing Infrastructure

There is currently no operational wastewater treatment facility within the project parcel, and the site has not previously been used for wastewater infrastructure purposes. Therefore, the project parcel itself does not constitute an area that has already been affected by existing wastewater infrastructure.

Under the Subproject, only a potential relocation and/or renewal of an existing 50 kVA transformer pole is foreseen, in line with the opinion of MEDAŞ. This activity will be carried out entirely within the boundaries of the existing KOSKİ-owned parcel and will not require any additional land acquisition, land use restriction, or use of privately owned land.

Areas Potentially Affected for the First Time

The collector pipelines to be constructed under the Subproject will be installed along existing road alignments and within public road corridors, as presented in Section 2.6. While these areas are already designated for public transportation and utility use, they may be affected for the first time by wastewater infrastructure construction activities.

All works related to the collector lines will be confined to public road areas. Accordingly, no permanent or temporary land acquisition, expropriation, or negotiated settlement involving privately owned parcels is anticipated.

Ownership and Use of Adjacent Parcels (Formal and Informal Users)

The wastewater treatment plant parcel is surrounded by privately owned parcels predominantly used for agricultural purposes, reflecting the general land use characteristics of the region. These parcels are located outside the project boundaries and will not be subject to land acquisition, land use restrictions, or physical displacement.

Field surveys and desk-based assessments did not identify any informal land use, informal economic activities, or unauthorized occupation within the project area of influence. Agricultural activities are carried out by the formal landowners or their authorized users.

Temporary Economic Impacts, Communication, and Grievance Mechanism

No permanent income loss or livelihood impact resulting from land acquisition or land use restrictions is anticipated under the Subproject. However, during the construction phase, temporary and localized economic disturbances—such as short-term access limitations to adjacent agricultural parcels, dust generation, noise, or construction-related nuisance—may theoretically occur.

To effectively manage such potential impacts, communication and stakeholder engagement will be treated as a key element of project implementation. Engagement with landowners and land users in the project area and its vicinity will be conducted primarily through stakeholder consultation meetings organized via the neighborhood mukhtar, who will serve as a key local point of contact.

During these meetings, stakeholders will be informed about the construction schedule, work areas, potential temporary impacts, access arrangements, and mitigation measures. In addition, the active and effective use of the Subproject Grievance Mechanism will be emphasized, and all available grievance submission channels will be clearly communicated to stakeholders.

Through this approach, stakeholder feedback will be collected in a timely manner, potential grievances will be addressed at an early stage, and temporary impacts will be effectively managed in line with the Stakeholder Engagement Plan and the Subproject Grievance Mechanism.

At this stage, as all Subproject activities are planned within publicly owned road corridors and the KOSKİ-owned parcel, no additional land acquisition-related environmental or social instruments are required.

2.7.3.3. Employment and Means of Livelihood

The primary sources of livelihood in Kireli Neighbourhood, located within the Area of Influence of the Subproject, are agriculture and livestock breeding. Economic activities in the settlement are predominantly household-based, and income generation shows a seasonal pattern linked to crop cultivation cycles and livestock breeding activities. Stakeholder consultations conducted within the scope of the Stakeholder Engagement Plan indicate that agricultural production constitutes the main livelihood activity, while livestock breeding plays a complementary role in supporting household incomes.

In addition to agricultural activities, pension income represents an important and regular source of livelihood for households in the neighbourhood. Furthermore, a limited number of households are engaged in small-scale fishing activities, which contribute modestly to household incomes. According to information obtained through consultations with the neighbourhood mukhtar, the average household income level in Kireli is reported to be above the national minimum wage, and no significant unemployment has been identified within the settlement (Source: Mukhtar consultations, 2025).

Employment opportunities within the neighbourhood are largely associated with agricultural and livestock-related activities, while non-agricultural employment options remain limited. Wage-based employment is generally temporary or seasonal in nature, and access to regular and permanent employment is more commonly achieved outside the neighbourhood, particularly in the Hüyük District center and nearby settlements.

Based on project planning information, it is envisaged that approximately 15 people will be employed during the construction phase of the Subproject and approximately 5 people during the operation phase. These figures are provided for descriptive purposes to outline the employment structure associated with the Subproject and do not alter the existing livelihood patterns in the neighbourhood.

Within the Area of Influence, comprising the neighbourhoods of Tolca, Göçeri, İlmen and Çavuş, livelihoods are also primarily based on agriculture, livestock breeding, and pension income. According to information obtained from consultations with the mukhtars of these settlements, livestock breeding plays a more prominent role in household livelihoods compared to Kireli Neighbourhood, while crop cultivation and animal husbandry constitute the main means of subsistence. Pension income provides a stable and regular financial basis for households and supports the overall livelihood structure in these settlements (Source: Mukhtar consultations, 2025).

2.7.3.4. Education and Health Services

Within the scope of the Subproject, the Area of Influence is defined as a 500-meter radius circular area surrounding the wastewater treatment plant site. There are no facilities providing education or health services located within this area. The only identified receptor within the Area of Influence is a seafood processing facility operating within the administrative boundaries of Kireli Neighbourhood. Due to its proximity to the settlement area, this facility is classified as a receptor associated with economic activities.

In addition, the Area of Influence includes numerous privately owned agricultural lands (farmland). These areas are predominantly used for crop production and constitute rural land uses associated with local livelihood activities. For the spatial distribution of receptors and satellite imagery, see Figure 2-5.

The Area of Influence of the Subproject is defined as a corridor extending 250 meters on both sides of the collector pipeline routes. This area covers the linear infrastructure alignments located within Kireli Neighbourhood as well as Tolca, İlmen, Göçeri and Çavuş neighbourhoods, together with the surrounding settlement areas adjacent to these routes.

The education, health, and other public/sensitive receptors located within the Area of Influence include:

- Kireli Şehit Kadir Kayhan Primary and Secondary School,
- Kireli High School,
- Kireli Family Health Center,
- Yeni Mosque and Yunus Emre Mosque,
- Çavuş Village Cemetery,
- Residential areas located within settlement boundaries,
- Privately owned agricultural lands (farmland),

- A limited number of small-scale commercial units and agricultural/livestock facilities (e.g., Türkoğlu Livestock Farm).
- Surface Water Source
- Prayer Room in Göçeri Neighborhood
- Callut Agriculture, Tourism and Aquaculture in Tolca Neighborhood

There are no actively operating educational institutions or health facilities in Göçeri, İlmen and Çavuş neighbourhoods. Residents of these neighbourhoods access education and healthcare services through facilities located in Kireli Neighbourhood and the Hüyük District center. In this context, a school transportation system is implemented to facilitate access to schools from these settlements.

Overall, education, health, and other social services, as well as sensitive receptors located within the Area of Influence of the Subproject, are defined through existing settlement areas, economic activity zones, and privately owned agricultural lands, and are accessible via the existing transportation network.

2.7.3.5. Infrastructure Services

Settlements located within the Subproject area benefit from basic infrastructure services such as water supply and solid waste management. However, a centralized sewerage and wastewater treatment system is not currently available in these settlements. Summary information on the existing infrastructure services in the Subproject area is presented in Table 2-12.

Areas Currently Benefiting from Existing Infrastructure

Based on desk-based studies and field observations conducted within the scope of the ESMP, all settlements located within the Subproject area currently benefit from water supply and solid waste management services. Water supply services are provided by the relevant water and sewerage administration, while solid waste collection and disposal services are delivered by the responsible municipalities. These services are operational and are used by formal residential users and, to a limited extent, by formal commercial users within the settlements.

In contrast, no centralized sewerage infrastructure is present in the settlements within the Subproject area under pre-project conditions. Domestic wastewater generated in the settlements is managed through individual on-site systems, primarily septic tanks (foseptik systems), serving individual households or small clusters of buildings. These systems operate independently and do not constitute an integrated or networked sewerage system.

Accordingly, prior to the Subproject, wastewater generated in the settlements is neither collected through a sewerage network nor treated at a centralized wastewater treatment facility.

Infrastructure Services to Be Provided or Upgraded under the Subproject

Under the Subproject, a centralized sewerage collection and wastewater treatment system will be established for the first time. The domestic wastewater generated in Kireli and surrounding settlements will be collected through a newly constructed collector network and conveyed to a centralized advanced biological wastewater treatment plant.

Through this arrangement, the existing fragmented and individual wastewater management practices based on septic tanks will be replaced by an integrated and environmentally sound wastewater collection and treatment system. As a result, the settlements within the Subproject area will benefit for the first time from a centralized sewerage and wastewater treatment service.

Water supply and solid waste management services will continue to be provided under the existing institutional and operational arrangements and will not be altered by the Subproject.

Users and Income Loss Considerations

Existing infrastructure services in the Subproject area are primarily used by formal residential users and, to a limited extent, by formal commercial users. Desk-based studies and field observations did not identify any informal users associated with water supply, solid waste management, or on-site wastewater systems within the settlements.

Within the scope of the social baseline assessment, no individuals, households, or businesses have been identified as being likely to experience temporary or permanent income loss related to existing infrastructure services. The Subproject does not involve activities that would disrupt water supply or solid waste services, nor does it directly affect income-generating activities linked to current on-site wastewater management practices.

Energy Transmission Line

An existing Energy Transmission Line (ETL) is located in the wider vicinity of the Subproject area and is considered an associated facility. The ETL is an existing infrastructure component, and no construction, upgrading, or physical intervention related to this line is planned within the scope of the Subproject. Further information regarding the location of the ETL and its relationship to the Subproject is provided in Section 2.4.

Table 2-12 Existing Infrastructure Services in Settlements within the Subproject Area

Neighborhood	Water Supply Service Provider	Sewerage / Wastewater System	Solid Waste Management Service Provider
Kireli Neighborhood	KOSKİ	Cesspool systems	Hüyük Municipality
Göçeri Neighborhood	KOSKİ	Cesspool systems	Hüyük Municipality
İlmen Neighborhood	KOSKİ	Cesspool systems	Hüyük Municipality
Çavuş Neighborhood	KOSKİ	Cesspool systems	Hüyük Municipality
Tolca Neighborhood	KOSKİ	Cesspool systems	Hüyük Municipality

2.7.3.6. Transportation and Traffic

Transportation within the Area of Influence of the Subproject is based on the existing regional and local road network serving Kireli Neighbourhood and its surrounding agricultural areas. The main regional access route is the D350 (Konya–Isparta) Highway, which passes through the vicinity of the settlement and provides direct connection between Kireli Neighbourhood, the Hüyük District center, and nearby settlements.

Access to the wastewater treatment plant site is currently provided via the D350 Highway, followed by existing stabilized municipal roads and village tracks leading to the project parcel. These roads are already used for local traffic, agricultural activities, and access to surrounding farmland. No new permanent access roads are planned within the scope of the Subproject, and the existing road network defines the baseline transportation conditions in the area.

Within Kireli Neighbourhood, transportation is mainly carried out through neighborhood streets that support daily residential movement, agricultural vehicle use, and local service access. Traffic volumes are generally low and predominantly local in character, reflecting the rural settlement pattern and the limited presence of commercial or transit traffic.

Traffic-related impacts under the Subproject are primarily associated with the construction of collector pipelines along existing neighborhood streets, rather than access to the wastewater treatment plant site itself. The installation of linear infrastructure within existing road corridors may result in temporary lane narrowing, partial road closures, or short-term traffic diversions along specific road segments during construction. These effects are expected to be localized and temporary, limited to the duration of construction activities carried out along each road section.

No permanent changes to the existing road network or long-term alterations to traffic patterns are envisaged under the Subproject.

2.7.3.7. Cultural Heritage (Tangible⁷ and Intangible⁸)

Tangible Cultural Heritage

Desk-based reviews and field assessments were conducted to identify tangible cultural heritage assets located within the subproject area and its area of influence. Within this scope, national cultural heritage inventories and available spatial data were reviewed.

⁷ 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.

⁸ 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.

As a result of these assessments, it was determined that no archaeological sites, historical buildings, monuments, cemeteries, or any registered tangible cultural heritage assets are located within the footprint of the Kireli Wastewater Treatment Plant Subproject or along its associated infrastructure routes. The project area does not have any cultural heritage protection status and has not been identified as an area with cultural or heritage-related use in the past.

The closest known tangible cultural heritage asset to the subproject area is the Eflatunpınar (Hittite Water Monument), located approximately 17.40 km from the project site. This cultural heritage site is included in the UNESCO World Heritage Tentative List and is situated outside the area of influence of the subproject (see Figure 2-11).



Figure 2-11 Closest Cultural Heritage to Subproject Area

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 project 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 WB 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 experience greater difficulties compared to other groups in accessing information and participating in stakeholder engagement processes.

Based on desk-based reviews and field assessments conducted within the scope of the Subproject, disadvantaged or vulnerable individuals and groups have been identified in the neighborhoods of Kireli, Tolca, Çavuş, İlmen and Göçeri. In addition, disadvantaged individuals and groups residing within Hüyük District, outside the defined Area of Influence, have also been considered as part of the social environment assessment. Summary information on the identified groups is presented in Table 2-13. The available data indicate that different forms of vulnerability are present across the neighborhoods. In this context, efforts have been made to identify and, where possible, quantify the vulnerable groups based on available data. Identified groups include low-income households dependent on state or external support, female-headed households, elderly individuals aged 75 and above living alone, persons with disabilities, unemployed individuals, and households with children. In particular, Kireli Neighborhood is among

the neighborhoods with a relatively higher number of female-headed households and experiences a seasonal population increase during the summer months due to the return of children and youth.

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

- Low-income households dependent on state or external support mechanisms (103 households);
- Female-headed households (180 households);
- Elderly individuals aged 65 and above (330 individuals);
- Persons with Disabilities (6 individuals);

Unemployed individuals (approximately 25 individuals).

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

Table 2-13 Disadvantaged or Vulnerable Individuals or Groups

Neighborhood	Poor Households	Female-Headed Households	Elderly Population (65+)	Persons with Disabilities	Unemployed
Kireli	28	150	150	-	-
Çavuş	50	30	150	-	-
İlmen	15	20	40	15	30
Göçeri	10	-	-	-	10
Tolca	15	-	30	6	15
Total	118	200	370	21	55

3. SUBPROJECT ACTIVITIES

3.1. Construction Phase

3.1.1. Construction Activities

Construction activities will be completed in 16 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 the establishment of temporary site arrangements, site access organization, setting out/survey works, and preparation of working areas. Within the Subproject area, there is an abandoned reinforced concrete structure of a wastewater treatment plant, which was initiated by the former municipality but could not be completed. This unused structure currently exists on the site and will be demolished prior to construction activities as part of the site clearance works.

Site preparation activities will include land leveling, excavation and fill works, compaction activities required for the construction of the WWTP units, internal roads, and general site arrangement, as well as the demolition and removal of the existing incomplete structure.

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

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 or demolition, work 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:
- Construction machinery and equipment to be used during the construction phase are presented in Table 3-1 below. All machinery and equipment will be regularly maintained, and oil/fuel leakages will be prevented through routine inspections and good housekeeping practices.

Table 3-1 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, 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 will require typical civil works materials such as aggregates, concrete, gravel, reinforcement 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 contractors in accordance with the Waste Management requirements defined under the ESMP.

3.1.2. Construction Facilities

Construction facilities to be used during construction activities are listed in Table 3-2. Information on AFs is separately provided in Section 2.4.

Table 3-2. 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 3-1 presents the layout plan showing only the Subproject area. A general layout plan is provided in Annex N.

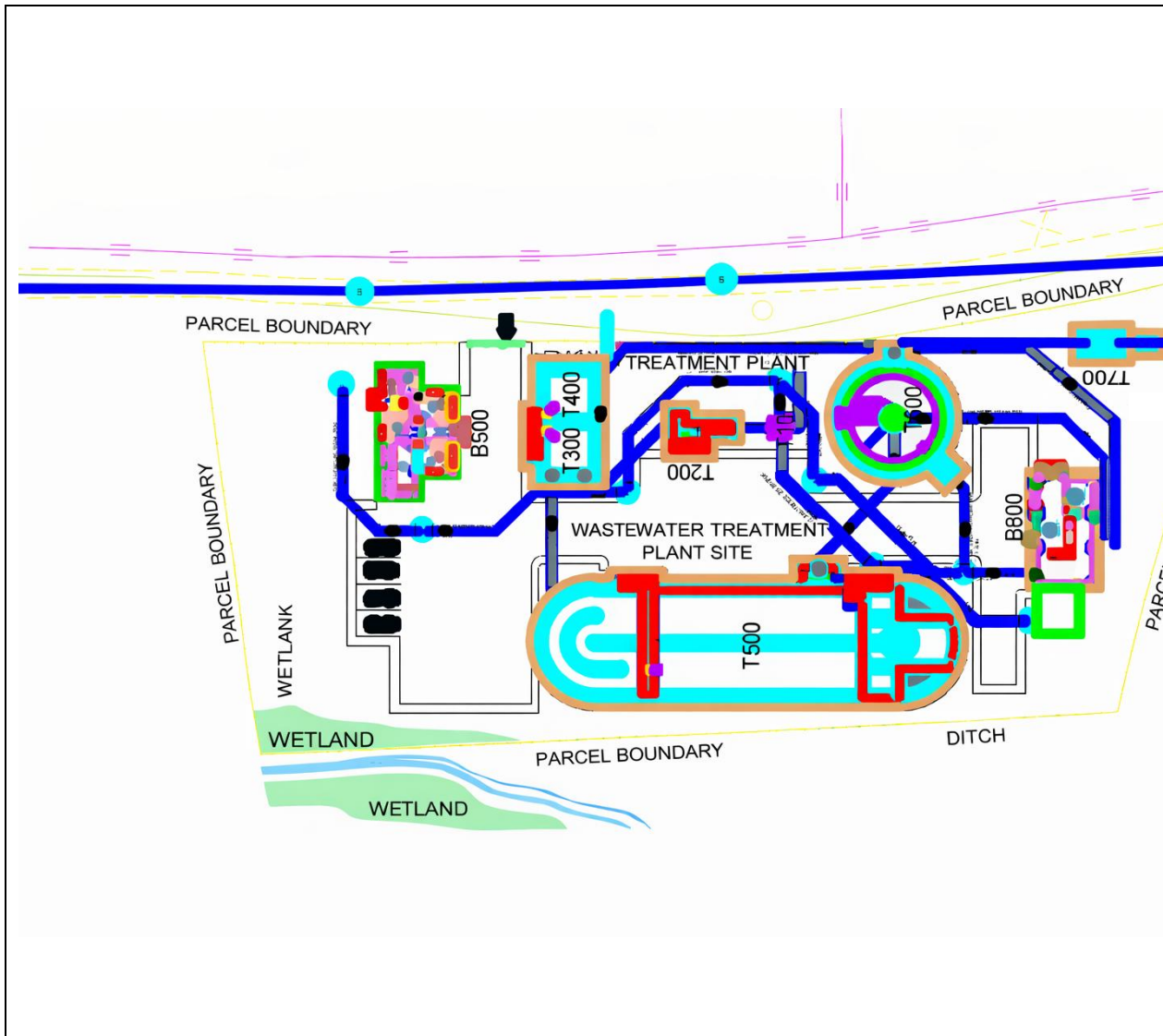


Figure 3-1 Layout Plan of the Subproject

3.2. Operation Phase

3.2.1. Operation Activities

During the operation phase, the Kireli Wastewater Treatment Plant (WWTP) will treat municipal wastewater generated within the Subproject service area to meet applicable national discharge standards and protect receiving water bodies. The operation activities 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 subjected to preliminary treatment units such as screening and grit removal, where coarse materials and inorganic solids are removed to protect downstream equipment and improve treatment efficiency. Following preliminary treatment, wastewater is conveyed to the biological treatment units designed to remove organic matter and nutrients through biological processes.

Biological treatment is followed by secondary settling tanks, where treated effluent is separated from biological sludge. The clarified effluent is then conveyed to the disinfection unit (chlorine contact tank) before discharge. The treated effluent quality is designed to comply with the relevant discharge criteria under Turkish legislation.

Approximately 15 tons per day raw sludge generated during the biological treatment and settling processes is transferred to the sludge handling line. Sludge management activities include thickening and dewatering operations carried out within the sludge dewatering building. Dewatered sludge (sludge cake 22%) will be temporarily stored on site and transported to Konya Wastewater Treatment Plant for agricultural reuse as compost, provided that it complies with the applicable national regulations and quality criteria for land application of sludge.

Operational activities also include regular inspection, cleaning, calibration, and maintenance of mechanical, electrical, and instrumentation systems, including pumps, blowers, valves, electrical panels, SCADA automation systems, fire and gas detection systems, and auxiliary units. Preventive maintenance will be conducted to ensure uninterrupted operation and 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 load and treatment efficiency and are managed through dewatering to minimize volume prior to off-site disposal.

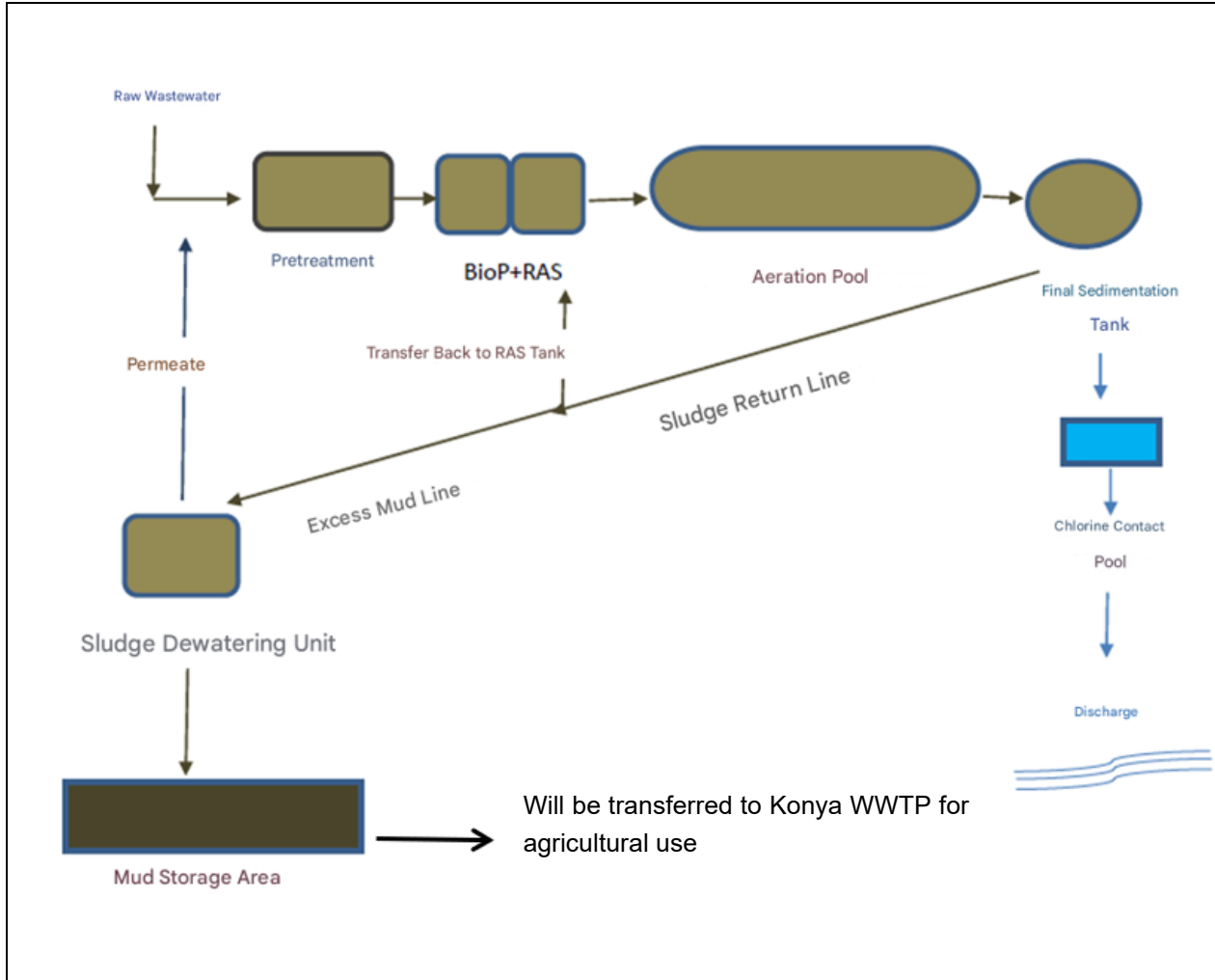


Figure 3-2. Process Flow Chart

3.2.2. Operation Facilities

The Kireli Wastewater Treatment Plant (WWTP) has been designed with the purpose of treating the wastewater generated within its service area and safely discharging the treated effluent into the Beyşehir Lake Basin via the dry creek bed. The treatment process has been planned based on an advanced biological treatment system that operates according to the principle of Simultaneous Nitrification–Denitrification (SNdN). Within the framework of the plant design, the primary goal is not only the removal of organic matter from the wastewater but also the effective elimination of nitrogen and phosphorus. By achieving this integrated removal of carbon, nitrogen, and phosphorus, the plant is able to meet the stringent discharge standards defined for "Sensitive Areas" in a reliable manner, thereby ensuring the protection of the receiving environment.

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 project meetings, the concentrations to be used as the basis for the design of the Kireli WWTP are presented in the table below;

Table 3-3 Design Parameters

PARAMETER	Influent	Effluent	Required Treatment Efficiencies
BOD ₅	350 mg/L	25 mg/L	93%
COD	600 mg/L	125 mg/L	79 %
TSS	400 mg/L	35 mg/L	91%
Total Nitrogen	70 mg/L	15 mg/L	79%
Total Phosphorus	15 mg/L	2 mg/L	87%

Table 3-4 Kireli 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)
BOD ₅	36,90	279,89	0,00	279,89	102,16	94,86	7,30
COD	63,25	479,75	0,00	479,75	175,11	138,63	36,48
TSS	42,20	320,09	0,00	320,09	116,83	99,31	17,52
TN	7,40	56,13	0,00	56,13	20,49	16,10	4,39
TP	1,60	12,14	0,00	12,14	4,43	3,84	0,59

The facility is designed for "Advanced Biological Treatment" using a "Simultaneous Nitrification–Denitrification (SNDn) process. SNDn simplifies the treatment line by carrying out nitrification and denitrification simultaneously in the same reactor; because no internal recycle is required, capital and energy costs are reduced. Operated as an oxidation ditch at low DO, it provides strong carbon removal and moderate-to-good nitrogen performance, and phosphorus removal can be easily added with chemical dosing if needed.

Screens: The screens, as preliminary treatment units, are designed to separate large solid materials such as paper, plastics, and fabrics, as well as smaller particles, from the wastewater. This initial stage ensures the smooth operation of the facility by preventing damage and clogging in pumps, pipes, and other mechanical equipment. The screens automatically clean the collected solids, transferring them to containers for disposal and thereby protecting the efficiency of the biological treatment units.

Grit Chamber: The grit chamber is a preliminary treatment unit where heavy inorganic materials like sand, gravel, and similar substances from the wastewater are separated through gravitational settling. This process removes abrasive particles that could cause wear and accumulation in pipelines and tanks. This extends the lifespan of pumps, valves, and other mechanical components and maintains the efficiency of the subsequent biological treatment stages.

Bio-P Tank: The Bio-P tank is an anaerobic (oxygen-free) reactor designed for the removal of phosphorus from wastewater, serving as the first step of the advanced biological treatment. In this unit, specialized microorganisms absorb easily biodegradable organic matter from the wastewater and release the phosphorus they have stored into the water. This "phosphorus release" mechanism triggers the microorganisms to absorb much more phosphorus than they need in the subsequent aerated (oxic) stage. As a result, phosphorus in the wastewater is efficiently removed through biological means.

Aeration Tank: The aeration tank constitutes the heart of the facility's biological treatment process and operates on the selected "simultaneous nitrification-denitrification" principle. In this unit, both oxygen-rich (aerobic) and oxygen-poor (anoxic) zones are created within the same tank through controlled aeration. In the aerobic zones, microorganisms remove organic matter and convert ammonia into nitrate (nitrification). In the anoxic zones, the resulting nitrate is converted into harmless nitrogen gas (denitrification) and released into the atmosphere. This integrated approach allows for the efficient treatment of both organic pollutants and nutrients like nitrogen in a single reactor.

Final Clarifier: The final clarifier is the unit where the treated water is physically separated from the activated sludge (microorganism mass) after the biological treatment stage. In this tank, the flow velocity of the water is reduced, allowing the sludge to settle to the bottom by gravity. The clear, treated water from the top is directed to the disinfection unit, while a portion of the settled sludge at the bottom is recirculated back to the aeration tank to maintain the biological process. The excess portion is sent to the sludge dewatering unit.

Disinfection (Chlorine Contact Tank): The disinfection unit represents the final safety step before the treated water is discharged into the receiving environment. In this unit, chlorine is dosed into the water to inactivate any remaining pathogenic microorganisms, such as disease-causing bacteria and viruses. This process ensures the protection of public health and the ecological quality of the receiving water body, Kireli Stream, and ultimately Beyşehir Lake.

Sludge Dewatering: The sludge dewatering unit is designed to reduce the volume of the excess biological sludge generated from the treatment process, thereby facilitating its disposal. In this unit, the sludge taken from the final clarifier is dewatered using centrifugal decanter, and converted into a semi-solid form called "sludge cake." This significantly volume-reduced sludge cake is then safely transported to the Konya Wastewater Treatment Plant for final disposal operations.

The facility's design incorporates a robust approach to ensure consistent performance under all seasonal conditions. The biological reactor volume has been calculated based on the most critical scenario of the winter period (wastewater temperature of 12°C). In contrast, the capacity of the aeration equipment has been determined based on the highest oxygen demand during the summer period (wastewater temperature of 25°C). This dual-scenario approach will ensure that the facility reliably meets the stringent discharge standards throughout the year.

Key technical information on the Subproject is summarized in Table 3-5.

Additional information on the construction and operation phase activities and facilities, as well as Associated Facilities (AFs), is provided in the subsequent sections of this Chapter.

Table 3-5. Key Technical Information on the Subproject

Component	Features
Drinking Water Supply	
Water Source for Drinking Water Supply System	N/A
Water Treatment Facilities	N/A
Treated Water Storage Facilities	N/A
Distribution System	N/A
Pumping and Lifting Stations	N/A
Others	N/A
Sanitation	
Sewerage	Construction of a new sewer collector network to collect domestic wastewater from Kireli, Çavuş, and Göçeri neighborhoods. - Type of sewer: Collector Network (collecting domestic wastewater to a central facility) - Length: 10 km - Diameter: Ø300 mm (from Çavuş to Kireli collector line) , 200 mm and 400 mm (from Göçeri to WWTP collector line) - Material: Corrugated sewer pipe - Primarily gravity-feed system designed to minimize pumping energy needs. - Pressure rating: N/A (Gravity lines) -
Wastewater Treatment Facilities	Construction of a new Advanced Biological Wastewater Treatment Plant (WWTP) using Simultaneous Nitrification–Denitrification (SNdN) process. - Process: Physical treatment (screening, grit removal) followed by Advanced Biological Treatment (Bio-P Tank for anaerobic phosphorus removal + Aeration Tank for nitrification/denitrification) and Final Sedimentation. Includes Disinfection (Chlorine Contact) before discharge. - Capacity: 800 m³/day (Phase 1, serving a population of 7,585).

Component	Features
	- Design Year: 2048. - Sludge Management: Sludge dewatering using a centrifugal decanter to produce sludge cake; disposed of at Konya WWTP. - Automation: SCADA system for continuous monitoring; VFDs (Variable Frequency Drives) on pumps/blowers for energy efficiency. - Reuse: Portion of treated effluent reused for on-site landscape irrigation and process cleaning.
Pumping and Lifting Stations	-Located at the inlet of the facility to lift incoming wastewater into the treatment units (Fine Screen/Grit Chamber)
Others	-Discharge Line: Construction of a discharge line (approximately 350 meters) to convey treated effluent to the dry stream bed (leading to Kireli Stream/Lake Beyşehir). - Demolition: Demolition of an existing, abandoned reinforced concrete structure on the site prior to construction. - Access: Use of existing D350 highway; no new access roads required. - Site Works: Fencing, security gate, and 21 m² administrative/operation building

The operational facilities and components of the Subproject will be as follows. The features of these facilities were previously summarized in Table 2-1. The main operational components of the Kireli WWTP are listed below.

- Inlet works (inlet structure)
- Screening unit (mechanical screens)
- Grit removal unit (grit chamber)
- Biological treatment units (Bio-P and aeration tanks)
- Secondary settling tank (secondary clarifier)
- Disinfection unit (chlorine contact tank)
- Sludge handling and dewatering facilities (sludge dewatering building)
- Auxiliary and supporting facilities (operation/control building, internal roads, and general site arrangement)
- Electrical, mechanical, and automation systems (including SCADA automation, grounding and lightning protection system, fire and gas detection and alarm system, and camera system)

Information on AFs is separately provided in Section 2.4.

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 3-6.

Table 3-6. Labor Requirements of the Subproject

Phase	Number of Workers (including contractors and subcontractors)	Planned Accommodation Arrangement
Construction Workers (at peak)	15	Off-site accommodation within nearby settlements (e.g. rental houses/apartments); no on-site camps, dormitories, or similar facilities will be established. Exact arrangements to be determined at later stages.
Operation Workers (at peak)	5	Off-site accommodation within nearby settlements (e.g. rental houses/apartments) and/or employment of local workforce; no on-site accommodation will be provided. Exact arrangements to be determined at later stages.

3.4. Land Acquisition Status

The wastewater treatment plant project area is located within a parcel owned by the KOSKİ General Directorate, which was purchased from the Hüyük Municipality in 2017, and the ownership transfer was completed in the same year. An overview of the land ownership, parcel characteristics, and land acquisition status for the Subproject is provided in Table 3-3, while information related to the project area is presented in this section, and the relevant supporting documents are provided in Annex C.

The wastewater treatment plant site is adjacent to and surrounded by privately owned parcels that are predominantly used for agricultural purposes, reflecting the general land use characteristics of the region, where agricultural land is widespread. However, these parcels are not located within the project parcel boundaries, and therefore no permanent or temporary land acquisition, restriction on land use, or physical displacement is envisaged under the Subproject.

The collector pipelines to be constructed under the Subproject will, as shown in Section 2.6, be located entirely along existing road alignments and within public road corridors. With regard to the energy infrastructure, only the relocation of an existing transformer pole is foreseen, in line with the opinion of MEDAŞ his activity will be carried out within the boundaries of the existing KOSKİ-owned parcel and will not require any additional land acquisition or the use of privately owned land. Existing energy transmission lines will continue to be used.

All planned activities are located within the Area of Influence. Accordingly, no permanent or temporary land acquisition, expropriation, negotiated settlement, or use of privately owned land is anticipated under the Subproject.

Nevertheless, considering that agricultural activities are carried out on privately owned parcels adjacent to and in the surrounding area of the project site, it is acknowledged that unforeseen temporary economic impacts, such as temporary access limitations or disturbance to agricultural activities, could theoretically occur during the construction phase. In such an unlikely event, appropriate mitigation and management measures will be implemented in accordance with the provisions outlined in Section 4.1.2 (Livelihoods and Economic Impacts), the Subproject Grievance Mechanism, and applicable national legislation.

Furthermore, should any unforeseen need for land acquisition or land use restriction arise during project implementation, all related processes will be carried out in accordance with the World Bank Environmental and Social Standards, in particular 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 and the grievance mechanism will be effectively implemented throughout the process.

At present, as the 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.

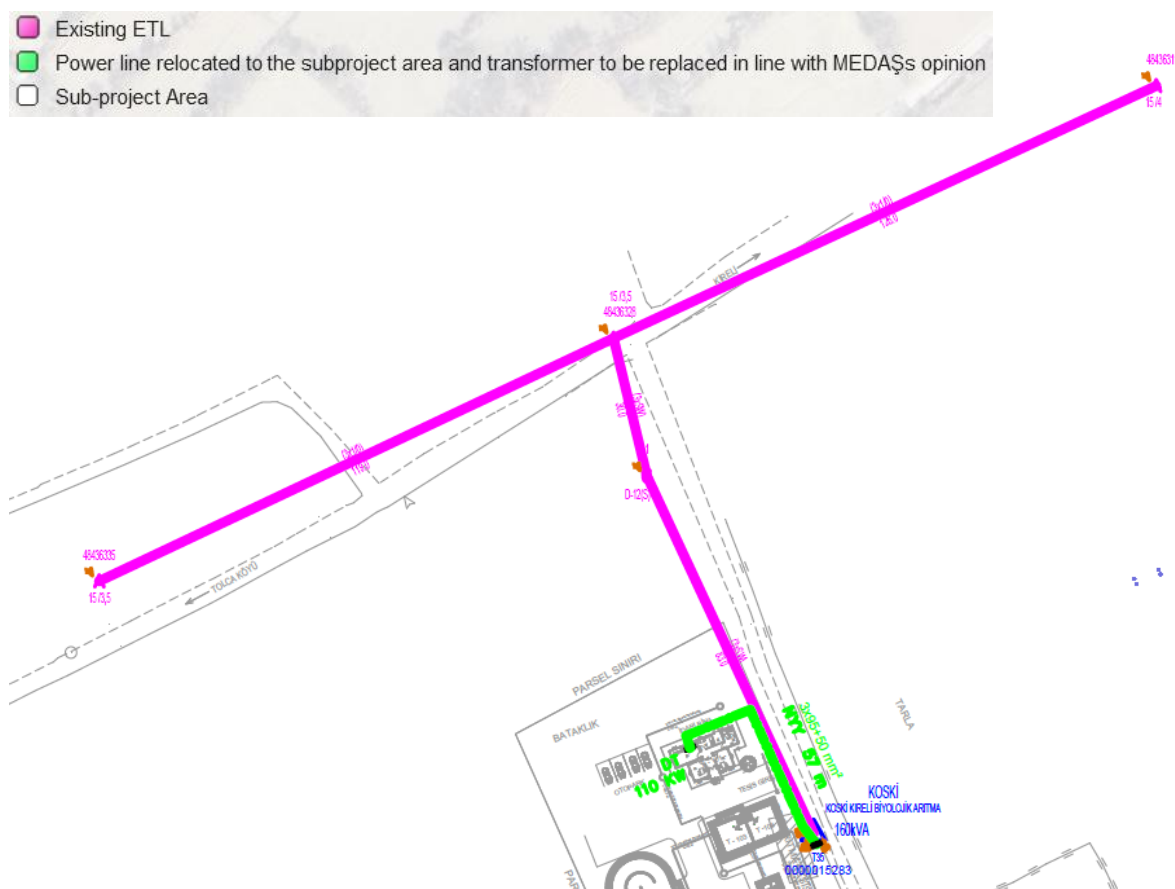


Figure 3-3 Existing ETL and Planned Transformer Relocation

Table 3-7. 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
Wastewater Treatment Plant									
Hüyük	Kireli Neighborhood	216/32	KOSKİ General Directorate (Public entity – land purchased)	WWTP Area	5,006.11	5,006.11	No residential structures, houses, permanent crops,	Purchase (from Hüyük Municipality, 2017)	Completed (Ownership transferred in 2017; no

Distri ct	Neighborhood/Vill age	Lot/ Parce l No.	Current Land Ownership (e.g. Applicant Sub- borrower, Private Person, Legal Entity), Treasury, Non- registered, Other)	Type of Parcel (accordin g to Title Deed) (e.g. Agricultur al, Pasture, Raw Soil, etc.)	Title Deed Area of the Parcel (m ²)	Area to be Acquired and Used by the Subproje ct (m ²)	Propertie s before Acquisitio n (Structur es, Houses, Trees, Crops etc.)	Land Acquisition Method (e.g. Purchase, Lease, Allocation, Easement Rights, etc.)	Status of Land Acquisitio n
			from municipalit y)				or economic assets identified		additional land acquisitio n required)
Energy Infrastructure (Existing ETL and Transformer Relocation – Within Existing KOSKİ Parcel)									
Hüyü k	Kireli Neighborhood	216/3 2	KOSKİ General Directorate (Public entity)	WWTP Area	5,006.1 1	Approx. 2	No residential structures , houses, trees, permane nt crops, or economic assets identified	Not applicable – energy infrastructu re located within existing KOSKİ- owned parcel	Not applicabl e – no additional land acquisitio n required

3.5. Permitting Status

Status of permits, licenses, and approvals required to be in place before starting construction is presented in Table 3-8.

Table 3-8. 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 Kireli Wastewater Treatment Plant was first evaluated on 20 April 2018, and the Konya Governorship Provincial Directorate of Environment and Urbanization determined that the project, planned with a design capacity of 800 m ³ /day, remained below the 30,000 m ³ /day threshold specified in the applicable EIA Regulation and was therefore out of scope of the EIA process. In subsequent years, the project was re-examined as part of administrative application procedures, and following the application submitted by the Konya Water and Sewerage Administration, a second assessment was conducted on 20 January 2026. This reassessment confirmed that the project capacity continued to remain below the regulatory threshold, and consequently, the project does not require an EIA. Both decisions underline that exemption from the EIA process does not eliminate the obligation to comply with Environmental Law No. 2872 and other relevant environmental legislation, including the requirement to obtain all necessary permits and to implement appropriate environmental protection measures.
Non-Agricultural Land Use Permit	Not in place	The non-agricultural land use request for the construction of a “Wastewater Treatment Plant” on Parcel 32, Block 216, Kireli Neighborhood, Hüyük District, was approved through the official letter of the Konya Provincial Directorate of Agriculture and Forestry. The permit, approved based on the consent of the General Directorate of Agricultural Reform dated 15.08.2025, is valid for one year from the date of notification. (Annex 1: Republic of Türkiye Konya Governorship – Provincial Directorate of Agriculture and Forestry, Ref. No: E-67894191-230.04.02-20663674) Moreover, the title deed classification of Parcel 32, Block 216, located in Kireli Neighborhood, Hüyük District, has been officially changed and registered as “Wastewater Treatment Plant Area” . Therefore, obtaining a Non-Agricultural Land Use Permit / Agricultural Marginal Land Certificate is no longer required.
GDNCNP (National Parks) Opinion	In place	According to the letter of the 8th Regional Directorate of Nature Conservation and National Parks, although the Subproject is located outside the boundaries of Beyşehir Lake National Park, it remains within the “Beyşehir Lake Wetland Buffer Zone”. Therefore, obtaining a “Wetland Activity Permit Certificate” prior to the commencement of activities is required as a condition. (Annex 3: Republic of Türkiye Ministry of Agriculture and Forestry – 8th Regional Directorate, Ref. No: E-98572095-622.02-22670323)
Zoning Plan Approval	Not In place (Ongoing Process)	The Department of Zoning and Urban Planning of Konya Metropolitan Municipality indicated that, for the preparation of the zoning plan for the facility, institutional opinions (e.g., DSİ, Agriculture, Highways, etc.) must be collected and the planning proposal must be prepared accordingly. (Annex 4: Republic of Türkiye Konya Metropolitan Municipality – Department of Zoning and Urban Planning, Ref. No: E-89646320-045.01-419469 / Date: 15.01.2026)
Institutional / Subproject Approval	Not In place (Ongoing Process)	As stated in the official letter of KOSKİ, the opinion request process has been initiated within the scope of feasibility and survey studies for the facility, which is planned to be financed by İLBANK and the World Bank (GFC Subproject). (Annex 5: Republic of Türkiye KOSKİ General Directorate, Ref. No: E-20824400-220.04.02-117644 / Date: 19.12.2025)
Electricity Connection Opinion	In place	A connection opinion has been issued by MEDAŞ. A capacity of 160 kVA has been allocated to meet the facility’s electricity demand. (Annex 6: Meram Electricity Distribution Inc. – Connection Opinion, Ref. No: 2018-3-1815 / Date: 06.02.2018)

Permit / License / Approval	Status (In place / Not in place)	Remarks / Notes
State Hydraulic Works (DSİ) Opinion	In place	According to the official opinion of the State Hydraulic Works (DSİ), the Kireli WWTP site is suitable for zoning and project implementation. For Kireli WWTP, a fill of 1.50 m above natural ground level has been calculated, and the project ground elevation of 1,140 m was found appropriate. DSİ provided a positive opinion for zoning studies. In addition, following consultations with DSİ, the discharge line alignment for Kireli WWTP has been revised and shifted further downstream.

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 Kireli 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 Subproject, environmental and social impacts caused by project activities may arise. Any potential impacts of the Subproject 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 Subproject 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 Subproject 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 2.6 and illustrated in Figure 2-5, no sensitive receptors are located within the defined 500-meter AoI boundary. 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.

The total excavation volume for the Subproject is estimated at approximately 3,585 m³. The Kireli WWTP will be constructed within a total project area of approximately 5,006.11 m². The built-up area of the facility, including the main treatment units and associated structures, is approximately 1,010 m². For this ESMP, the Subproject footprint area is considered as 5,006.11 m², corresponding to the total area to be used for the WWTP site, including treatment units, auxiliary structures, internal access, operational areas, and site arrangements. Topsoil stripping will be limited to the defined construction footprint; however, no separate stockpiling of topsoil is foreseen. All excavated material will be reused on site for backfilling and site grading purposes where technically feasible. Therefore, no dedicated topsoil storage or off-site disposal of excavated soil is anticipated under the current design.

There will be some minor impacts on the soil environment and land use during the construction of the project. However, these impacts are on the project 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 Subproject. 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 Kirelli 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 Kireli 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 16 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 Kireli 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 Kireli 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:

During the construction phase, noise impacts are expected due to intensive use of heavy 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/unloading activities. Noise levels may temporarily increase within and near the Subproject area, potentially causing nuisance to nearby receptors, particularly along access routes and areas where construction activities are concentrated. These impacts are expected to be short-term, localized, and reversible.

For a screening-level noise estimate, the main equipment planned for the Subproject includes 1 excavator, 1 compactor/roller, and 1 JCB. Typical sound power / sound pressure levels for this type of equipment are generally in the range of approximately 80–90 dB(A) at 10 m under normal operating conditions. For a conservative assessment, a source level of 85 dB(A) at 10 m is assumed for each unit. If all three units operate simultaneously, the combined noise level at 10 m is estimated at approximately 90 dB(A). Noise attenuates with distance; assuming spherical spreading only, the estimated combined noise levels are approximately 84 dB(A) at 20 m, 78 dB(A) at 50 m, 70 dB(A) at 100 m, 64 dB(A) at 200 m, 58 dB(A) at 400 m, and approximately 50 dB(A) at 1,000 m. Accordingly, at the nearest settlement, construction noise is expected to be close to typical daytime background levels and is unlikely to cause significant nuisance. Along the unpaved access routes, short-term noise peaks may occur when construction vehicles pass nearby receptors; these impacts will remain intermittent and localized.

Noise impacts will be managed through the implementation of standard mitigation measures, including proper maintenance of machinery to avoid 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 noise-related occupational health risks.

Operation Phase:

During the operation phase, noise will mainly be associated with 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 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 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.

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.

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.

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.

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

Construction Phase

During the construction phase of the Kireli Wastewater Treatment Plant (WWTP) Subproject, the workforce will be employed by the Contractor and, where relevant, subcontractors. The workforce is expected to consist primarily of skilled and semi-skilled workers, including civil construction workers, mechanical and electrical technicians, equipment operators, drivers, and support staff. To the extent feasible, the workforce will be sourced from the regional labour market, while specialized technical personnel may be mobilized from outside Hüyük District depending on the technical requirements of the works.

The construction works will include demolition of the existing reinforced concrete structure belonging to the previously initiated but incomplete wastewater treatment plant, construction of the new WWTP units within Block 216, Parcel 32, construction of wastewater collector lines along existing road corridors in Kireli, Çavuş, Tolca, and Göçeri neighbourhoods, construction of the approximately 350 m-long discharge line, and relocation of the existing transformer pole within the KOSKİ-owned parcel.

No construction works are planned in İlmen Neighbourhood, as the neighbourhood is already connected to the existing Çavuş sewer network and will continue to be served through the existing infrastructure.

Therefore, labour and working condition risks will not be limited to the WWTP parcel only, but will also be managed along the collector line routes, discharge line alignment, and access roads.

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, particularly Occupational Health and Safety Law No. 6331.

Occupational health and safety risks during construction may include demolition works, excavation and trenching for collector lines and discharge line construction, operation of heavy machinery, lifting operations, electrical works related to the transformer pole relocation, working at height, confined space entry where applicable, and traffic-related risks due to machinery and material transport. Since the roads around the project site are narrow and privately owned agricultural lands are located very close to the project parcel, additional site-specific risks may arise from limited maneuvering space, interaction with local road users, accidental entry into agricultural lands, dust generation, and potential damage to crops, field boundaries, or access roads.

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.

These risks will be managed through the implementation of a site-specific Occupational Health and Safety Plan, task-specific risk assessments prior to critical activities, daily toolbox talks, traffic and access management measures, and mandatory use of personal protective equipment. The boundaries of the project site and working areas will be clearly marked, and machinery, equipment, excavated materials, and construction materials will not be stored on privately owned agricultural lands. Construction vehicle

movements will be controlled, speed limits will be applied on local and narrow roads, and access to agricultural lands will be maintained to the extent technically feasible.

Workers will receive induction training prior to mobilization and periodic refresher trainings throughout the construction phase. Training will cover occupational health and safety, emergency preparedness, traffic safety, use of PPE, working near agricultural lands and local communities, prevention of environmental pollution, waste management, and the requirements of the Code of Conduct. Additional task-specific trainings will be provided for higher-risk activities such as demolition, excavation, lifting, electrical works, and confined space entry where relevant.

A Worker Grievance Mechanism prepared under the scope of the SEP will be implemented at the project site level to cover all project workers, including contractor and subcontractor workers. The mechanism will be communicated to all workers in a language they understand and will allow workers to raise concerns related to working conditions, occupational health and safety, discrimination, harassment, payment, accommodation if any, 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 Kireli, Çavuş, Tolca, and Göçeri neighbourhoods and the limited scale of the Subproject, no significant labor influx is anticipated. No worker accommodation is expected to be established within the project site. Where needed, workers will stay off-site and commute daily to the working areas. A designated temporary worker area may be established within the project parcel during the construction phase to meet daily needs such as meals, rest, hygiene, and sanitary facilities.

The Contractor will implement a Code of Conduct for all workers. The Code of Conduct will address respectful behavior toward local communities, prevention of gender-based violence, sexual exploitation and abuse, and sexual harassment, prohibition of unauthorized entry into agricultural lands, respect for local road users and vulnerable groups, and compliance with community health and safety rules. Any breach of the Code of Conduct will be subject to corrective and disciplinary measures in accordance with the Contractor's procedures and applicable legislation.

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, the Subproject will require a small permanent workforce of approximately 5 workers, organized in shifts to ensure continuous operation of the wastewater treatment plant. Given the limited number of workers and the routine nature of operational activities, labor-related impacts during this phase are expected to be negligible.

No significant adverse impacts related to labor and working conditions are anticipated during operation, as:

- Employment conditions will remain formal, regulated, and compliant with ESS2 and national labor legislation;
- The workforce size will not generate labor influx or associated social risks;
- Working conditions will be stable and predictable, with clearly defined roles, responsibilities, and grievance channels.

During the operation phase, awareness trainings on SEA/SH and communicable diseases (such as HIV/AIDS) will be provided to all personnel as part of induction processes and on a periodic basis. These trainings will ensure that workers are informed about appropriate behavior, risk prevention, and protective measures.

All personnel will be informed about the Code of Conduct, which will include provisions on SEA/SH prevention, respectful interaction with local communities, and a zero-tolerance approach to misconduct. Implementation and participation will be documented, and these measures will be monitored throughout the operation phase.

Accordingly, labor and working conditions during the operation phase are assessed as posing no significant adverse social risks or impacts, and are expected to remain fully manageable through standard operational procedures and the project-level worker grievance mechanism.

4.1.2.2. Occupational Health and Safety (OHS)

As required by Turkish National Law, the World Bank Group Environmental, Health and Safety (EHS) Guidelines, and İLBANK's Environmental and Social Management System (ESMS), all general and sector-specific occupational health and safety (OHS) hazards and risks will be identified, addressed, and managed throughout the construction, operation, and decommissioning phases.

Prior to site mobilization, the Subproject-specific OHS Management Plan, Emergency Preparedness and Response Plan, Traffic Management Plan, and Incident Investigation Reporting Procedure should be prepared and submitted to ILBANK for review and approval.

A subproject-specific risk assessment will be prepared by qualified OHS professionals. An OHS Training Plan will also be prepared in line with national legislation.

Safe Work Procedures and Safe Operation Manuals will be developed for equipment requiring specialized techniques during transportation, installation, and waste disposal.

Unauthorized Access to the site will be prevented through fencing and the presence of security personnel. Adequate safety signage will be installed in accordance with national regulations.

Personal Protective Equipment (PPE) complying with TS/EN standards will be provided to workers together with training on proper use.

Special tasks such as cutting, welding and confined space entry will only be carried out under a permit-to-work system.

Administrative measures such as adjusting working hours will be applied in case of extreme weather conditions.

Adequate first aid equipment will be provided on site and regular emergency drills including firefighting and evacuation will be conducted.

Construction Phase

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

- **Main hazard sources during the construction phase include:** Vehicle operations including interaction with local traffic
- Moving machinery and construction equipment
- Electrical hazards from temporary installations
- Exposure to fuels, oils and construction chemicals
- Use of hand tools and power tools
- Lifting and rigging operations
- Working at height
- Compressed vessels and pressurized equipment
- Extreme weather conditions
- Hot works such as cutting, welding and grinding
- Slip, trip and fall hazards
- Ergonomic risks such as manual handling and repetitive movements
- Confined space entry
- Excavation activities and potential collapse hazards
- Poor hygiene and inadequate sanitation conditions
- Exposure to dust and noise

OHS risks during construction will be managed through measures including pre-task risk assessments, mandatory use of personal protective equipment (PPE), regular OHS training and toolbox talks, permit-to-work systems for high-risk activities, site traffic management measures, 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.

Special attention will be given to Lock Out Tag Out (LOTO) procedures due to high-voltage equipment used in the facility. Only trained and certified personnel will be allowed to work on high-voltage systems. All occupational incidents will be documented using the standard forms provided in Annex G and Annex H.

Main hazard sources during the operation phase include:

- Electrical hazards and high voltage equipment
- Mechanical hazards from rotating machinery
- Chemical exposure during operation and maintenance
- Confined space entry during maintenance works
- Noise exposure from equipment
- Slip, trip and fall hazards
- Ergonomic risks during maintenance activities

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

Construction Phase

During the construction phase, potential community health and safety impacts may arise from dust and noise generation, increased traffic movements, temporary access restrictions, and risks associated with construction activities. These impacts are expected to be temporary, localized, and manageable, provided that appropriate mitigation measures are implemented.

Traffic- and road-related risks may occur due to the movement of construction vehicles, particularly along sections of the existing road network used for the installation of collector pipelines. To minimize risks to residents, heavy vehicles and haulage trucks will primarily use the D350 highway, avoiding narrow neighborhood and village roads to the extent practicable. Speed limits, warning signage, vehicle maintenance, and driver awareness measures will be enforced. Detailed traffic-related risks are further addressed under Section 4.1.2.4.

Dust, noise, and vibration generated during excavation and construction works may temporarily affect nearby residents, agricultural activities, and sensitive receptors located within the Area of Influence, including schools, residential areas, and places of worship. These impacts are expected to remain short-term and localized, and will be managed through standard construction mitigation measures such as road watering, covering of trucks, maintenance of equipment, and restriction of works to daytime hours where feasible.

With respect to existing infrastructure services, construction works—particularly excavation for collector pipelines—may pose a temporary risk of damage to underground public utilities, such as water supply lines, electricity cables, or telecommunication infrastructure. Accidental damage to such infrastructure could result in short-term service disruptions affecting households or local facilities. To mitigate this risk, utility coordination will be undertaken prior to excavation works, relevant service providers will be consulted, and works will be carried out in accordance with approved method statements. In the event of any unplanned disruption, prompt repair and communication with affected communities will be ensured through established coordination mechanisms.

Temporary access constraints to residences, agricultural parcels, schools, or small businesses may also occur during pipeline installation along existing roads. These impacts are expected to be limited in duration and extent, and access will be maintained to the extent practicable through phased construction, temporary crossings, and advance notification to affected residents via the mukhtars.

The Subproject does not involve worker camps or large-scale labor influx. Therefore, pressure on local health services, sanitation infrastructure, or housing, as well as risks related to communicable diseases or SEA/SH associated with labor influx, are assessed as low. Nevertheless, worker codes of conduct, awareness-raising activities, and supervision measures will be implemented to prevent any adverse interaction between workers and local communities.

All active construction areas will be physically restricted through fencing, barriers, and visible warning signage to prevent unauthorized access and reduce community exposure to construction-related hazards.

Special consideration will be given to vulnerable groups, including elderly individuals, children, and low-income households, particularly in relation to access, traffic movements, and information dissemination. Community awareness activities will be conducted through the neighborhood mukhtars to ensure that residents—including school children using daily transportation services to Hüyük—are informed in advance about construction schedules, potential risks, and safety precautions.

Operation Phase

During the operation phase, the Subproject is not expected to generate significant adverse community health and safety impacts. On the contrary, the establishment of a centralized sewerage and wastewater treatment system will bring long-term benefits to the community by improving environmental conditions, protecting surface and groundwater quality, and reducing public health risks associated with existing on-site wastewater management practices.

Operational activities will be confined within the wastewater treatment plant site, and no increased traffic, noise, or safety risks for surrounding communities are anticipated. Standard operational safety measures, controlled site access, and routine maintenance practices will further limit any potential interaction risks between the facility and the surrounding population.

Grievance Mechanism and Overall Assessment

A Subproject-level Grievance Mechanism (GM) is in place to allow community members and workers to raise concerns related to health, safety, infrastructure disruptions, or other project-related impacts. Grievances can be submitted through multiple channels (e.g., website, hotline, e-mail), and all submissions will be recorded, assessed, and addressed within defined timelines, as detailed in the Stakeholder Engagement Plan (SEP).

Overall, community health and safety impacts associated with the Subproject are assessed as temporary, localized, and manageable during the construction phase, and negligible during the operation phase, provided that the mitigation measures defined under the ESMP and related management plans are effectively implemented.

4.1.2.4. Traffic Safety

Construction Phase

During the construction phase, traffic safety-related impacts may arise from the transportation of construction materials and equipment to the wastewater treatment plant site, as well as from the installation of collector pipelines along existing road alignments. These activities may result in temporary traffic congestion, lane narrowing, and short-term road interruptions along certain road sections.

It should be noted that no construction activities are planned within Tolca Neighbourhood, as the Subproject will utilize the existing collector lines in this area. Therefore, traffic-related impacts associated with construction activities are not anticipated in Tolca Neighbourhood, and any potential traffic safety risks are limited to Kireli, Göçeri, and Çavuş neighbourhoods where new construction works will be undertaken.

The movement of construction vehicles and machinery may:

- reduce traffic flow and vehicle mobility on local roads, and
- increase the frequency and severity of traffic accidents, posing risks to drivers, pedestrians, and agricultural vehicles using the same routes.

These impacts may cause temporary nuisance, disruption, and safety risks for local road users, particularly in Kireli Neighborhood and the Area of Influence, which includes Göçeri and Çavuş neighborhoods and is characterized by low-capacity rural roads.

It should be noted that no construction activities are planned within Tolca Neighbourhood, as the Subproject will utilize the existing collector lines in this area. Therefore, traffic-related impacts associated with construction activities are not anticipated in Tolca Neighbourhood, and any potential traffic safety risks are limited to Kireli, Göçeri, and Çavuş neighbourhoods where new construction works will be undertaken. Similarly, no construction activities are planned in İlmen Neighbourhood, as the neighbourhood will continue to be served through its existing connection to the Çavuş sewer network. Therefore, no traffic-related impacts associated with construction activities are anticipated in İlmen Neighbourhood.

However, construction-phase traffic safety impacts are assessed as temporary, localized, and manageable, provided that appropriate mitigation measures are implemented. To minimize traffic-related risks:

- Heavy vehicles and haulage trucks will be primarily routed via the D350 Highway, avoiding narrow neighborhood and village roads to the extent practicable;
- Construction activities will be phased to limit the duration and extent of traffic disruption along individual road sections;
- Appropriate warning signs, traffic guidance measures, and speed limits will be installed at work zones;
- Construction vehicles will be regularly maintained, equipped with audible and visual warning systems where required, and drivers will receive appropriate training;
- Local communities and road users will be informed in advance of construction schedules and temporary traffic arrangements through the neighborhood mukhtars.

With the implementation of these measures, traffic safety risks during the construction phase are expected to remain at acceptable levels.

Operation Phase

During the operation phase, the Subproject is not expected to generate any significant increase in traffic volume or vehicle movements. Access to the wastewater treatment plant will be limited to a small number of operational staff and occasional maintenance vehicles using the existing road network.

Accordingly, no significant adverse traffic safety impacts are anticipated during the operation phase.

4.1.2.5. Pedestrian Safety

Construction Phase

During the construction phase, pedestrian safety risks are expected to occur primarily along the collector pipeline routes, where construction works will be undertaken within existing neighborhood roads that are currently used by pedestrians.

No temporary restrictions on pedestrian or bicycle routes are expected in Tolca Neighbourhood, as no excavation or installation works will be carried out and the existing collector lines will continue to be used.

Temporary Restrictions on Pedestrian and Bicycle Routes

Temporary restrictions or partial closures of pedestrian routes may occur along specific road sections during excavation and pipe-laying activities. These restrictions will be short-term and section-based, limited to the active construction front, and typically lasting several days to a few weeks per road segment, depending on ground conditions and construction progress.

The detailed construction schedule and road section-based work program will be finalized following contractor mobilization. At this stage, the exact duration and timing of temporary restrictions on pedestrian and bicycle routes have not yet been determined. Nevertheless, all restrictions will be limited to the shortest practicable duration, affected areas will be progressively reopened upon completion of works, and advance information will be provided to affected users prior to implementation.

The pedestrian routes that may be temporarily affected are mainly used by:

- School children commuting to and from Kireli Primary and Secondary School and Kireli High School,
- Residents accessing homes, mosques, and local facilities within Kireli, Göçeri, and Çavuş neighborhoods,
- Elderly individuals and other community members accessing the Family Health Center and places of worship,
- Local residents accessing agricultural lands, particularly during agricultural seasons.

These potential impacts are limited to Kireli, Göçeri, and Çavuş neighbourhoods. Pedestrian movements within Tolca Neighbourhood will not be affected during the construction phase, as the Subproject will rely on existing collector lines in this area. Where pedestrian or informal bicycle paths are temporarily inaccessible, alternative safe walking routes will be provided where feasible, and advance notice will be given to affected users through neighborhood mukhtars and on-site signage.

Pedestrian–Construction Interaction Areas and Associated Risks

Pedestrian interaction with construction activities is most likely to occur:

- Along neighborhood streets where collector pipelines intersect with residential areas,
- Near schools, mosques, residential clusters, and the Family Health Center located within the Area of Influence,

- At road crossings and junctions where pedestrians and construction vehicles share the same space.

Potential pedestrian safety risks during the construction phase include:

- Increased risk of pedestrian–vehicle interaction due to construction traffic,
- Temporary narrowing or obstruction of sidewalks, shoulders, or road edges,
- Open trenches, uneven surfaces, and stockpiled materials creating trip and fall hazards,
- Reduced visibility and heightened risk for children, elderly individuals, and persons with limited mobility.

These risks are assessed as temporary, localized, and manageable, provided that appropriate mitigation measures are implemented. Such measures will include physical barriers around excavations, clear warning signage, safe pedestrian crossings near sensitive receptors, temporary walkways where needed, and continuous supervision of work zones. Construction schedules and access changes will be communicated in advance to the community via mukhtars.

Operation Phase

During the operation phase, pedestrian safety risks are expected to be minimal. Operational activities will be confined within the wastewater treatment plant site, and routine operation will not require frequent vehicle movements along neighborhood roads.

No permanent restrictions on pedestrian or bicycle access are envisaged during operation. The Subproject does not include engineering structures such as underpasses, overpasses, tunnels, or grade-separated pedestrian crossings that would be accessible to the public. Therefore, pedestrian access to operational units will not be permitted, and public interaction with treatment structures will be prevented through controlled site access and perimeter fencing.

Following the completion of construction works, all roads and pedestrian routes along the collector pipeline alignments will be fully reinstated, restoring pedestrian access to baseline conditions. As a result, no significant long-term pedestrian safety impacts are anticipated during the operation phase.

4.1.2.6. Loss of Land and Livelihoods

Construction Phase

Areas Already Affected by Existing Infrastructure

The wastewater treatment plant site is located within a formally registered parcel owned by the KOSKİ General Directorate, which was acquired from Hüyük Municipality in 2017. The parcel is publicly owned and has been allocated for the construction of wastewater infrastructure. Accordingly, no privately owned land, assets, or livelihood activities are present within the project footprint.

All collector pipelines to be constructed under the Subproject will be installed along existing road alignments and within public road corridors. These areas are already designated for transportation and utility services and are therefore considered areas previously affected by existing infrastructure. In this context, no permanent land acquisition, expropriation, or land use restrictions involving privately owned parcels are envisaged.

As a result, no permanent loss of land, assets, or livelihoods is anticipated within areas already affected by existing infrastructure.

Areas Affected for the First Time under the Subproject

Although the collector pipelines will be constructed within existing public road corridors, these road sections have not previously hosted centralized wastewater infrastructure. Therefore, they are considered areas that will be affected for the first time by wastewater infrastructure construction activities under the Subproject.

The impacts anticipated in these areas are expected to be temporary and non-permanent. During construction activities, including excavation, pipe-laying, material transport, and site works, indirect impacts may occur on adjacent agricultural lands and open areas located along the road corridors. These impacts may include:

- Temporary access restrictions to agricultural lands,
- Dust and noise generation,
- Short-term disruptions during harvest or maintenance periods,
- Associated risks of temporary income or livelihood loss.

Such impacts are expected to be temporary, limited in scale, and reversible. Upon completion of construction works, affected road sections and surrounding areas will be reinstated to pre-construction conditions, allowing agricultural activities to continue. Accordingly, these impacts are not considered permanent loss of land or sustained loss of livelihoods.

The Subproject does not include the construction of worker camps, permanent access roads, or new energy transmission lines (ETL). In the event that relocation or renewal of an existing transformer pole becomes necessary, such activities will be carried out entirely within the KOSKI-owned parcel and will not require additional land acquisition.

In cases where temporary income or livelihood loss may occur during the construction phase, direct communication will be established with affected landowners and/or users to identify the scope and duration of impacts, and appropriate preventive and/or corrective measures will be implemented. These measures may include planning construction works with due consideration of critical agricultural periods, restoring access as soon as practicable, and addressing grievances through the Subproject-level Grievance Mechanism. Where necessary, temporary economic impacts will be managed and monitored in accordance with national legislation and ESS5 requirements.

Operation Phase

During the operation phase, the Subproject will not require any additional land acquisition or land use restrictions. All operational activities will be confined to the wastewater treatment plant site, while the collector pipelines will continue to operate underground within public road corridors.

No permanent impacts on land ownership, land use, or livelihoods are anticipated during the operation phase. Agricultural activities and other livelihood practices in the surrounding areas are expected to continue under baseline conditions.

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, as well as the baseline conditions presented in Section 2.7.3.8 and the related tables.

For the purposes of impact assessment, disadvantaged or vulnerable groups include, but are not limited to, low-income households, female-headed households, elderly individuals (75+), persons with disabilities, unemployed individuals, and households with children, as identified within the Area of Influence of the Subproject.

Construction Phase

During the construction phase, temporary and localized impacts may affect certain vulnerable groups, particularly in areas where civil works are carried out along the collector pipeline routes within or adjacent to settlement areas.

Potential risks to disadvantaged and vulnerable individuals or groups during construction include:

- Disruptions to daily mobility and access, particularly for elderly individuals, persons with disabilities, and households with limited coping capacity, due to temporary road works, excavations, or access restrictions,
- Increased safety risks for school-aged children commuting daily to educational facilities, especially along routes shared with construction traffic,
- Temporary exposure to dust, noise, and construction-related nuisance, which may disproportionately affect elderly individuals and persons with pre-existing health conditions,
- Short-term impacts on livelihood-dependent households, particularly those engaged in small-scale agriculture, due to temporary access limitations to agricultural lands.

These impacts are assessed as temporary, localized, and manageable, provided that appropriate mitigation and engagement measures are implemented. In line with the Subproject-specific ESMP and SEP, particular attention will be given to minimizing impacts on the daily living patterns of vulnerable groups, including school commuting hours, access to health services, and access to agricultural lands during critical periods.

Information on construction schedules, temporary access arrangements, and safety measures will be communicated in advance through neighborhood mukhtars and other locally appropriate channels. Vulnerable individuals and households will be encouraged and supported to use the Subproject-level Grievance Mechanism, which allows for confidential and, where needed, anonymous submissions.

Operation Phase

During the operation phase, no significant adverse impacts on disadvantaged or vulnerable individuals or groups are anticipated. Operational activities will be confined to the wastewater treatment plant site, and no routine activities are expected to interfere with community access, daily mobility, or livelihood activities.

The Subproject is expected to generate long-term positive effects for vulnerable groups through improved environmental conditions and access to municipal wastewater services, contributing to enhanced public health outcomes in the surrounding communities.

Any residual or unforeseen impacts affecting vulnerable individuals during operation will be addressed through the continued implementation of the SEP.

4.1.2.8. Cultural Heritage

Tangible Cultural Heritage

Construction Phase

Based on desk-based reviews and field assessments, no known or registered tangible cultural heritage assets are located within the Subproject footprint or along its associated infrastructure routes. Accordingly, no direct impacts on known tangible cultural heritage are anticipated during the construction phase.

However, given that construction activities will involve excavation and earthworks, there remains a low probability of chance finds (e.g., previously unknown archaeological remains). In the event of such chance finds, construction activities will be immediately suspended in the affected area, and the procedures defined under the Chance Finds Procedure included in the ESMP will be implemented, in line with national legislation and ESS8 requirements.

Indirect impacts on known tangible cultural heritage assets are not anticipated, as the nearest identified heritage site (Eflatunpınar / Hittite Water Monument) is located approximately 17.4 km from the Subproject area and lies outside the Area of Influence.

Overall, impacts on tangible cultural heritage during the construction phase are assessed as negligible, provided that the Chance Finds Procedure is effectively implemented.

Operation Phase

During the operation phase, all activities will be confined to the wastewater treatment plant site and underground collector pipelines. No activities are envisaged that would involve ground disturbance or interaction with cultural heritage resources.

Accordingly, no impacts on tangible cultural heritage are anticipated during the operation phase.

Intangible Cultural Heritage

Construction Phase

The Subproject area of influence does not have a spatial or functional association with locations where intangible cultural heritage elements are practiced, such as ritual areas, event spaces, or culturally significant focal points. Construction activities are therefore not expected to disrupt or interfere with intangible cultural heritage practices.

Nevertheless, temporary construction-related disturbances (e.g., noise, traffic, access restrictions) may occur within settlement areas. These impacts are expected to be temporary and localized and are not anticipated to affect the continuity of intangible cultural heritage practices within the communities.

Operation Phase

During the operation phase, the Subproject will function as a closed and controlled infrastructure facility. No interaction with community cultural practices or events is expected.

Accordingly, no adverse impacts on intangible cultural heritage are anticipated during the operation phase.

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. • Measures will be taken to prevent employment or engagement of children under the minimum age established in GFC Project's LMP⁹.	• 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

⁹ According to the Project LMP, workers under the age of 18 will not be engaged by the Project.

No	Risk and Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
			- Measures will be taken in accordance with the Subproject specific Labor Management Plan to prevent use of forced labor¹⁰ in connection with the Subproject. - Where on-site or off-site accommodation services¹¹ 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. - 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.		

¹⁰ 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.

¹¹ 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 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 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. - 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.	- 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
			- 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. - 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	<u>General Measures</u> Ensure the implementation of engineering measures to eliminate, to the extent possible, the presence and negative character of confined spaces.	- Contractor - Subcontractors - OHS Specialist - Site Supervisor - Project	Occupational Health and Safety Management Plan

No	Risk and Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
		subcontractor personnel authorized to enter confined spaces On-site technical and supervisory staff	• 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. ○ The atmosphere within the confined space will be tested to assure the oxygen content is between 19.5 percent and 23 percent, and that the presence of any flammable gas or vapor does not exceed 325 percent of its respective Lower Explosive Limit (LEL). ○ 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.	Implementation Unit (PIU)	• 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 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. • 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	<u>General Measures</u> • Ensure that all energized electrical devices and lines are marked with warning signs	• Contracto • Subcontractors • Authorized	• Occupational Health and Safety

No	Risk and Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
		Electricians and authorized technical personnel Contractor and subcontractor personnel working near energized equipment On-site technical and supervisory staff	• 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. • 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.	Electrician • OHS Specialist • Site Supervisor • Project Implementation Unit (PIU)	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
			- 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 Contractor and subcontractor personnel involved in elevated works On-site technical and supervisory staff	<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. 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 use of 100 percent fall protection (typically when working over 2 meters above the working surface, but sometimes extended to 7 meters, depending on the activity). The fall protection system will be appropriate for the structure and necessary movements, including ascent, descent, and moving from point to point, in accordance with the risk assessment prepared for the work to be performed at height.	- Contractor - Subcontractors - OHS Specialist - Site Supervisor - Project Implementation Unit (PIU)	- Occupational Health and Safety Management Plan - Working at Height Procedure - Construction Phase Risk Assessment - Emergency Preparedness and Response Plan - Contractor Management Plan - National OHS

No	Risk and Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
			• 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’. <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.		Regulations on Working at Height
	OHS - Physical Hazards: Rotating	Construction workers operating or working near	<u>General Measures</u>	• Contractor • Subcontractors	• Occupational Health and

No	Risk and Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
	and Moving Equipment	rotating and moving equipment Heavy machinery operators Contractor and subcontractor personnel present in equipment operating areas On-site technical and supervisory staff	- 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 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.	- Equipment Operators - OHS Specialist - Site Supervisor - Project Implementation Unit (PIU)	Safety Management Plan - Equipment Operation and Maintenance Procedures - Construction Phase Risk Assessment - Contractor Management Plan - National OHS Legislation

No	Risk and Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
	OHS - Physical Hazards: Welding and Hot Works	Construction workers performing welding, cutting, and other hot works Contractor and subcontractor personnel working in proximity to hot works On-site technical and supervisory staff	<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, 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.	• Contractor • Subcontractors • OHS Specialist • Site Supervisor • Authorized Welding Personnel • Project Implementation Unit (PIU)	• Occupational Health and Safety Management Plan • Hot Work 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
			- 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.		
	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.	- 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
			Night-time or low-visibility operations will be subject to additional control measures, including adequate lighting.		
	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

No	Risk and Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
	OHS - Chemical Hazards	Construction workers handling chemicals (e.g. fuels, solvents, lubricants, paints) Contractor and subcontractor personnel exposed to chemical substances Workers involved in refueling, maintenance, and storage activities On-site technical and supervisory staff	<u>General Measures</u> • 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'	• Contractor • Subcontractors • OHS Specialist • Site Supervisor • Project Implementation Unit (PIU)	• Occupational Health and Safety 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 - Contractor

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.		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. - Ensure that each direct and contracted worker signs the Worker Code of Conduct prior to commencing work on site. - Provide SEA/SH training to all direct and contracted workers as part of the induction and/or regular OHS and social training program.	- 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 Management Plan - National

No	Risk and Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
					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> • Ensure implementation of technically and financially feasible measures for improving efficient consumption of energy, water and raw materials. • Minimize unnecessary water use for dust suppression and general site needs. <u>Site-specific Measures</u> • Construction machinery will be regularly maintained to optimize fuel consumption and reduce exhaust emissions. • Materials (aggregates, concrete, piping) will be procured from licensed local suppliers to reduce transport distances and carbon footprint. • During operation, energy efficiency will be maintained via SCADA automation and Variable Frequency Drives (VFDs) on pumps/blowers. • Excavated soil will be reused for backfilling where technically feasible to minimize raw material extraction.	• 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, Nearby agricultural lands	<u>General Measures</u> • Minimizing disturbance to vegetation and soils. • Reducing or preventing erosion by scheduling to avoid heavy rainfall periods. • Limiting access road gradients. <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
			• Vehicles and machinery will only operate on designated access routes (existing dirt tracks and D350 highway) to prevent soil compaction on agricultural lands. • Construction activities will be strictly confined to the defined project boundaries (Block 216, Parcel 32) to prevent encroachment into the Beyşehir Lake Wetland Buffer Zone. • Drip trays and absorbent kits (spill kits) will be available on-site for immediate response to accidental fuel/oil spills. • No fuel storage will be established on-site; refueling will be done by mobile tankers in controlled areas.		
	Impacts on topsoil	Vegetative soil layer	<u>General Measures</u> • Store topsoil for future site rehabilitation activities. • Maintain soil integrity in readiness for future use. <u>Site-specific Measures</u> • Topsoil stripping will be limited to the construction footprint and stored in designated areas with proper slopes to prevent erosion. • Vegetative soil stored to be used for rehabilitation purposes will be used as top cover in necessary areas during landscaping. • Topsoil piles will be kept separate from subsoil and construction debris to prevent contamination.	• Contractor • Environmental Specialist • PIU	• Soil Management Plan • ESMP
	Management of Air Pollution				
	Emissions to air during construction	Residents of Kireli, Çavuş, Tolca and Göçeri Neighborhoods, Agricultural crops, Construction workers	<u>General Measures</u> • Use of dust control methods (water suppression) for open storage piles and unpaved roads. • Use of water suppression for control of loose materials. <u>Site-specific Measures</u> • Regular water spraying will be applied to the construction site and access roads, especially during excavation, filling, and demolition of the existing abandoned concrete structure. • Speed limit of 30 km/h will be enforced for construction vehicles on site and unpaved access roads to minimize dust.	• Contractor • Site Supervisor • PIU	• Air Quality Management Plan • Traffic Management Plan

No	Risk and Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
			• Trucks transporting loose materials (soil, debris) will be covered with tarpaulins. • Construction machinery will be switched off when not in use (no idling) to reduce exhaust emissions (NOx, PM, SO2). • Demolition of the existing reinforced concrete structure will be carried out with specific dust suppression measures.		
	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> • A Temporary Waste Storage Area will be established on the WWTP site with designated bins for hazardous, non-hazardous, and recyclable wastes. • Demolition Waste: Debris from the demolition of the existing unfinished concrete structure will be segregated and disposed of at licensed construction waste disposal facilities. • Excavated Soil: Excess soil not used for backfilling will be transported to permitted dump sites authorized by the Municipality. • Hazardous Waste: Waste oils, filters, and contaminated packaging will be stored in leak-proof containers on impermeable ground and collected by licensed disposal firms. • Domestic Waste: Solid waste from workers will be collected in bins and disposed of via the municipal waste collection system.	• Contractor • Environmental Specialist • PIU	• Waste Management Plan
	Management of Wastewater				
	Wastewater generation (such domestic wastewater, wastewater from construction sites, etc.)	Surface water (Dry creek bed/Kireli Stream), Groundwater	<u>General Measures</u> • Prevent discharge of untreated wastewater. • Ensure that waste minimization is carried out. <u>Site-specific Measures</u>	• Contractor • Operator (KOSKİ) • PIU	• Wastewater Management Plan • Water Pollution Control Regulation Compliance

No	Risk and Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
			• Construction Phase: Portable toilets will be provided for workers. Wastewater will be collected in impermeable septic tanks and transported by vacuum trucks to the Konya WWTP or nearest authorized facility. • Operation Phase: Treated effluent will be discharged to the dry creek bed via a 350m discharge line, meeting the standards of the Urban Wastewater Treatment Regulation (SKKY) and EU Directive 91/271/EEC. • 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.		
	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. • 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.	• Contractor • OHS Specialist • Operator (KOSKİ)	• Hazardous Material and Waste Management Plan • Emergency Preparedness and Response Plan
	Management of Environmental Noise and Vibration				
	Noise and vibration generation during construction	Residents of Kireli Neighborhood, Fauna in the vicinity	<u>General Measures</u> • Manage the potential impact of noise, selecting equipment with lower sound power levels.	• Contractor • PIU	• Noise Management Plan • Stakeholder Engagement Plan (SEP)

No	Risk and Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
			- 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.		
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 from fire, injuries suffered as a consequence of falls or contact with heavy equipment, etc.)	Local communities and beneficiaries within the administrative boundaries of Kireli Neighborhood Road users and visitors accessing areas adjacent to construction sites Workers of nearby facilities and land users in the vicinity of construction activities	<u>General Measures</u> - Design and construct 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. - 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	- Administration / Employer - Design Engineers - Contractor - Site Supervisor - Project Implementation Unit (PIU)	- Environmental and Social Management Plan (ESMP) - Approved Design and Engineering Documents - 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
			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. - 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)	<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	- Contractor - Traffic Safety Officer / Site Supervisor - Project Implementation Unit (PIU)	- Traffic Management Plan (Construction Phase) - Stakeholder Engagement

No	Risk and Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
		Nearby businesses and service users Construction workers exposed to traffic movements	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 ○ 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;		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
			○ 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. • 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 Kireli Neighborhood (project beneficiaries) Pedestrians and road users in nearby settlements with potential indirect interaction during construction (including Tolca, Çavuş and Göçeri Neighborhoods) Pedestrians, cyclists, and drivers using existing public	<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	• 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

No	Risk and Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
		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 construction sites	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. - 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.		Plan (ESMP) National Traffic and Road Safety Regulations
	Emergency Preparedness and Response				
	Risks and impacts on communities due to potential emergency events during	Residents of Kireli Neighborhood (project beneficiaries)	<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.	- Contractor - OHS Specialist - Site Supervisor	Emergency Preparedness and Response Plan

No	Risk and Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
	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 failure to implement operating procedures that are designed to prevent their occurrence, extreme weather or lack of early warning, traffic accidents, structural failures, etc.).	Residents of nearby settlements with potential indirect interaction during construction (including Tolca, Çavuş and Göçeri Neighborhoods) Pedestrians and road users using public roads and access roads adjacent to construction areas 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)	• <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. • 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.	• Project Implementation Unit (PIU)	(Construction Phase) • Occupational Health and Safety Management Plan • Traffic Management Plan (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 Kireli Neighborhood (project beneficiaries) Pedestrians and road users using public roads and access roads adjacent to the construction sites	<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.	• Contractor • Project Implementation Unit (PIU) • Social Specialist • Site Supervisor	• Environmental and Social Management Plan (ESMP) • Stakeholder Engagement Plan (SEP) • Project Grievance Mechanism Procedure

No	Risk and Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
		Nearby land users and visitors in the vicinity of construction activities	• 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 are required to act within the applicable national legislation and any requirements set out in Subproject'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.		• Contractor Management Plan (CMP)
ESS5 – Land Acquisition, Restrictions on Land Use and Involuntary Resettlement					

No	Risk and Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
	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. - 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.	- Project Implementation Unit (PIU) - Contractor - Social Specialist	- Environmental and Social Management Plan (ESMP) - Stakeholder Engagement Plan (SEP)
	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 project 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 project 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					

No	Risk and Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
	Impacts on habitats	Modified Habitat (Agricultural and Ruderal vegetation areas) located within the Beyşehir Lake Wetland Buffer Zone (Block 216, Parcel 32)	<u>General Measures</u> - Minimize the project 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 confined to the defined project 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.	- Contractor - Environmental Specialist - PIU	- Biodiversity Management Plan - Construction Method Statement - ESMP
	Impacts on flora species	Widespread herbaceous species: <i>Cynodon dactylon</i> , <i>Bromus tectorum</i> , <i>Chenopodium album</i> , <i>Convolvulus arvensis</i> , <i>Cirsium arvense</i>	<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. - 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	Potential sheltering reptiles (specifically Common Tortoise - <i>Testudo graeca</i> , IUCN Vulnerable) in the abandoned structure; common birds and 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>).	- Contractor - Biodiversity Expert - PIU	- Biodiversity Management Plan - Waste Management Plan

No	Risk and Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
			• 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. • 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 project 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.	• 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
			Construction activities will be carried out in a manner that avoids unnecessary disturbance to the surrounding environment, and monitoring will be conducted to ensure compliance with CHMP provisions.		
	Impacts on intangible cultural heritage	Local communities residing within the administrative boundaries of Kireli 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 I) 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 (presented in Annex I) - 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.	- 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
			- Relevant authorities will be notified, and construction activities will resume only after clearance is obtained from the competent authority. - 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 pre-construction and 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. - Within the scope of the Sub-Project, a Public Participation Meeting was held on 20 August 2026 to inform stakeholders about the Sub-Project and relevant environmental and social matters and to obtain their views. During the meeting, stakeholders' questions, views, and suggestions were received and addressed by the representatives of the relevant institutions. The minutes and supporting records of the Public Participation Meeting are provided in Annex O.	- Project Implementation Unit (PIU) - Social Specialist - Contractor (for construction-phase stakeholder engagement activities)	- Stakeholder Engagement Plan (SEP) - Public Participation Meeting Minutes
	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. KOSKI 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	Residents of Kireli Neighborhood (project beneficiaries), nearby	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	Project Implementation Unit (PIU)	Stakeholder Engagement Plan (SEP)

No	Risk and Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Relevant Plans/Procedures
	disclosure on construction activities	settlements with potential indirect interaction during construction (including Tolca, Çavuş and Göçeri Neighborhoods), local authorities, and other interested stakeholders.	the SEP. • Announce planned construction activities and changes in advance through appropriate communication channels defined in the SEP. • Ensure that information disclosed during the construction phase is consistent with the project description and impact assessment findings presented in the ESMP and SEP.	• Social Specialist • Contractor	• Environmental and Social 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	General Measures • 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 LMP¹².	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

¹² 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 labor¹³ in connection with the Subproject. - Where on-site or off-site accommodation services¹⁴ 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. Site-specific Measures - 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. - A Code of Conduct will be implemented for all operational staff, including provisions on respectful behavior, prevention of Sexual Exploitation and Abuse/Sexual Harassment (SEA/SH), and a zero-tolerance approach to harassment, exploitation, and discrimination.		

¹³ 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.

¹⁴ 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
			All personnel will receive periodic training and awareness sessions on SEA/SH and communicable diseases (such as HIV/AIDS). These trainings will cover acceptable conduct, prevention measures, reporting mechanisms, and health protection practices. Participation will be documented and monitored throughout the operation phase.		
	OHS – General 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> - 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. - 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.	- 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
			- 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. - 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	<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).	- 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

No	Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Implementation Plans
		the facility	• 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. • 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.		Legislation

No	Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Implementation Plans
			• 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. • 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.	• 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
			• 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. • 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	<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).	• 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

No	Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Implementation Plans
		the facility	• 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. • 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.		Legislation

No	Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Implementation Plans
			- 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.		
	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.	- 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
			- 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. - 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	<u>General Measures</u>	- Employer - Employer's	Occupational Health and Safety

No	Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Implementation Plans
		(O&M) personnel Operation-phase contractors and subcontractors Technical, administrative and support staff working within the facility	• 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 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.	Representative • Contractor • Subcontractors • Project Implementation Unit (PIU) • Social Specialist • Occupational Health and Safety (OHS) Specialist • Occupational Physician	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
			• Provide access to safe drinking water and sanitation (including hand washing) facilities; • Control vectors and intermediate hosts. <u>Site-specific Measures</u> • 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	<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>	• 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

No	Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Implementation Plans
		the facility	• 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. • 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.		Legislation
	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					

No	Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Implementation Plans
	Resource Efficiency (Energy Use, Water Use and Raw Material 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 Kireli 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 Kireli 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 systems	Receiving Body: Dry Creek Bed leading to Kireli Stream and Beyşehir	<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
		Lake (Sensitive 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. • Discharge Infrastructure: Treated effluent will be discharged via a newly constructed ~250-meter discharge line into the dry creek bed to prevent erosion and ensure proper conveyance to the receiving body. • 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	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
	water resources		• 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				
	Noise and vibration	Residents of	<u>General Measures</u>	• KOSKİ (Operator)	• Noise Management

No	Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Implementation Plans
	generation during operation	Kireli Neighborhood, Fauna in the vicinity	• 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).	• PIU	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 Kireli Neighborhood (project beneficiaries) Visitors and service users accessing the wastewater treatment plant area Nearby land users and road users in the	<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. • Safety signage, barriers, and guardrails will be maintained in areas where there is a risk of falls, contact with equipment, or other physical hazards.	• 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 • Environmental and Social Management

No	Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Implementation Plans
		vicinity of the facility	Emergency shutdown procedures and safe access routes will be maintained to protect both workers and third parties.		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. - 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.	- Employer - Employer’s Representative - Occupational Health and Safety Specialist - Occupational Physician	National Legislation

No	Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Implementation Plans
			- 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 resettlement impacts related to the operation of the Subproject.	Not applicable. No individuals, households, land users, or businesses are affected by economic or physical displacement	- 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 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	- Sub-borrower - Project Implementation Unit (PIU) - Social Specialist	- Environmental and Social Management Plan (ESMP) - Stakeholder Engagement Plan

No	Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Implementation Plans
		during the operation phase of the Subproject.	Action Plan (RAP), will be initiated as necessary, with reference to the Construction ESMP.		• 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 Receiving Body) and Kireli Stream	<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 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	• KOSKİ (Operator) • Environmental Specialist	• Wastewater Management Plan • Water Pollution Control Regulation Compliance

No	Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Implementation Plans
			the dry creek bed that feeds into the lake system. • 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 disclosure during the operation phase of the Subproject.	Residents of Kireli Neighborhood (project beneficiaries) Nearby settlements with potential indirect interaction	- 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 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.	Sub-borrower Project Implementation Unit (PIU)	Stakeholder Engagement Plan (SEP) Project Grievance Mechanism Procedure Environmental and Social Management Plan (ESMP)

No	Impact Description	Receptor	Proposed Mitigation Measure	Responsible Parties	Implementation Plans
		during operation Relevant local authorities and public institutions Other interested or affected stakeholders identified in the SEP			

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 the 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 4-1.

Table 4-1. 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
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 90% or higher worker satisfaction rate
Community Health and Safety	

Monitoring Focus	KPI
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 4-2. Construction 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
C-01	Air Quality – Dust	PM10, visible dust, complaints	WWTP site, excavation areas, haul roads, nearest receptors (Kireli Neighborhood)	Visual inspection + portable PM meter + grievance review	Daily visual / Weekly measurement	RAQAM + WBG EHS (PM10 ≤ 50 µg/m³ 24h)	Contractor EHS Officer / KOSKİ PIU	No visible plume, # complaints = 0, watering implemented	Included in contract
C-02	Air Emissions – Machinery	Equipment exhaust, black smoke	Construction site	Visual inspection, maintenance logs	Weekly	National emission standards	Contractor	% equipment with valid maintenance = 100%	Included
C-03	Noise	LAeq (dBA)	Site boundary & nearest houses	Sound level meter	Monthly + complaint-based	ÇGDYY + WBG EHS (55 dBA day)	Contractor / Supervision Consultant	≤ limits, # complaints	Included
C-04	Vibration	Vibration level during heavy works	Sensitive receptors	Portable vibration meter (if required)	As needed	National standards	Contractor	No structural damage/complaints	Included
C-05	Surface Water Protection	Turbidity, sediment runoff	Drainage channels / creek bed	Visual check, turbidity observation	Weekly & after rainfall	No visible sediment discharge	Contractor	Silt traps installed, erosion control effective	Included
C-06	Wastewater (domestic)	Septic tank condition / leakage	Worker facilities	Inspection	Weekly	No discharge to environment	Contractor	0 illegal discharge	Included
C-07	Soil Management	Erosion, spills, compaction	Entire site	Visual inspection	Weekly	GIIP	Contractor	Erosion controls installed	Included
C-08	Hazardous Materials	Fuel/chemical storage, MSDS	Storage areas	Checklist inspection	Weekly	WBG EHS	Contractor	Bunded storage, spill kit availability 100%	Included
C-09	Spill Control	Spill incidents	Site	Incident log review	Continuous	Zero uncontrolled spill	Contractor	# spills, response time	Included
C-10	Solid Waste	Waste segregation, records	Waste storage areas	Inspection + manifests	Weekly	Waste Management Reg.	Contractor	Segregation rate %, manifests	Included
C-11	Hazardous Waste	Labeling, temporary storage	Hazardous storage	Inspection	Weekly	HW Reg.	Contractor	Licensed disposal 100%	Included
C-12	Excavation Waste	Disposal location	Haul routes / disposal sites	Documentation review	Per load	Licensed site only	Contractor	Disposal receipts	Included
C-13	Sludge/Construction Debris	Proper removal	Site	Visual check	Weekly	No open dumping	Contractor	0 illegal dumping	Included
C-14	Traffic Safety	Vehicle speed, signage	Access roads (D350, village roads)	Inspection + GPS/speed checks	Daily	TMP requirements	Contractor	# incidents, speed compliance	Included
C-15	Community Safety	Barricades, warning signs	Site perimeter & trenches	Inspection	Daily	GIIP	Contractor	100% barricaded areas	Included
C-16	Occupational Health & Safety	OHS monitoring (site inspections, high-risk activities, incident reporting and corrective actions)	Entire site	Site audit	Daily	WB ESS2 + OHS Law	Contractor HSE Manager	PPE compliance %, # trainings	Included
C-17	Accidents/Incidents	Lost Time Injury, near miss	Site	Incident reporting system	Continuous	Zero fatality	Contractor / KOSKİ	LTIFR, # near miss reported	Included
C-18	Working Conditions	Contracts, working hours	HR records	Document review	Monthly	Labor Law + ESS2	Contractor	% compliant workers	Included
C-19	Training	OHS & E&S trainings	Site office	Attendance logs	Monthly	ESMP training plan	Contractor	# staff trained	Included

Ref.	Subject	Parameter to be Monitored	Monitoring Location	Monitoring Method	Monitoring Frequency	Reference / Threshold Level	Responsibility for Monitoring	Monitoring / KPIs	Cost
C-20	Biodiversity	Flora/fauna disturbance	Site boundary	Visual survey	Monthly	No unnecessary clearing	Contractor	Disturbed area minimized	Included
C-21	Cultural Heritage	Chance finds	Excavation areas	Monitoring + procedure check	Continuous	Chance Finds Procedure	Contractor	# finds properly handled	Included
C-22	Grievance Mechanism	Complaints received/resolved	Community	GM log review	Monthly	ESS10	KOSKI / Contractor	Resolution $\leq$ 15 days, closure rate	Included
C-23	Stakeholder Engagement	Information disclosure	Villages	Meeting records	Quarterly	SEP	KOSKI	# meetings	Included
C-24	Camp Management	Sanitation, hygiene	Worker camp	Inspection	Weekly	WBG EHS	Contractor	Cleanliness score	Included
C-25	Emergency Preparedness	ERP drills, equipment	Site	Drill + checklist	Quarterly	ERP	Contractor	# drills/year $\geq$ 2	Included
C-26	Energy Use	Fuel consumption	Site	Log review	Monthly	Resource efficiency	Contractor	L fuel / m ³ excavation	Included
C-27	Housekeeping	Site tidiness	Site	Inspection	Daily	GIIP	Contractor	Clean site score	Included
C-28	Documentation	ESMP compliance	Site office	Internal audit	Monthly	ESMP	Supervision Consultant	% actions closed	Included

Table 4-3. 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	BODs, COD, TSS	WWTP outlet	Sampling + accredited lab analysis	Weekly	WPCR + EU 91/271/EEC limits	KOSKI Operator	$\geq$ 95% compliance rate	Included
O-02	Nutrient Removal	Total N, Total P	Outlet	Lab analysis	Weekly	Sensitive area discharge limits	KOSKI	N $\leq$ 15 mg/L, P $\leq$ 2 mg/L	Included
O-03	Microbiological Quality	E.coli / coliform	Outlet	Lab analysis	Monthly	National standards	KOSKI	Within limits	Included
O-04	Flow Rate	Influent & effluent m ³ /day	Flow meter	SCADA monitoring	Continuous	Design capacity 800 m ³ /day	KOSKI	Overload events = 0	Included
O-05	Receiving Environment Protection	Visual turbidity / odor	Creek bed discharge point	Field inspection	Weekly	No visible pollution	KOSKI	0 complaints/pollution sign	Included
O-06	Sludge Quality	Moisture %, stabilization	Dewatering unit	Lab/inspection	Weekly	Safe handling criteria	KOSKI	Cake dryness $\geq$ 20% solids	Included
O-07	Sludge Disposal	Disposal manifests	Transfer records	Documentation review	Per shipment	Licensed disposal only	KOSKI	100% licensed disposal	Included
O-08	Odor Management	H ₂ S/odor presence	Plant boundary	Odor patrol + handheld meter	Weekly + complaint-based	No nuisance odor	KOSKI	# odor complaints	Included
O-09	Ambient Air	PM10, H ₂ S (if needed)	Site boundary	Portable measurement	Quarterly	WBG EHS limits	KOSKI	Within limits	Included

O-10	Noise	LAeq (dBA)	Site boundary / nearest receptor	Sound meter	Semi-annually	≤ 55 dBA day	KOSKİ	Within limits	Included
O-11	Chemical Storage	Chlorine, chemicals storage	Chemical room	Inspection checklist	Weekly	WBG EHS / MSDS	KOSKİ	100% bunded storage	Included
O-12	Chemical Consumption	Usage logs	Site	Record review	Monthly	Resource efficiency	KOSKİ	kg chemical/m³ treated	Included
O-13	Spill Prevention	Leaks/spills	Chemical & fuel areas	Inspection	Weekly	Zero uncontrolled spill	KOSKİ	# spill events	Included
O-14	Solid Waste	Screening waste, grit	Waste storage	Inspection	Weekly	Waste Reg.	KOSKİ	Proper segregation	Included
O-15	Hazardous Waste	Used oil, chemical containers	Hazardous storage	Inspection + manifests	Monthly	HW Reg.	KOSKİ	Licensed disposal	Included
O-16	Energy Efficiency	Electricity (kWh)	SCADA / meters	Meter reading	Monthly	Energy mgmt target	KOSKİ	kWh/m³ treated	Included
O-17	Water Reuse	Reused effluent volume	Irrigation line	Flow record	Monthly	Internal reuse plan	KOSKİ	% reuse rate	Included
O-18	Equipment Condition	Pumps/blowers uptime	Plant	Maintenance logs	Monthly	Preventive maintenance	KOSKİ	Uptime ≥ 95%	Included
O-19	Emergency Preparedness	ERP drills	Plant	Drill + report	Semi-annually	ERP plan	KOSKİ	≥ 2 drills/year	Included
O-20	Occupational Health & Safety	PPE, accidents	Entire facility	Safety audits	Monthly	OHS Law + ESS2	KOSKİ	LTIFR, PPE compliance	Included
O-21	Confined Space Safety	Entry permits	Tanks	Permit review	Per entry	OHS standards	KOSKİ	100% permit compliance	Included
O-22	Training	Operator training hours	Site	Attendance records	Annual	Training plan	KOSKİ	≥ 8 hr/person/year	Included
O-23	Working Conditions	Contracts, hours	HR records	Document review	Annual	Labor Law	KOSKİ	Full compliance	Included
O-24	Biodiversity	Wildlife disturbance	Site boundary	Visual inspection	Quarterly	No habitat damage	KOSKİ	No incidents	Included
O-25	Community Health & Safety	Public complaints	Villages	GM log review	Monthly	ESS10	KOSKİ	Closure ≤ 15 days	Included
O-26	Traffic Safety	Sludge transport vehicles	Access roads	Inspection/log	Monthly	TMP	KOSKİ	0 accidents	Included
O-27	SCADA & Data Integrity	Monitoring system uptime	Control room	System check	Weekly	Continuous monitoring	KOSKİ	≥ 99% uptime	Included
O-28	Regulatory Compliance	Permits validity	Documentation	Annual audit	Annual	National permits	KOSKİ	100% valid permits	Included
O-29	Reporting	ESMR submission	PIU/İLBANK	Report review	Quarterly	ESMP requirements	KOSKİ	On-time reporting	Included
O-30	Climate / Resource Efficiency	Specific energy & sludge production	Plant	KPI calculation	Quarterly	GIIP	KOSKİ	Benchmark improvement	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 4-4.

Table 4-4. 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 İLBANK of any material changes to the Subproject (including those resulting from the activities of the Sub-borrower and/or contractor) using İLBANK's Change Notification Form template (see Annex J).

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 in Figure 5-1. The PIU will include qualified staff and resources to the satisfaction of İLBANK.

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	Branch Manager of Wastewater Treatment Facilities Project and Construction – Electrical & Electronics Engineer	Department of Wastewater Treatment Facilities	Project Assistant 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

Figure 5-1. Organization Structure – Project Implementation Unit (PIU)

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 5-1.

Table 5-1. Roles and E&S related Responsibilities of Key Parties associated with ESMP Implementation

Party	Role	Key Responsibilities
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 Subproject 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) • 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

Party	Role	Key Responsibilities
		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 • 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 5-2*. 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 5-2. 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: - o 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.) - o External Communications (including stakeholder engagement, grievance management, etc.) - o Monitoring, Review and Reporting - o 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: - o E&S covenants included in sub-loan agreements - o Subproject ESAP requirements - o Subproject-level E&S assessment and management documentation (such as ESMP, SEP and other E&S management plans and procedures as applicable); - o Emergency Preparedness and Response Plan including a training program for emergency responders including drills at regular intervals; - o 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.

6. IMPLEMENTATION SCHEDULE AND COST ESTIMATES

6.1. Implementation Schedule

The duration of the construction and operation phase activities is listed in Table 6-1.

Table 6-1. Duration of Activities

Phase	Remarks/ Notes
Construction Duration	16 months
Defect Liability Period	12 months

6.2. 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 6-2.

- 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 6-2 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 KOSKI (**)
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.

(**) 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 KOSKI.

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

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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
Efe Can OĞUZOĞLU	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
Abdullah Mustafa KARAGÖZ	POSEİDON Environmental Social Consulting Engineering Trade Ltd. Co. (POSEİDON)	OHS Expert
Gözde YURTTAŞ	POSEİDON Environmental Social Consulting Engineering Trade Ltd. Co. (POSEİDON)	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
Kireli WWTP	37.928322	31.525443
	37.928441	31.525373
	37.928896	31.525138
	37.929140	31.525010
	37.929329	31.525493
	37.928705	31.525780
	37.928464	31.525953
	37.928295	31.526096
	37.928275	31.526055
	37.928312	31.525936
	37.928336	31.525765
	37.928331	31.525556

Annex C – Title Deeds



TÜRKİYE CUMHURİYETİ TAPU SENEDİ

TAŞINMAZ BİLGİLERİ	İl:	KONYA		
	İlçe:	HÜYÜK		
	Mahalle/Köy:	KİRELİ		
	Mevki:	KÖROĞLU		
	Ada:	Parsel:	32	
	Yüz Ölçümü:	Cilt/Sayfa No:	49 - 4770	
Niteliği:		5.006,11 m ² Atıksu Arıtma Tesisi Alanı		

MALİK BİLGİLERİ	Adı Soyadı/Baba Adı:	Hissesi:	Hisseye düşen m ² :
	KONYA SU VE KANALİZASYON İDARESİ GENEL MÜDÜRLÜĞÜ (KOSKİ)	Tam	5.006,11

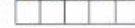
TESCİL İLİŞKİN BİLGİLER	Taşınmaz No:	Edinme Nedeni:	İşlem Bedeli:
	117158089	Diğer Cins Değişiklikleri.	
Konum Bilgisi:	Tescil Tarihi/Yevmiye No:	Siciline Uygun	
	12/05/2026 - 2859	Veriliş Tarihi : 12/05/2026 Özge SEYİDİ Tapu Müdür V.	

Mülkiyetin dışındaki aynı ve şahsi haklar ile şerh ve belırtmeler için tapu siciline müracaat edilmesi gerekmektedir.

İli	KONYA	<i>Türkiye Cumhuriyeti</i>  <i>TAPU SENEDİ</i>		Fotoğraf			
İlçesi	HÜYÜK						
Mahallesi	KİRELİ						
Köyü							
Sokağı							
Mevkii	KÖROĞLU						
Satış Bedeli		Pafta No.	Ada No.	Parsel No.	Yüzölçümü		
1,00				4719	ha	m ²	
					5.145,39	m ²	
GAYRİMENKULÜN	Niteliği	TARLA					
	Sınırı	Planındadır					
		Zemin Sistem No : 63258978					
	Edinme Sebebi	Tamamı HÜYÜK BELEDİYESİ adına kayıtlı iken KOSKİ GENEL MÜDÜRLÜĞÜ adına Satış işleminden.					
	Sahibi	KOSKİ GENEL MÜDÜRLÜĞÜ Tam					
Geldisi		Yevmiye No.	Cilt No.	Sahife No.	Sıra No.	Tarihi	Gittisi
Cilt No.		3069	49	4770		12/12/2017	Cilt No.
Sahife No.		Siciline Uygundur. Tuncay E.KİÇİ Tapu Müdürü 				Sahife No.	
Sıra No.						Sıra No.	
Tarih						Tarih	
NOT : * Mülkiyetin gayrimenkul hakkı ile satış işlemi tapu siciline müracaat edilmelidir. * Tebliğat Kanunu hükümleri perspektifinde deşifre edilmiş ilgili Tapu Sicil Müdürlüğüne bildirilecektir.							

D.M.O. Basım İşl. Md.

Döner Sermaye İşletmesi tarafından bastırılmıştır.



Stok No 129

4719 parsel hareket listesi			
Tablo		Grafik	
Açıklama	Durum	Taşınmaz No	Parsel
▼ 05/10/2021 Tarihli 3402 S.Y. Kadastro Ka...	Pasif	4719	
-	Aktif	216/32	

Annex D – Existing Permitting Documentation

EIA Decisions



T.C.
KONYA VALİLİĞİ
Çevre ve Şehircilik İl Müdürlüğü

Sayı : 47342952-220.03-E.7056
Konu : Muafiyet

20.04.2018

KONYA SU VE KANALİZASYON İDARESİ GENEL MÜDÜRLÜĞÜNE

İlgi : a) Mora Çevre ve Orman Müh. San. Tic. Ltd. Şti.'nin 13/04/2018 tarihli dilekçesi.
b) 19/04/2018 tarihli ve 90413 Referans No'lu Başvuru.

İlimiz, Hüyük İlçesi, Kireli Mahallesi, Köroğlu Mevkii, 4719 Parsel adresinde KOSKİ tarafından yapılması planlanan Kireli Atıksu Arıtma Tesisi (800 m³/gün) 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'î mevzuat çerçevesinde öngörülen gerekli izinlerin alınması, ekolojik dengenin bozulmamasına, çevrenin korunmasına ve geliştirilmesine yönelik tedbirlere riayet edilmesi hususunda;

Gereğini rica ederim.



Kanaliz. D. Bşk. İht.
Atıksu Kan. Tes. B. Md.
25.04.2018
Atıksu Art. Tes. B. Md.

Hülya ŞEVİK
Vali a.
İl Müdür Yardımcısı V.



Un. E. Kalıllı
25.4.2018
Di. Y. Z. Z. Z.
26.04.2018

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

Hacıhalıhan Mah. Abdulbasri Sok. No:1 Selçuklu/KONYA
Tel: (332) 235 45 20 Fax: (332) 235 45 27 konya@csb.gov.tr

Bilgi için: Merve SEZER
Çevre Mühendisi



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

Sayı : E-47342952-220.03-14685936

Konu : ÇED Muafiyet Belgesi

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

İlgi : a) 09/01/2026 tarihli ve E-20824400-220.04.02-119071 sayılı yazınız.
b) 20/01/2026 tarihli ve 228538 referans no'lu başvuru.

İlgi (a) yazınız ile yapılan başvuru ilgi (b) referans numarası ile çevrimiçi Çevresel Etki Değerlendirmesi süreci yönetim sistemine kayıt edilmiş olup, başvurunuzun incelenmesi neticesinde; Konya İli, Hüyük İlçesi, Kireli Mahallesi 216 Ada, 32 Parselde bulunan alanda, Koski Genel Müdürlüğü tarafından yapılması planlanan Atıksu Arıtma Tesis (800 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.

Non-Agricultural Land Use Permit



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) yazımız 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 yazımız 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



GDNCNP (National Parks) Opinion



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 Tesisleri,

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

- Hüyük İlçesi Köşk, Selki, İmrenler ve Burunsuz Mahalleleri kaynaklı atıksuların arıtılması amacıyla Köşk İleri Biyolojik Atıksu Arıtma Tesisleri 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



Zoning Plan Approval



T.C.
KONYA BÜYÜKŞEHİR BELEDİYE BAŞKANLIĞI
İmar ve Şehircilik Dairesi Başkanlığı

Sayı : E-89646320-045.01-419469
Konu : Atıksu Arıtma Tesisi Amaçlı İmar Planına Esas
Kurum Görüşü hk.

15.01.2026

DAĞITIM YERLERİNE

Finansmanı Dünya Bankası tarafından sağlanan ve İller Bankası A.Ş. tarafından yürütülmekte olan *Yeşil ve Geleceğin Şehirleri Projesi (GFC)* kapsamında yapımı planlanan **Kireli Atıksu Arıtma Tesisi, Köşk Atıksu Arıtma Tesisi ve Karaali Atıksu Arıtma Tesisi**'ne ilişkin bu amaçla yapılacak olan imar planlarına esas olacak şekilde mer'i mevzuatınız kapsamında kurum görüşünüzün 3194 sayılı İmar Kanunu'nun 8'inci maddesinin (e) bendi uyarınca 30 (otuz) gün içinde bildirilmesi ve söz konusu alanlar ile ilgili planlama çalışmalarına altlık oluşturacak bilgi ve belgelerin varsa sayısal ortamda, yoksa ozalit-fotokopi şeklinde basılı suretlerinin gönderilmesi hususunda;

Gereğini bilgilerinize rica ederim.

Ahmet Furkan KUŞDEMİR
Başkan a.
Genel Sekreter Yardımcısı

Ekler :
1 - Dağıtım Listesi (15 Birim)
2 - Taşınmaz bilgileri

Bu belge, güvenli elektronik imza ile imzalanmıştır.

Doğrulama Kodu: 7156abee-60d0-4072-bfde-eb97f5c9236e

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

Adres: Büyük İhsaniye Mah. Kazım Karabekir Cd. No:56, 42060 Selçuklu/Konya
Telefon No: 4445543 Faks No: (332)211 15 76
e-Posta: imarisleri@konya.bel.tr İnternet Adresi: <https://www.konya.bel.tr>
Kep Adresi: konyabuyuksehirbelediyesi@hs03.kep.tr

Bilgi için: Kamil GULMEZ
Şehir Plancısı
Telefon No: -



DAĞITIM LİSTESİ**Gereği:**

Konya İl Tarım ve Orman Müdürlüğü
Dsi 4. Bölge Müdürlüğü
Karayolları 3. Bölge Müdürlüğü
Konya Kültür Varlıklarını Koruma Bölge Kurulu
Müdürlüğü
Konya Çevre, Şehircilik ve İklim Değişikliği İl
Müdürlüğü
Konya Orman Bölge Müdürlüğü
Doğa Koruma ve Milli Parklar 8. Bölge
Müdürlüğü
Teiaş 9. Bölge Müdürlüğü
MERAM ELEKTRİK DAĞITIM ANONİM
ŞİRKETİ
Konya Su ve Kanalizasyon İdaresi Genel
Müdürlüğü
Boru Hatları İle Petrol Taşıma Anonim Şirketi
Genel Müdürlüğü
Maden Tetkik ve Arama Orta Anadolu İ. Bölge
Müdürlüğü
Maden ve Petrol İşleri Genel Müdürlüğü
Konya Yatırım İzleme ve Koordinasyon
Başkanlığı
Konya İl Afet ve Acil Durum Müdürlüğü

Bilgi:

Institutional / Subproject Approval



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 Tesisi, Köşk Atıksu Arıtma Tesisi, Karaali Atıksu Arıtma Tesisi 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-53d3918b9#5

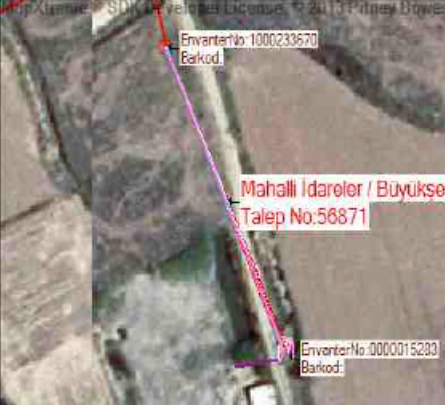
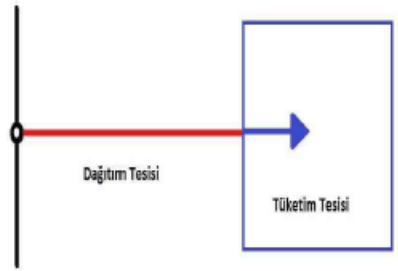
Doğrulama Linki: <https://www.turkiye.gov.tr/icisleri-belediye-ebys>

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: -



Electricity Connection Opinion

MERAM ELEKTRİK DAĞITIM A.Ş. BAĞLANTI GÖRÜŞÜ				NO: 2018-3-1815	
Talep No: 2018-3-1815 İşletme: BEYŞEHİR Bağlantı Seviyesi: OG Kullanım Amacı: Atık Su Arıtma Tipi: 1 Bağlantı Şekli: Radyal	Talep Sebebi ☐ Yeni Abonelik ☒ Güç Artışı ☐ Bağlantı Noktası Değişikliği Tesisat No: 2133950	Tahsis Edilen Kapasite Mevcut Güç: 50 Talep Edilen Güç: 110 Toplam Güç: 160 Birim: ☐ KW ☒ KVA Gerilim Seviyesi: 31.5 kV BN Kısa Devre Akımı: 04,00	Talep Tarihi: 06.02.2018 Veriliş Tarihi: 10.02.2018 Geçerlilik Tarihi: 11.05.2018 Tüketim Tesisi Tamamlanma Tarihi: 05.04.2018 Tesisin Yapılacağı Tarihi: 2018		
Tesis Sahibinin Bilgileri Adı Soyadı, Unvanı, TC Kimlik No: Mahalli İdareler / Büyükşehir Belediyeleri Vergi Kimlik No: Adres: Nişantaşı Mah. Vatan Cad. No:2/A 42060 Selçuklu/KONYA			☐ Gerçek ☐ Tüzel ☒ Kamu Tesisin Kullanıcı Sayısı: 1	Proje Müellifi Bilgileri Adı Soyadı: Rohat ÇETİNKAYA Grup: Kayıt No: Unvanı: İmza:	
Tesis Adres Bilgileri İl: Konya İlçe: HÜYÜK Mahalle: KIRELİ Belediye: HÜYÜK CSBM: Dış Kapı No: Koordinat: X 370387,22 Y 4200641,07 Pafta: Ada: Parsel: İmar: Dışı 0 0 4719 Köy: Evet		Bağlantı Noktasının Elektrik Adresi Fider Adı: BEYŞEHİR3 Trafo Merkezi: BEYŞEHİR TM Dağıtım Merkezi: ÇUKURKENT KÖK Dağıtım Hattı: Kök: TOLCA KÖK Kök Çıkış: TOLCA ÇIKIŞI Direk Numarası: 7 Envanter No: 0000015283		Tesisin Özellikleri Bağlantı Noktasına Kadar Olan Kesit: 3 X SWL Bağlantı Ciri: ENH Ölçüm Noktası: AG Trafo Platformu: Direk Branşman Direği Değiştirilebilir mi? Evet Trafo/DM Yeni Devri Gerekli mi? Hayır Boş Hücre Yeni Adedi:	
Mevcut Durum 		Bağlantı Görüşü Dağıtım Tesisi ve Tüketim Tesisine Alt Direk Tipi Trafo Tesis Edilmesi 			
Enerji Müşade Mühendisi: TÜRKER SOYLU e i m z a		Baş Mühendis: MUSTAFA SAĞLAM e i m z a			

MERAM ELEKTRİK DAĞITIM A.Ş. BAĞLANTI GÖRÜŞÜ		NO: 2018-3-1815
Varsa Özel Şartları Yazınız		
2133950 tesisat numaralı abonelikte istenilen 31.5 kV, 50 KVA' dan 110 KVA güç artışı yapılarak 160 KVA güce Konya İli, HÜYÜK İlçesi,KÖROĞLU mevkii, 0 Ada, 0 pafta, 4719 parselde kurulması planlanan Atık Su Arıtma Tesisi amaçlı sisteme bağlantı talebi aşağıdaki şartlarla karşılanacaktır. BEYŞEHİR TM(154/31,5 kV), FİDER BEYŞEHİR3, ÇUKURKENT KÖK DM çıkışı, 0000015283 nolu mevcut trafo direği uygun görülmesi halinde projede hesaplanan trafo direği ile değiştirilecektir. 50 KVA trafo demontaj edilerek 160 KVA trafo montaj edilecektir. Trafo direğine sigortalı seksiyoner takılacaktır. Ölçü ve devre elemanları yeni güce göre tadil edilecektir. Dağıtım varlıkları projede netleştirilecek olup, tesisin geçici kabulüne müteakip dağıtım tesisi olarak kaydedilecektir. Tüketici niteliğindeki başvuru sahibinin bağlantı talebi aşağıdaki şartlar dahilinde karşılanır: a) Meskun mahal içindeki bağlantı talepleri, bağlantı anlaşmasının imzalandığı tarihten itibaren; 1. Sadece AG bağlantı hattının gerekli olduğu durumlarda 2 ay, 2. Mevcut AG şebekesinde kapasite artışı veya ilave tesis yapılması gereken durumlar ile mevcut dağıtım trafosunda güç artışı yapılması gereken durumlarda 4 ay, 3. Yeni bir dağıtım trafosu yapılması gereken durumlarda 6 ay içinde, 4. Sadece OG bağlantı hattının gerekli olduğu durumlarda 4 ay, 5. OG bağlantı hattı dışında, 2 km'ye kadar OG şebeke tesis edilmesi gereken durumlarda 6 ay, 6. 2 km'den daha uzun tesis edilmesi gereken durumlarda 18 ay içinde karşılanır. b) Kazı izni gereken durumlarda, (a) bendinde belirlenen ilgili süreye 2 ay ilave edilir. c) Dağıtım trafosunun tesis edilebileceği uygun yerin mevcut olmaması halinde (a) bendindeki ilgili süreye 6 ay ilave edilir. Ancak gerekli yerin kullanıcı tarafından tahsis edilmesi halinde bu süre ilavesi yapılmaz. ç) Bağlantı talebinin karşılanması için yapılması gereken tesis yatırımları (a) bendinde belirtilenlerden iki veya daha fazlasını içeriyorsa bağlantı talebinin karşılanmasında (a), (b) ve (c) bentleri dikkate alınarak belirlenen sürelerden uzun olanı esas alınır. d) Meskun mahal dışındaki bağlantı talepleri kullanıcının bağlantı başvurusunda bulunduğu tarihten itibaren en geç 5 yıl içinde karşılanır. e) Başvuru sahibinin dağıtım sistemine bağlanmak istediği tarihin bu madde hükümlerine göre belirlenen tarihten daha sonra olması halinde bağlantı, başvuru sahibinin dağıtım sistemine bağlanmayı öngördüğü tarihe kadar yapılır. Dağıtım varlıkları projede netleştirilecek olup, tesisin geçici kabulüne müteakip dağıtım tesisi olarak kaydedilecektir. 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.		
Tesis Sahibinin Dağıtım Şebekesi Haline Gelecek Kusurın Yapımına İlişkin Tercih		
Bu kısmın proje onayı esnasında doldurulmuş olarak teslim edilmesi gerekmektedir.		
1-) Önerilen tarihi kabul ediyorum. Tesisin dağıtım şirketince tamamlanmasını bekleyeceğim.	Tesis Sahibi	
2-) Tesisin MEDAŞ tarafından yapılmasını istiyorum. Finansmanı sağlayacağım.		
3-) Tesisin 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 halinde, bağlantı hattı işletme ve bakım sorumluluğu karşılığı dağıtım şirketine devredilir, bu tüketicilerden bağlantı bedeli alınmaz." hükmü gereği bağlantı bedeli ödmeden bağlantı anlaşması yapılmasını kabul ve beyan ederim.	İmza	
	Tarih	
Yukarıda tarafıma sunulan seçeneklerden nolu olanı tercih		

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: 19837775f8

Project Confirmation Form

EK-3

KİRELİ ATIKSU ARITMA TESİSİ PROJESİ ONAY FORMU

Belge No: **AAT01573**
Belge Tarihi: **17.08.2018**

ATIKSU ARITMA TESİSİNİN

Adı : Kireli Atıksu Arıtma Tesisi
Adresi : Kireli Mah. Köroğlu Mevki Hüyük / KONYA
Vergi Numarası : MERAM V.D. 5800024777
Tel : 0332 221 61 00
Faks : 0332 235 46 24
E-Posta : ekoski@koski.gov.tr
Koordinatları : ED50 ile;
1(X:4199070.5 Y:370435.77); 2(X:4199083.85 Y:370429.82);
3(X:4199134.63 Y:370409.95); 4(X:4199161.85 Y:370399.17);
5(X:4199182.22 Y:370441.95); 6(X:4199112.54 Y:370466.04);
7(X:4199085.59 Y:370480.87); 8(X:4199066.63 Y:370493.14);
9(X:4199064.49 Y:370489.46); 10(X:4199068.69 Y:370479.08);
11(X:4199071.62 Y:370464.08); 12(X:4199071.31 Y:370445.68)

RESMİ TEMASLARDA İŞLETMEYİ TEMSİL ETMEYE YETKİLİ İKİ ŞAHSIN

Adı : Serdar KOYUNCU
Adresi : Nişantaşı Mah. Vatan Cad.
No: 2/A 42060 Selçuklu / KONYA
Tel : 0332 221 61 00
Faks : 0332 235 46 24
E-Posta: serdar.koyuncu@koski.gov.tr

Adı : İbrahim SİYİRDİCİ
Adresi : Nişantaşı Mah. Vatan Cad.
No: 2/A 42060 Selçuklu / KONYA
Tel : 0332 221 61 00
Faks : 0332 235 46 24
E-Posta: ibrahim.siyirdici@koski.gov.tr

Proje onay dosyasının, doğru sağlıklı bilgilere havi olduğunu ve bu bilgilere ait tüm sorumluluğun aşağıda imzalan bulunan işletme, firma sorumlusu ve proje koordinatörü tarafından yüklenildiğini ve ayrıca işletmeyi temsile yetkili şahısların aynı sorumluluğu paylaştığını şimdiden kabul ve taahhüt ederiz.

İşletme Yetkilisinin;
Adı Soyadı : Erol BİRCAN
İmza ve Kaşesi :

Projeyi Hazırlayan Firma Yetkilisinin
Adı Soyadı : Kubilay DUMAN
İmza ve Kaşesi :

Üretim Sektörü:
Evsel Nitelikli Atıksular
Alt Sektör Adı:
Kirlilik yükü ham BOİ olarak 60-
600 kg/gün, (EN 2.000 - 10.000)
Deşarj Std. Tablo No*
SKKY - 21.2 + KAAY Tablo 1 ve
Tablo 2
Deşarj Yeri ve Havzası:
Kuru Dere Yatağı, Konya Kapalı
Havzası
AAT/DDD Kapasitesi:
2048 yılı 800 m³/gün

AAT/DDD PROJESİNİ HAZIRLAYAN FIRMANIN			AAT/DDD PROJESİNİ ONAYLAYAN KURUMUN		
Adı, Adresi ve Telefonu			Adı, Adresi ve Telefonu		
OBM DANIŞMANLIK EĞT. MÜH. BİLŞ. BLG. İNŞ. SAN.TİC.LTD.ŞTİ. Mebusevleri Mah. Ergin Sok. No: 28/B Çankaya / ANKARA TEL / FAX: 0312 212 50 05			KONYA ÇEVRE VE ŞEHİRCİLİK İL MÜDÜRLÜĞÜ		
AAT/DDD Projesini Hazırlayan Teknik Personelin			AAT/DDD Projesini İnceleyen Teknik Personelin		
Adı Soyadı	Mesleği	İmzası	Adı Soyadı	Mesleği	İmzası
Kubilay DUMAN Diploma No: 12759/01 1266 Oda No:10658	Çevre Müh		Bekir ÖZER Elektrik Teknikeri		
Berkay ALA Diploma No: 0-2015-89938 Oda No:14280	Çevre Müh		Hamza ERSOZ Çevre Mühendisi		
Ali ALTAY Diploma No: 332 Oda No:34268	İnşaat Müh		Mümin SEMERCİ Çevre Yönetimi ve Denetimi Şebeke Mod. V		
.../20... Projeyi Koordinatörünün Adı Soyadı-Diploma No-İmzası Prof. Dr. İsmail Ayhan ŞENGİL-1135			.../20... Projeyi Onaylayan Kurum Yetkilisinin Adı Soyadı-İmza ve Kaşesi Eyyup G... Çevre ve Şehircilik İl Müdürü		



State Hydraulic Works (DSİ) Opinion



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 yazımız.
b) 21.04.2026 tarihli ve E-57417367-754-7073901 sayılı yazımız.
c) 24.04.2026 tarihli ve E-20824400-220.04.02-127650 sayılı yazımız.

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: DSİ 4. Bölge Müdürlüğü Anıt Alanı Meram / KONYA

Telefon No : Belgegeçer No :

KEP Adresi : dsi.genlmd@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 Amr 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



Opinion Letter of the General Directorate of Water Management



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 deşarjından 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 deşarjının yapılacağı alıcı ortamlar üzerinde, yapılacak teknik etütlerle uygunluğu tespit edilmesi durumunda 'yapay sulak alan veya benzeri sistemler' yapılabilir."

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

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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'î 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 Tesisleri 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.

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Bilgi için İlker YILDIRIM

Mühendis



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 KIRELİ 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)

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Annex E – Site Photographs

Photo No: 01	
Date: 20 August 2025	
Location: Kireli WWTP Subproject Site	
Details/Notes:	
Photo No: 02	
Date: 20 August 2025	
Location: Kireli WWTP Subproject Site	
Details/Notes: the cadastral road passing in front of the Subproject site	

Annex F – Baseline Measurements

Site-specific baseline environmental measurements could not be conducted at the Kireli 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 G – 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) ¹⁵			
☐ 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. <i>What is the incident?</i> <i>[Please briefly describe]</i> II. <i>What were the conditions or circumstances under which the incident occurred (if known)?</i> <i>[Please briefly describe]</i> III. <i>Are the basic facts of the incident clear and uncontested, or are there conflicting versions? What are those versions?</i> <i>[Please briefly describe]</i> IV. <i>Is the incident still ongoing or is it contained?</i> <i>[Please briefly describe]</i> V. <i>Have any relevant authorities been informed?</i> <i>[Please briefly describe]</i>			
4) Actions taken to contain the incident			
Short Description of Action	Responsible Party	Expected Date	Status

¹⁵ See Appendix 2 for definitions.

For incidents involving a Contractor:

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

[Please briefly describe]

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 H – 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) ¹⁶: ☐ 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

¹⁶ 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 ☐ Workman's Compensation/National Insurance ☐ Contractor Direct		☐ Contractor Insurance ☐ Other ☐ 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 İ – Chance Finds Procedure

1. INTRODUCTION

This Chance Finds Procedure is a Subproject-specific procedure that 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 the 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.
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 6-3.

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 6-3 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 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 <i>BÖLÜM A</i>		
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 <i>ACİL ÖNLEMLER</i>		
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 <i>ŞANS BULGU AYRINTILARI</i>		
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</i> <i>Evet Hayır</i> Specify (drawings, HD quality videos, etc.): <i>Belirtin (çizimler, HD kalite videolar, vb.)</i>	
Description of chance find: <i>Tesadüfî 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 BÖLÜM B		
NOTIFICATION OF MUSEUM DIRECTORATE OFFICIALS MÜZE MÜDÜRLÜĞÜ YETKİLİLERİNE BİLDİRİM		
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: <i>Yetkilinin iletişim numarası</i>		
DECISION OF MUSEUM DIRECTORATE ARCHAEOLOGIST MÜZE MÜDÜRLÜĞÜ ARKELOĞUNUN KARARI		
Date of site visit: <i>Saha ziyaret tarihi:</i>		
☐ Site/Finding of no 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: <i>Müze müdürlüğü yetkilisinin ismi</i>		
Contact information: <i>İletişim numarası</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>
PART C – FURTHER FIELD INVESTIGATION		
BÖLÜM C – İLAVE SAHA ARAŞTIRMALARI		
☐ Site/Finding of minor significance <i>Az önem taşıyan saha/bulgu</i>	☐ Site/Finding of moderate significance <i>Orta derecede önemli saha/bulgu</i>	☐ Site/Finding of high significance <i>Çok önemli saha/bulgu</i>
Describe additional actions required to be implemented: <i>İlave aksiyonların tanımı</i>		

PART D – IMPLEMENTATION OF ACTIONS AND RESUMPTION OF WORKS BÖLÜM D – AKSİYONLARIN TAMAMLANMASI VE İŞE DEVAM	
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 J – 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)	
Documents Submitted with Change Notification Form	
Name of the Staff Notifying the Change	
Position of the Staff Notifying the Change	
Signature	

Annex K – Legislative Framework and Gap Analysis

Table 6-4.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.

Regulations / Communiques	OG Number	OG Date	Relevance/Implication for 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.
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.
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.

Regulations / Communiques	OG Number	OG Date	Relevance/Implication for the Project
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

Regulations / Communiques	OG Number	OG Date	Relevance/Implication for the Project
			the necessary regulations and 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 wastewater infrastructure

Regulations / Communiques	OG Number	OG Date	Relevance/Implication for the Project
			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 Turkiye	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

Regulations / Communiqués	OG Number	OG Date	Relevance/Implication for the Project
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.
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.
Regulation on Material Safety Data Sheets on Hazardous Materials and Mixtures	29204	13.12.2014	Preparation of safety data sheets to ensure effective control and surveillance against the negative effects of harmful substances

Regulations / Communiques	OG Number	OG Date	Relevance/Implication for the Project
			and mixtures on human health and the environment during construction and operation phases.
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 contactors/sub-contractors during construction and operation phases.
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 ,

Regulations / Communiques	OG Number	OG Date	Relevance/Implication for the Project
			O ₂ deficiency). This regulation mandates safe entry procedures, including gas measurement, permit-to-work systems, and rescue plans.
Regulation on Health and Safety Conditions Regarding Use of Work Equipment (as it pertains to LOTO/EKED)	28628	25.04.2013	Mandates the control of hazardous energy sources during maintenance and repair. This makes Lockout/Tagout (LOTO/EKED) procedures a legal requirement to prevent accidental start-up of pumps, blowers, and electrical equipment, which is a primary safety risk in a WWTP.
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.
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 6-5.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-

WB Environmental and Social Standards (ESS)	Gaps	Actions taken to fill gaps
		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.
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

WB Environmental and Social Standards (ESS)	Gaps	Actions taken to fill gaps
		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:

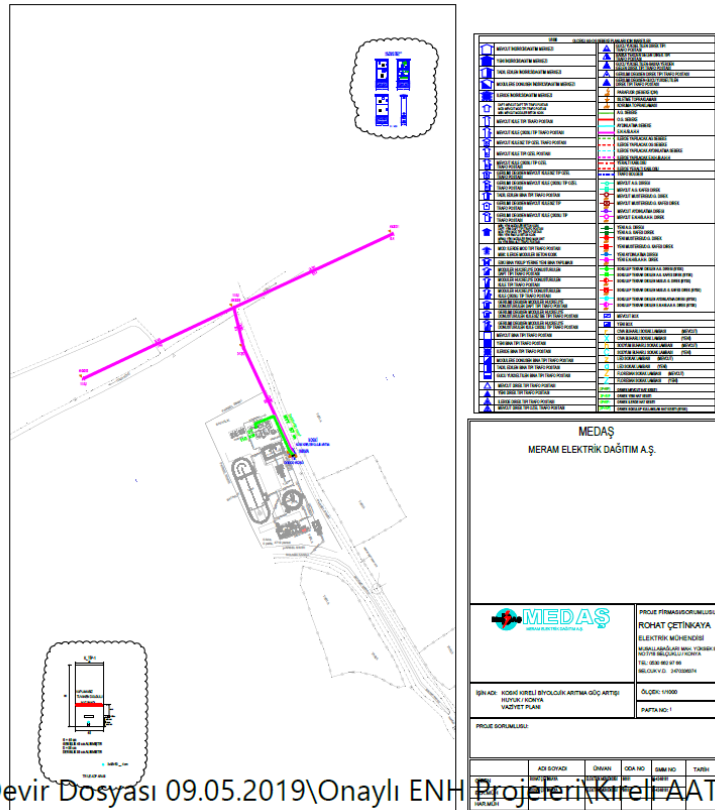
- Paris Agreement (2021),
- UN Framework Convention on Climate Change (UNFCCC) (2004),
- Rio Declaration on Environment and Development and Statement on Forest Principles (1992),
- Convention on Biological Diversity (Rio Convention) (1992),
- Paris Convention on the Protection of the World Cultural and 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).

Annex L -Collector Line Routes



Annex M OG/AG Network and Transformer Layout Plan



D:\Elektrik Devir Dosyası 09.05.2019\Onaylı ENH Projeleri\Kirel AAT ENH Onaylı\

Annex N Subproject Site Layout Plan



Annex O Public Participation Meeting Minutes

GREEN AND FUTURE CITIES (GFC) PROJECT

KIRELİ WASTEWATER TREATMENT PLANT CONSTRUCTION PROJECT of KONYA WATER AND SEWERAGE ADMINISTRATION

MINUTES of STAKEHOLDER CONSULTATION MEETING

Version : Rev 01

Date : August 2026

This document was prepared by POSEİDON Environmental & Social Consulting Engineering Trade Ltd.

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1. Stakeholder Consultation Meeting

The Kireli Wastewater Treatment Plant Construction Project of the Konya Water and Sewerage Administration (KOSKİ) will be financed under the Green and Future Cities Project (GFC).

The Environmental and Social Management Plan (ESMP) and Stakeholder Engagement Plan (SEP) have been prepared by POSEİDON in accordance with İLBANK's Environmental and Social Management System (ESMS), the applicable Environmental and Social Standards (ESSs), the World Bank Group (WBG) General Environmental, Health and Safety (EHS) Guidelines and relevant Industry Sector Guidelines, as well as the national legislation in force in Türkiye. In addition to these studies, following the finalization of the ESMP, a Stakeholder Consultation Meeting was held on 20 August 2026 at 14:00.

The meeting lasted approximately 1 hour and was concluded at 15:00. Presentations on the Project, the environmental and social studies, and the anticipated environmental and social impacts and mitigation measures were delivered by Environmental Engineer Ceyda TERZİ and Sociologist Merve YILDIRIM from the POSEİDON team. Following the presentations, a

question-and-answer session was held, during which the questions raised by the participants were answered by representatives of the relevant institutions.

A total of 30 people attended the meeting. In addition to representatives from DSİ, the Provincial Directorate of Environment, Urbanization and Climate Change, İLBANK Konya Regional Directorate, and other relevant institutions, a total of 16 stakeholder participants attended the meeting. Of these participants, 9, including the mukhtars, were from neighbourhoods located within the Project Area of Influence, while the remaining 7 were stakeholders of the Köşk Wastewater Treatment Plant Construction Project, for which a Stakeholder Consultation Meeting was held on the same day at 15:00.

The detailed list of meeting participants is provided in Section 2.

This document includes details of the Stakeholder Consultation Meeting announcement, as well as the questions raised by stakeholders and the responses provided.

In addition to the announcement and information disclosure methods specified in the meeting minutes, the mukhtars of Kireli, Çavuş, Tolca, İlmen and Göçeri neighbourhoods, which are located within the Project's Area of Influence, were also contacted by KOSKİ by telephone and invited to the Stakeholder Consultation Meeting. The mukhtars of Kireli, Tolca, İlmen and Göçeri neighbourhoods attended the meeting, while the Mukhtar of Çavuş Neighbourhood did not attend.

Question & Answer Session:

In this section, the opinions, requests, and questions raised by participants during the Stakeholder Consultation Meeting, along with the responses provided, are presented below:

Questions 1:

Municipality Mayor of Hüyük:

I would like to thank all stakeholders and the neighbourhoods that will benefit from the Project. The primary objective here is to protect Lake Beyşehir and to resolve the problems experienced by our residents. This has been a long-standing issue affecting all of our mukhtars. I would particularly like to thank everyone involved in the efforts to resolve these issues. Is the part of Lake Beyşehir located on the Isparta side also being addressed in the same manner?

Answer 1:

Head of Wastewater Treatment Plants Project and Construction Branch:

As KOSKİ, within the scope of the Special Environmental Provisions for Lake Beyşehir, we conducted feasibility studies covering both Konya and Isparta provinces and submitted them to the Ministry of Environment, Urbanization and Climate Change. Although the Isparta side is outside the area of responsibility of our Administration, we aim to contribute to the protection of Lake Beyşehir by adopting a holistic and proactive approach.

We continue our activities concerning the areas associated with Lake Beyşehir that fall within the area of responsibility of our Administration. In this context, since 2014, we have completed the revision of the Beyşehir Wastewater Treatment Plant, construction of the Hüyük Wastewater Treatment Plant, construction of the Derebucak Wastewater Treatment Plant, construction of the Huğlu Wastewater Treatment Plant, construction of the Üzümlü Wastewater Treatment Plant, and revision of the Çamlık Wastewater Treatment Plant.

Taking population density into consideration, we have prioritized the Kireli, Karaali, and Köşk Projects. In line with our plan, we aim to complete the planned works by 2029.

Municipality Mayor of Hüyük:

Thank you very much. If the other neighbourhoods had been excluded from the scope, the works might not have fully achieved their intended objective; however, based on the explanations provided, I understand that this is not the case.

Question 2:

Mukhtar of Kireli Neighborhood:

Where is the treated wastewater planned to be used? Would it be possible to provide the treated wastewater to local residents who own agricultural land in the area for irrigation purposes?

Answer 2:

Head of Wastewater Treatment Plants Project and Construction Branch:

The Kireli Wastewater Treatment Plant is an advanced biological wastewater treatment facility. However, providing the treated wastewater to farmers for agricultural irrigation would require a separate planning and permitting process. In addition to the need for large storage capacities, it would also be necessary to plan when, to whom, and under what conditions the treated wastewater would be supplied.

The primary objective of the current Project is to eliminate the adverse environmental impacts of wastewater by treating it in compliance with the discharge criteria stipulated under the applicable legislation.

Mukhtar of Kireli Neighborhood:

Tolca, Kireli, and Göçeri neighbourhoods have suitable areas for agricultural development, particularly for fruit growing. We would like to use this treated wastewater for agricultural irrigation in these three neighbourhoods.

Head of Wastewater Treatment Plants Project and Construction Branch:

The use of treated wastewater for agricultural irrigation requires comprehensive arrangements, including determining which users will benefit from the water, in what order, and during which irrigation periods.

As explained in Annex 7 of the Communiqué on Technical Procedures, there are numerous variables to be considered, including crop type, irrigation method, irrigation period, and irrigation frequency. Although wastewater treatment at the facility will be carried out continuously, irrigation generally takes place during the summer months. Therefore, a considerably large storage area would be required. Such an arrangement is not considered feasible or manageable within the scope of the current Project and would require additional costs and permitting processes.

Under the current Project design, the treated wastewater, after being treated in compliance with the applicable discharge criteria, will be discharged into the receiving environment.

Question 3:

Mukhtar of Kireli Neighborhood:

Which institutions should we apply to regarding this matter?

Answer 3:

KOSKİ Environmental Engineer:

In order for treated wastewater to be used for irrigation purposes, KOSKİ is required to obtain the necessary permit in accordance with Annex 7 of the Communiqué on Technical Procedures. In addition, the irrigation of agricultural areas falls within the mandate of the General Directorate of State Hydraulic Works.

In accordance with the applicable legislation set out in Annex 7 of the Communiqué on Technical Procedures, a commission is established under the Governor's Office to carry out the necessary assessments. If the treated wastewater meets the specified criteria, its use for irrigation is evaluated by this commission in accordance with the prescribed irrigation methods and conditions.

Question 4:

Mukhtar of Göçeri Neighborhood:

We do not want corrugated pipes to be used for the new lines to be constructed. Corrugated pipes deteriorate in a short period of time and have a higher risk of failure.

Answer 4:

Beyşehir KOSKİ Branch Manager:

All projects implemented by our General Directorate are carried out in accordance with national and international standards. The lines to be constructed under the Project will be installed in accordance with the specified depth requirements and applicable technical standards.

Head of Wastewater Treatment Plants Project and Construction Branch:

Approximately 10 km of new wastewater lines are planned within the scope of the Kireli Project. The alignments of these lines have been defined in detail in the Project design.

Question 5:

Mukhtar of Tolca Neighbourhood:

We are experiencing a problem with the manhole. In particular, wastewater discharge in the area where the restaurants are located causes odour and visual pollution. We request that this problem be resolved.

Answer 5:

Beyşehir KOSKİ Branch Manager:

There is a wastewater pumping station in the area. You can contact us through ALO 185, in person, or by telephone regarding such issues.

You can also submit notifications through our existing contact numbers. We will specifically follow up on the issue you have raised and ensure that it is addressed.

Head of Wastewater Treatment Plants Project and Construction Branch:

One of the main reasons we are here today and carrying out these works is to address such issues. This Project is being implemented to contribute to resolving wastewater-related problems experienced in the area.

Conclusion

The Stakeholder Consultation Meeting held on 20 August 2026 lasted approximately 1 hour and was concluded at 15:00.

Overall, the stakeholders' approach towards the Project was observed to be positive, and the Project was considered important, particularly in terms of addressing wastewater-related problems in the area and protecting Lake Beyşehir. During the meeting, issues such as the potential use of treated wastewater for agricultural irrigation, the technical specifications of the pipes to be used for the new sewerage lines, and odour and visual nuisance resulting from the existing sewerage system in the area were raised.

Participants expressed their request for the treated wastewater to be utilized for agricultural irrigation in Tolca, Kireli and Göçeri neighbourhoods and received information on the relevant permitting and assessment processes to be followed in this regard. In addition, expectations regarding the construction of the new sewerage lines in accordance with the applicable technical standards, as well as requests for the resolution of local problems arising from the existing sewerage system, were conveyed to the representatives of the relevant institutions.

No negative views or objections regarding the Project were raised during the meeting. The questions and requests raised by the participants were considered and addressed by representatives of the relevant institutions. The meeting was concluded after the stakeholders' views, questions and requests had been received.

2. Participants List

Katılımcı Listesi		
Tarih: 20.08.2026 / Saat: 14:00		
		
İsim Soy İsim	Kurum	İmza
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12	Büyük Mektap	
13	Kültür Merkezi	
14	İmaratlar	
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17	İl Sağlık Müdürlüğü	
18	"	
19	Genel Sağlık ve İlk Yardım	
20	"	
21	Koruma	

22		
23	Hüseyin	İbrahim
24	İlhan Kaya	İbrahim
25	İlhan Kaya	İbrahim
26	KOSKİ	İbrahim
27	Pamir	İbrahim
28	Koski	İbrahim
29	İlhan Kaya	İbrahim
30	DSİ U. Bölge	İbrahim
31	DSİ U. Bölge	İbrahim
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The table below has been prepared to present the information included in the original meeting attendance list in a clearer and more legible manner. The institution/position information provided in the table was primarily compiled based on the original attendance list; where information was missing or not clearly specified in the list, it was supplemented using notes taken during the meeting and available visual records. In addition, for some participants who also attended the Public Consultation Meeting for the Köşk Wastewater Treatment Plant Construction Project held on the same day at 15:00, their institution/position information was cross-checked against the attendance list of that meeting, where such information was clearly indicated, and reflected in the table accordingly.

The institution/position information of Participant No. 2 was not specified in the original attendance list and could not be verified through the meeting notes, available visual records, or the attendance list of the Public Consultation Meeting for the Köşk Wastewater Treatment Plant Construction Project. Therefore, it is indicated in the table as “Institution Information Could Not Be Identified.”

Environmental Engineer Ceyda TERZİ and Sociologist Merve YILDIRIM from the POSEİDON team, who delivered the presentations during the meeting, are not included in the original attendance list. The participant recorded as “POSEİDON” in the original attendance list is a member of POSEİDON’s administrative staff and did not deliver a presentation. Since the table below has been prepared in line with the original attendance list, the POSEİDON team members who delivered the presentations have not been added separately as participants.

No.	Institution / Position
1.	Member of the Köşk Neighbourhood Mukhtar Council
2.	Institution Information Could Not Be Identified
3.	Member of the Tolca Neighbourhood Mukhtar Council
4.	Member of the Tolca Neighbourhood Mukhtar Council
5.	Member of the Göçeri Neighbourhood Mukhtar Council
6.	Member of the Göçeri Neighbourhood Mukhtar Council
7.	Mukhtar of Göçeri Neighbourhood
8.	Mukhtar of Selki Neighbourhood
9.	Mukhtar of Tolca Neighbourhood
10.	Member of the Kireli Neighbourhood Mukhtar Council
11.	Member of the Kireli Neighbourhood Mukhtar Council
12.	Mukhtar of Budak Neighbourhood
13.	Mukhtar of Köşk Neighbourhood
14.	Mukhtar of İmrenler Neighbourhood
15.	Member of the İmrenler Neighbourhood Mukhtar Council

16.	Member of the İmrenler Neighbourhood Mukhtar Council
17.	Representative of Konya Provincial Directorate of Health
18.	Representative of Konya Provincial Directorate of Health
19.	Representative of Konya Provincial Directorate of Environment, Urbanization and Climate Change
20.	Representative of Konya Provincial Directorate of Environment, Urbanization and Climate Change
21.	KOSKİ Beyşehir Branch Manager
22.	Mayor of Hüyük Municipality
23.	Representative of İLBANK Konya Regional Directorate
24.	Representative of İLBANK Konya Regional Directorate
25.	KOSKİ Representative
26.	POSEİDON
27.	KOSKİ Representative
28.	Mukhtar of İlmen Neighbourhood
29.	Representative of DSİ 4th Regional Directorate
30.	Representative of DSİ 4th Regional Directorate

3. Stakeholder Consultation Meeting Announcements and Project Information Brochure Distributed at the SCM

3.1 Announcement Published on the Press Advertisement Agency's "ilan.gov.tr" Website:

İLAN METNİ

Yazdır

Kapat

KONYA SU VE KANALİZASYON İDARESİ (KOSKİ) PAYDAŞ KATILIM PLANI HALKIN KATILIMI TOPLANTISI İLANI

"Yeşil ve Geleceğin Şehirleri Projesi - GFC" kapsamında Dünya Bankası tarafından finanse edilecek olan "Kireli Atıksu Arıtma Tesisi İnşaatı İşİ" için Paydaş Katılım Planı toplantısı yapılması planlanmaktadır. Söz konusu alt proje için aşağıda belirtilen tarih ve saatte halkı bilgilendirmek, görüş ve önerilerini almak için "Halkın Katılımı Toplantısı" yapılacaktır.

Alt proje kapsamında çevresel ve sosyal etkiler oluşabileceğinden, bu etkilerin yönetimi amacıyla alt proje'ye özel Çevresel ve Sosyal Yönetim Planı (ÇSYP) ile Paydaş Katılım Planı (PKP) hazırlanmıştır. Söz konusu planlar, KOSKİ'nin internet sitesinde kamuoyunun [TB1]erişimine sunulmuştur.

Halkımıza saygı ile duyurulur.

Toplantı Tarihi: 20.08.2026- Perşembe Günü

Toplantı Saati: 14.00

Toplantı Yeri: Beyşehir İçme Suyu Arıtma Tesisi Eğitim Binası Toplantı Salonu

Adres: Hacıakif Mahallesi, 40368. Sokak, No.6 Beyşehir/KONYA

Proje İletişim Bilgileri:

Adres: KOSKİ Genel Müdürlüğü İhsaniye Mh. Kazım Karabekir Cd. No :56 42060 Selçuklu/Konya

Telefon: 0 332 221 61 00/7251

Faks: 0 332 235 46 34

İletişim: <https://www.koski.gov.tr/koski/iletisim>

E mail: ekoski@koski.gov.tr - bilgi@koski.gov.tr

Açık kapı: <https://ebelediye.konya.bel.tr/webportal/index.php?wwwsayfa=5047>

Dokümanların Yayımlandığı Bağlantı Adresi: <https://www.koski.gov.tr/sayfa/gfc-yesil-ve-gelecegin-sehirleri-projesi>

İlan Bilgileri

İlan Sahibi

KONYA SU VE KANALİZASYON İDARESİ
GENEL MÜDÜRLÜĞÜ (KOSKİ) [↗](#)

İlan Numarası

ILN02527793

Şehir

KONYA

İlçe

Beyşehir

Semt-Mahalle

HACIAKİF MAH. / BEYŞEHİR

İlan Türü

TEBLİGAT

Tebliğat Muhatabı

Bölge Halkı ve Kamuoyu

Yayın Mecrası

10/08/2026 : [MİLLÎ GAZETE](#)

10/08/2026 : [GAZETE KONYAM](#)

3.2 Announcement Published on the Konya Water and Sewerage Administration (KOSKİ) General Directorate's Website:

KONYA SU VE KANALİZASYON İDARESİ (KOSKİ) PAYDAŞ KATILIM PLANI HALKIN KATILIMI TOPLANTISI İLANI

“Yeşil ve Geleceğin Şehirleri Projesi - GFC” kapsamında Dünya Bankası tarafından finanse edilecek, Kireli, Tolca, Çavuş, Göçeri ve İlmen Mahallelerine hizmet verecek olan “Kireli Atıksu Arıtma Tesisi İnşaatı İşi ” için Paydaş Katılım Planı toplantısı yapılması planlanmaktadır. Söz konusu alt proje için aşağıda belirtilen tarih ve saatte halkı bilgilendirmek, görüş ve önerilerini almak için “Halkın Katılımı Toplantısı” yapılacaktır.

Alt proje kapsamında çevresel ve sosyal etkiler oluşabileceğinden, bu etkilerin yönetimi amacıyla alt proje'ye özel Çevresel ve Sosyal Yönetim Planı (ÇSYP) ile Paydaş Katılım Planı (PKP) hazırlanmıştır. Söz konusu planlar, KOSKİ'nin internet sitesinde kamuoyunun erişimine sunulmuştur

Halkımıza saygı ile duyurulur.

Toplantı Tarihi: 20.08.2026- Perşembe Günü

Toplantı Saati: 14.00

Toplantı Yeri: Beyşehir İçme Suyu Arıtma Tesisi Eğitim Binası Toplantı Salonu

Adres: Hacıakif Mahallesi, 40368. Sokak, No:6 Beyşehir/KONYA

Proje İletişim Bilgileri:

Adres: KOSKİ Genel Müdürlüğü İhsaniye Mh. Kazım Karabekir Cd. No :56 42060 Selçuklu/Konya

Telefon: 0 332 221 61 00/7251

Faks: 0 332 235 46 34

İletişim: <https://www.koski.gov.tr/koski/iletisim>

E mail: gfc@koski.gov.tr - bilgi@koski.gov.tr

Açık kapı: <https://ebelediye.konya.bel.tr/webportal/index.php?wssayfa=5047>

Dokümanların Yayınlandığı Bağlantı Adresi: <https://www.koski.gov.tr/sayfa/gfc-yesil-ve-gelecegin-sehirleri-projesi>



3.3 Screenshots of the Documents Published on the KOSKİ Website

Website Where the Documents Were Published: <https://www.koski.gov.tr/sayfa/gfc-yesil-ve-gelecegin-schirleri-projesi>

The screenshot displays the KOSKİ website's interface. At the top, there is a navigation bar with links for 'BAŞKAN', 'KURUMSAL', 'SU-ATIKSU', 'ABONE HİZMETLERİ', 'İTERAKTİF', and 'İLETİŞİM'. A search bar is located below the navigation bar. The main content area is titled 'GFC- Yeşil ve Geleceğin Şehirleri Projesi'. Under the 'Dosyalar' (Documents) section, there is a list of documents, each with a download icon and a title. The 'Su-Atıksu' (Water-Wastewater) section lists various documents related to water supply and wastewater treatment.

Dosyalar

- Kireli AAT Bilgilendirme Broşürü
- Köşk AAT Bilgilendirme Broşürü
- Bilgilendirme Broşürü
- Halkın Katılımı Toplantısı İlanı
- Köşk İlan
- Köşk Paydaş Katılım Planı
- Köşk Çevre Sosyal Yönetim Planı
- Köşk STAKEHOLDER ENGAGEMENT PLAN
- Köşk ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN

Su-Atıksu

- Konya Çeşmeleri
- Tatlı Su Kaynakları
- Sulama Suyu
- İçme Suyu Tarihçesi
- Su Arıtma Tesisi
- İçme Suyu Arıtma Tesisi Tanıtım Filmi
- İçme Suyu Arıtma Tesisi Genel
- Laboratuvar (Su-Kalite-Kontrol)
- Şikayet Prosedürü
- Su Analizleri ve Analiz Ücretleri
- Atıksu Ruhsat ve Denetim
- Atıksu Deşarj
- Atıksu Arıtma

 Kireli İlan	Tanıtım Filmi
 Kireli Çevre Sosyal Yönetim Planı	Atıksu Kalite Kontrol Laboratuvarı
 Kireli Paydaş Katılım Planı	Altınapa Barajı Doluluk Değerleri
 Kireli STAKEHOLDER ENGAGEMENT PLAN	Bagbaşı Barajı Doluluk Değerleri
 Kireli ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN	Bozkır Barajı Doluluk Değerleri
 Karaali AAT ÇSYP	Afşar Barajı Doluluk Değerleri
 Karaali AAT PKP	Uluslararası Finansmanlı Projeler
 Karaali AAT SEP	WCEIP-Türkiye Su Döng. ve Verimli...
 Karaali AAT ESMP	Mütecilerden Etkilenen Böl.Bel.Hiz...
 KARAALİ FİNAL ÇSYP	Sürdürülebilir Şehirler Projesi (SCP2-AF)
 KARAALİ FİNAL PKP	CFC- Yeşil ve Geleceğin Şehirleri Projesi
 KARAALİ FİNAL ESMP	
 KARAALİ FİNAL SEP	



Konya Su ve Kanalizasyon İdaresi Genel Müdürlüğü
İhsaniye Mh. Kazım Karabekir Cd.
No.56 42060 Selçuklu/Konya

185

bilgi@koski.gov.tr

Kurumsal

Başkan
Kurumsal Yapı
Genel Kurul
Kalite Politikamız
Stratejik Plan

Kültürel Faaliyet

Kitaplar
Filmler
Sempozyum ve Konferanslar

Diğer

e-Randevu
e-Dilekçe
Bize Yazın
Hizmet Tarifesi
Personel E-posta

Sosyal Medya

Facebook
Youtube
Instagram
LinkedIn
X



National Newspaper

3.5 Announcement Brochure Posted at the Kireli Neighbourhood Mukhtar's Office



3.6 Letter Sent to Stakeholders



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



Sayı : E-20824400-220.04.02-135605
Konu : Paydaş Katılım Toplantısı Hk.

DAĞITIM YERLERİNE

“Yeşil ve Geleceğin Şehirleri Projesi - GFC” kapsamında Dünya Bankası tarafından finanse edilecek, Kireli, Tolca, Çavuş, Göçeri ve İlmen Mahallelerine hizmet verecek olan “Kireli Atıksu Arıtma Tesisi İnşaatı İşi ” için Paydaş Katılım Planı toplantısı yapılması planlanmaktadır.

Kireli Atıksu Arıtma Tesisi için aşağıda belirtilen tarih ve saatte halkı bilgilendirmek, görüş ve önerilerini almak için “Halkın Katılımı Toplantısı” yapılacaktır.

Alt proje kapsamında çevresel ve sosyal etkiler oluşabileceğinden, bu etkilerin yönetimi amacıyla alt proje’ye özel Çevresel ve Sosyal Yönetim Planı (ÇSYP) ile Paydaş Katılım Planı (PKP) hazırlanmıştır. Söz konusu planlar, KOSKİ’nin internet sitesinde kamuoyunun erişimine sunulmuştur.

Sözkonusu toplantıya katılımın sağlanması hususunda gereğini arz ederim.

Toplantı Tarihi: 20.08.2026- Perşembe Günü

Toplantı Saati: 14.00

Toplantı Yeri: Beyşehir İçme Suyu Arıtma Tesisi Eğitim Binası Toplantı Salonu

Adres: Hacıakif Mahallesi, 40368. Sokak, No:6 Beyşehir/KONYA

Dokümanların Yayımlandığı Bağlantı Adresi: <https://www.koski.gov.tr/sayfa/gfc-yesil-ve-gelecegin-sehirleri-projesi>



Yusuf DEMET
Genel Müdür V.

bu belge, güvenli elektronik imza ile imzalanmıştır.

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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: -



Dağıtım:
Doğa Koruma ve Milli Parklar 8. Bölge
Müdürlüğüne
Hüyük İlçe Milli Eğitim Müdürlüğüne
Hüyük İlçe Tarım ve Orman Müdürlüğüne
Hüyük Belediye Başkanlığına
Hüyük Kaymakamlığına
Konya İl Milli Eğitim Müdürlüğüne
Konya Çevre, Şehircilik ve İklim Değişikliği İl
Müdürlüğüne
İller Bankası Konya Bölge Müdürlüğüne
Dsi 4. Bölge Müdürlüğüne
Konya İl Tarım ve Orman Müdürlüğüne
Konya İl Sağlık Müdürlüğüne
Konya Büyükşehir Belediye Başkanlığına

bu belge, güvenli elektronik imza ile imzalanmıştır.

Doğrulama Kodu: e173217e-2b87-430d-8513-6fe246a1a297

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3.7 Announcement Brochure Distributed at the SCM

Çevresel ve Sosyal Etkileri Azaltma Önlemleri ve İzleme

Proje kapsamında Paydaş Katılım Planı (PKP) ve Çevresel ve Sosyal Yönetim Planı (ÇSYP) hazırlanmıştır. Bu planlar doğrultusunda, inşaat ve işletme aşamalarında ortaya çıkabilecek çevresel ve sosyal etkilerin önlenmesine ve azaltılmasına yönelik tüm tedbirler detaylı olarak tanımlanmıştır.

PKP kapsamında paydaşlarla etkin iletişim ve katılım süreçleri yürütülürken, ÇSYP kapsamında ise toz, gürültü, atık yönetimi, trafik güvenliği, toplum sağlığı ve güvenliği ile iş sağlığı ve güvenliği gibi konulara ilişkin azaltım önlemleri belirlenmiştir ve uygulanacaktır.

Söz konusu planlar, proje süresince KOSKİ ve yüklenici tarafından düzenli olarak izlenecek ve ilgili gerekliliklere uyum bağımsız denetimler ile kontrol edilecektir.

Paydaş Katılımı ve Şikâyet Mekanizması

Projeye ilişkin bilgi paylaşımı için bir Paydaş Katılımı Planı hazırlanmış, halkın görüş, öneri ve şikâyetlerini iletebileceği bir Şikâyet Mekanizması kurulmuştur. Başvurular hızlı ve özenli şekilde değerlendirilir. Bu mekanizmanın uygulanmasından KOSKİ sorumludur. Broşürdeki iletişim kanalları dilek, şikâyet ve önerileri iletmek için kullanılabilir.

Şikâyet/dilek/öneri telefon hattı:
Web Sitesi: <https://www.koski.gov.tr>
E-posta: bilgi@koski.gov.tr
Telefon Numarası:
03322216100
Alo 185 Hattı

Resmî Yazışma / Dilekçe Adresi: İhsaniye Mh.
Kazım Karabekir Cd. No :56 42060
Selçuklu/Konya



İLLER BANKASI A.Ş. İletişim Kanalları

0(312) 508 79 79
Web sitesi:
<https://www.ilbank.gov.tr/form/bilgiedinmeuluslararası>
E-mail: uidbbilgi@ilbank.gov.tr
Açık Adres: İLBANK Genel Müdürlüğü Finansal Kurumlar ve Yatırımcı İlişkileri Dairesi
Başkanlığı, Emniyet Mahallesi Hipodrom Caddesi No:9/21 Yenimahalle/ANKARA



KIRELİ ATIKSU ARITMA TESİSİ İNŞAATI PROJESİ KOSKİ GENEL MÜDÜRLÜĞÜ

BİLGİLENDİRME BROŞÜRÜ

Tarih, Yer ve Saat: 20 Ağustos 14.00,
Beyşehir İçme Suyu Arıtma Tesisi
Eğitim Binası Toplantı Salonu
Adres: Hacıakıf Mahallesi, 40368.
Sokak, No:6 Beyşehir/KONYA



Alt Proje Tanıtımı

Kireli Atıksu Arıtma Tesisi İnşaat Projesi, Dünya Bankası tarafından finanse edilen Yeşil ve Geleceğin Şehirleri Projesi kapsamında, finansal aracı olarak görev yapan İller Bankası A.Ş. koordinasyonunda Konya Su ve Kanalizasyon İdaresi (KOSKİ) tarafından yürütülmektedir. Alt proje, Konya İli, Hüyük İlçesi, Kireli Mahallesi'nde yer almaktadır.

Proje kapsamında:

- Günlük 800 m³ kapasiteli ileri biyolojik atıksu arıtma tesisi inşa edilecektir.
- Çavuş ve Göçeri mahallelerinden kaynaklanan atıksuların tesise iletilmesi amacıyla toplam yaklaşık 10.013 metre uzunluğunda kolektör hattı inşa edilecektir. Kireli, Tolca ve İlmen mahallelerinde mevcut altyapı kullanılacaktır.
- Arıtılmış atıksuyun kuru dere yatağına iletilmesi amacıyla yaklaşık 350 metre uzunluğunda deşarj hattı inşa edilecektir.

Alt Proje Finansmanı

Yeşil ve Geleceğin Şehirleri Projesi (GFC) kapsamında finanse edilen alt proje, Dünya Bankası (DB) kredisi ve İller Bankası A.Ş. aracılığı ile KOSKİ tarafından yürütülecektir. Yeşil ve Geleceğin Şehirleri Projesi (GFC), iklim değişikliğine dayanıklı ve sürdürülebilir kentsel gelişimi teşvik etmeyi amaçlayan stratejik bir girişimdir.

Projenin Amacı ve Faydaları

Projenin temel amacı:

- Kireli, Çavuş, Tolca, Göçeri ve İlmen Mahallelerinde oluşan evsel atıksuların etkin şekilde toplanması ve arıtılması
 - Alıcı ortam olan dere yatağının dolayısıyla Beyşehir Gölü'nün su kalitesinin korunması
 - Halk sağlığının korunması ve çevresel risklerin azaltılması
 - Yeraltı ve yüzey su kaynaklarının kirlenmesinin önlenmesi
- Beklenen faydalar:
- Kontrolsüz atıksu deşarjının ortadan kaldırılması
 - Su kaynaklarının korunması ve ekosistem üzerindeki baskının azaltılması
 - Koku, hijyen ve çevresel kirlilik sorunlarının azaltılması
 - Bölgedeki yaşam kalitesinin iyileştirilmesi
 - Uzun vadeli çevresel sürdürülebilirliğe katkı sağlanması

Çevresel ve Sosyal Etkiler

İnşaat sürecinde geçici etkiler oluşabilir:

Olası Çevresel Etkiler

- Kazı ve hafriyat faaliyetlerinden kaynaklı toz oluşumu
- İnşaat ekipmanlarından kaynaklı gürültü
- Hafriyat ve inşaat atıkları oluşumu
- Yağ/yakıt sızıntısı riskleri
- Geçici trafik yoğunluğu
- Üst toprağın sınılanması ve geçici arazi bozulması

Olası Sosyal Etkiler

- Yerel yollarda kısa süreli ulaşım aksamaları
- İnşaat sürecinde geçici yaşam kalitesi etkileri
- Toplum sağlığı ve güvenliği açısından riskler
- Alt Proje alanına yetkisiz giriş riski

Bu etkileri yönetebilmek üzere alt proje özelinde Çevresel ve Sosyal Yönetim Planı (ÇSYP) ve Paydaş Katılım Planları (PKP) hazırlanmıştır.

Alt Proje kapsamında hazırlanan ÇSYP ve PKP KOSKİ resmi internet sitesinde yayınlanacaktır.

<https://www.koski.gov.tr/sayfa/gfc-yesil-ve-gelecegin-sehirleri-projesi>



4. SCM Presentation

Kireli Atıksu Arıtma Tesisi İnşaatı Projesi

Paydaş Bilgilendirme Sunumu



GÜNDEM

- Bilgilendirme Sunumunun Amacı
- Projenin Tarafları
- Projenin Amacı ve Faydaları
- Projenin Özellikleri
- Çevresel ve Sosyal Çalışmaların Kapsamı
- Soru & Cevap



BİLGİLENDİRME SUNUMUNUN AMACI

- Paydaşlar Projenin tarafları hakkında bilgilendirmek
- Projenin olası çevresel ve sosyal etkilerini tanımlamak
- Sürece nasıl dahil olunacağını paydaşlara aktarmak



PROJENİN TARAFLARI



Proje Finansörü



Finansal Aracı



Alt Projenin Uygulayıcısı



PROJENİN AMACI VE FAYDALARI

- Kireli, Cıvus, Göçeri, Tolca ve İlimen mahallelerinden kaynaklanan evsel nitelikli atıksuların etkin ve sürdürülebilir şekilde toplanması ve arıtılması için gerekli atıksu altyapısının oluşturulması.
- Mevcut ve gelecekteki nüfus projeksiyonları dikkate alınarak, 800 m³/gün tasarım kapasiteli Kireli Atıksu Arıtma Tesisinin inşa edilmesi ve işletilmesi.
- Cıvus ve Göçeri mahallelerinde yapılacak yeni kolektör hatları ile mevcut kanalizasyon altyapısının Kireli AAT ile bütünleştirilerek atıksuların kontrollü şekilde arıtma tesisine iletilmesinin sağlanması.
- Evsel atıksuların uygun şekilde arıtılması ve kontrolsüz atıksu kaynaklı çevresel ve halk sağlığı risklerinin azaltılması.
- Arıtılmış atıksuyun ilgili kalite gerekliliklerine uygun şekilde deşarj edilmesiyle Beyşehir Gölü Havzası içerisindeki hassas su kaynaklarının ve alıcı ortamların korunmasına katkı sağlanması.
- Atıksu yönetiminin iyileştirilmesi yoluyla çevresel koşulların ve bölgedeki yaşam kalitesinin geliştirilmesine katkı sağlanması.



PROJENİN ÖZELLİKLERİ



- Proje, Konya İli Hüyük İlçesi Kireli Mahallesi sınırları içerisinde, KOSKİ mülkiyetinde bulunan 216 ada 32 parseldeki 5.006,11 m² büyüklüğündeki alanda gerçekleştirilecektir.
- Proje kapsamında, sahada bulunan tarım alanlarının mevcut atıksu arıtma tesisine altı betonarme yapıyı ek olarak yerine 800 m³/gün tasarım kapasiteli yeni Kireli Atıksu Arıtma Tesisi inşa edilecektir.
- Proje kapsamında Kireli, Cıvus, Göçeri, Tolca ve İlimen mahallelerinden kaynaklanan evsel atıksuların Kireli AAT'ye arıtılması görülmektedir. Cıvus ve Göçeri mahalleleri için yeni kolektör hatları yapılacak, Kireli ve Tolca'daki mevcut hatlardan yararlanılacak, İlimen Mahallesi ise mevcut kanalizasyon altyapısı üzerinden Cıvus hattına bağlı olması devam edecektir.
- Proje kapsamında yeni bir enerji iletim hattı inşa edilmeyecek, yalnızca tesisin enerji ihtiyacının karşılanması amacıyla trafo bağlantısı gerçekleştirilecektir.
- AAT sahası KOSKİ mülkiyetinde olup, kolektör ve deşarj hatları mümkün olduğunca kamu mülkiyetindeki alanlar ile mevcut yol ve altyapı kordonlarını takip edecek şekilde planlanmıştır. Bu nedenle Proje kapsamında arazi edinimi, kamulaştırma veya istem dışı yerden yerleşim görülmemektedir.



PROJENİN ÖZELLİKLERİ

- İnşaat faaliyetlerinin, gerekli izin ve mobilizasyon çalışmalarının tamamlanmasından arından yaklaşık 12 ay içerisinde gerçekleştirilmesi planlanmaktadır. İşletme aşamasında tesis KOSİD tarafından işletilecektir.
- İnşaat döneminde ihtiyaç duyulacak şantiye ofisi ve diğer geçici tesisler, Alt Proje sahası içerisinde ve mevcut arazi kullanımına en aza indirecek şekilde konumlandırılacaktır.
- Alt Proje faaliyetleri; AAT sahası, kolektör hatları, deşarj hattı ve bunlarla bağlantılı çalışma alanlarında yürütülecek; inşaat kaynaklı çevresel ve sosyal etkilerin mümkün olduğunca sınırlandırılması hedeflenecektir.



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PROJENİN ÖZELLİKLERİ

- AAT sahası KOSİD mülkiyetinde olup kolektör ve deşarj hatları mümkün olduğunca kamu mülkiyetindeki alanlar ile mevcut yol ve altyapı koridorlarına tekzip edilecektir. Bu nedenle ilave arazi edinimi, kamulaştırma veya istem dışı yeniden yerleşim öngörülmemektedir.
- İnşaat faaliyetleri sırasında ortaya çıkacak hafriyat malzemesinin uygun riteliktaki kısımları yeniden kullanılacak, ihtiyaç fazlası malzeme ise ilgili mevzuat doğrultusunda uygun alanlara taşınacaktır.
- İşletme sırasında oluşacak arıtma çamuru, tesiste yoğunlaştırma ve susuzlaştırma işlemlerinden geçirilerek çamur keki haline getirilecek; uygun koşullarda geçici olarak depolandıktan sonra ileri arıtım, bertaraf ve/veya yeriden kullanım amacıyla Konya Atıksu Arıtma Tesisi'ne taşınacaktır.
- Alt Proje sahasına orijinal mevcut karayolu ve yerel ulaşım ağı üzerinden sağlanacak; inşaat dönemindeki araç ve ekipman hareketlerinden kaynaklanabilecek trafik ve yol güvenliği etkileri gerekli önlemlerle yönetilecektir.



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ÇEVRESEL VE SOSYAL ÇALIŞMALARIN KAPSAMI



8

ÇEVRESEL VE SOSYAL ÇALIŞMALARIN KAPSAMI



9

TOPRAK ORTAMI



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SU KAYNAKLARI



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HAVA KALİTESİ VE GÜRÜLTÜ

Olası Etkiler

- İnşaat faaliyetlerinden kaynaklı toz oluşumu
- Kazi ve hafriyat taşınması sırasında geçici parlıkları artışı
- İnşaat ekipmanlarından kaynaklı geçici gürültü artışı
- Ağır vasıta hareketine bağlı yerel gürültü ve titreşim etkisi

Alınacak Önlemler

- İnşaat sahası ve yollar toz oluşumuna karşı düzenli olarak sulanacaktır.
- Hafriyat taşınırken araç kasaları kapalı olacaktır.
- Araç ve ekipmanların periyodik bakım yapılacaktır.
- Gürültü seviyesi düşük ekipman tercih edilecektir.
- Çalışmalar mümkün olduğunca gündüz saatlerinde gerçekleştirilecektir.
- Gerekliğinde hassas alıcılar için gürültü ölçümleri yapılacaktır.
- Hız limitleri uygulanarak araç kaynaklı toz ve gürültü azaltılacaktır.



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ATIK YÖNETİMİ

Olası Etkiler

- İnşaat sürecinde tehlikeli atık oluşumu
- Yağ, filtre ve kimyasal kaynaklı tehlikeli atık oluşumu
- Kazı çalışmalarını sonucu hafriyat atığı oluşumu
- İşletme aşamasında atılma çamuru oluşumu.

Alınacak Önlemler

- Atıklar türlerine göre ayrı toplanacak ve geçici depolama alanlarında muhafaza edilecektir.
- Tehlikeli atıklar lisanslı firmalara teslim edilecektir.
- Atık oluşumu ve bertarafına ilişkin tüm kayıtlar tutulacaktır.
- Atılma çamuru susuzlaştırılacak uygun koşullarda geçici olarak depolanacak ve Konya Atıksu Arıtma Tesisine taşınacaktır.



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BİYOÇEŞİTLİLİK

Olası Etkiler

- İnşaat faaliyetleri sırasında flora ve fauna üzerinde etki
- Toz oluşumu sülle ile kontrol edilecektir.
- İnşaat etkileri belirlenen alanlarda depolanacak ve sahada bırakılmayacaktır.

Alınacak Önlemler

- İnşaat alanı ıspatleme ve bariyerlerle çevrelenmektedir.
- Toz oluşumu sülle ile kontrol edilecektir.
- İnşaat etkileri belirlenen alanlarda depolanacak ve sahada bırakılmayacaktır.
- Çalışmalar belirlenen alanlarla sınırlanacaktır ve doğal habitatlara gereksiz müdahalelerden kaçınılacaktır.
- Yaban hayatına zarar vermemesi için çalışmalar bilgilendirilecektir.



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TRAFİK

Olası Etkiler

- İnşaat sürecinde malzeme ve hafriyat taşınmasına bağlı araç trafiğinde artış
- İnşaat alanı güzergahında ağır vasıta geçişlerine bağlı geçici trafik yavaşlığı
- Yerel yollarda kısa süreli ulaşım aksamaları
- Yerleşim alanlarında yaya güvenliği açısından risk

Alınacak Önlemler

- Hafriyat taşıma güzergahı önceden belirlenecek ve duyurulacaktır.
- Süreçlere hız sınırı ve güvenli sürüş eğitimi verilecektir.
- Araç hareketleri belirlenen güzergah ile sınırlanacaktır.
- Yerleşim alanlarında hız sınırları, levhalar ve yönlendirmeler sağlanacaktır.
- Genel durumlarında trafik düzenlemesi yapılacaktır.
- Çalışmalar mümkün olduğunca gündüz saatlerinde yürütülecektir.



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İŞ GÜCÜ VE ÇALIŞMA KOŞULLARI

Olası Etkiler

- İnşaat sürecinde iş sağlığı ve güvenliği riskleri
- Çalışanların çalışma koşulları
- Yerel istihdam beklentilerinin yönetimi
- Çalışan-toplum etkileşimi

Alınacak Önlemler

- Proje, ulusal iş hukuku ve İSG mevzuatı ile DB Çevresel ve Sosyal Standartları doğrultusunda yürütülecektir.
- Tüm çalışanlara İSG eğitimleri verilecek gerekli KGD sağlanacaktır.
- Risk değerlendirilmesi yapılacak sahada düzenli İSG denetimleri yürütülecektir.
- Alt yükleniciler dahil tüm çalışanlara çalışma koşulları ve hakları yazılı olarak bildirilecektir.
- Çalışanlar için ayrı bir Sıkıyol Mekanizması işletilecek; başvurulara hızlılıkla ele alınacaktır.
- Ayrımcılık, zorla çalıştırma ve çocuk işçiliğe karşı sulu tolerans uygulanacaktır.



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SOSYO-EKONOMİK ÇEVRE

Olası Etkiler

- İnşaat faaliyetlerine bağlı geçici yaşam kalitesi etkileri (toz, gürültü)
- Yerel istihdam beklentileri yönetimi
- İnşaat faaliyetleri nedeniyle toplum sağlığı ve güvenliği riskleri
- Proje alanına yatkın geniş riski

Alınacak Önlemler

- Proje alanına girişler kontrolü şeklinde sağlanacak ve kayıt altına alınacaktır.
- Çalışma alanları bariyer ve ayar levhaları ile güvenli hale getirilecektir.
- Yüklenici, toplum sağlığı ve güvenliği için gerekli önlemleri alacaktır.
- Halk için enjekte bir Sıkıyol Mekanizması uygulanacaktır.



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PAYDAŞ KATILIMINA DAİR GENEL TANIMLAR



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PAYDAŞ KATILIMININ TEMEL HEDEFLERİ

- Proje boyunca Projeden Etkilenen Kişiler (PEK) ve Diğer İlgili Tarafları (DİT)'i belirlemek ve düzenli olarak bilgilendirmek
- İnşaat ve işletme sürecinde ortaya çıkabilecek çevresel ve sosyal etkiler hakkında zamanında ve anlaşılır bilgi sağlamak
- Paydaş görüş, öneri ve endişelerini kayıt altına alarak proje uygulamasında dikkate almak
- Şeffaflık, erişilebilir ve sürekli bir iletişim süreci yürütmek
- Halk ve çalışanlar için erişilebilir bir şikayet mekanizması oluşturmak ve etkin şekilde işletmek



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PAYDAŞ KATEGORİLERİ



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PAYDAŞ KATILIMI: SÜRECE NASIL DAHİL OLABİLİRSİNİZ?



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PAYDAŞ KATILIMI: SÜRECE NASIL DAHİL OLABİLİRSİNİZ?

- Web sitesi: <https://www.koski.gov.tr>
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- Alo Hattı: Alo 185
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- Resmi yazışma / Dilokçe adresi: İhsaniye Mh. Kazım Karabekir Cd. No :56 42060 Selçuklu/Konya



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PAYDAŞ KATILIMI: SÜRECE NASIL DAHİL OLABİLİRSİNİZ?



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POSEIDON

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5. Photographs From SCM



