GENERAL DIRECTORATE OF INFRASTRUCTURE INVESTMENTS

CONSTRUCTION WORKS FOR THE BRANCHING RAILWAY LINES TO THE INDUSTRIAL FACILITIES AT THE CUKUROVA REGION, YUMURTALIK FREE ZONE AND THE PORTS AT THE ISKENDERUN BAY

(CONTRACT ID NO: AYGM-YAP-2023-WB 02)

SUPPLEMENTARY ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN FOR DESIGN CHANGES

ÖZGÜN İNŞAAT TAAHHÜT SANAYİ VE TİCARET LİMİTED ŞİRKETİ | ÖZDEMİR İNŞAAT TURİZM ENERJİ SANAYİ ve TİCARET A.Ş. =

ÖZGÜN - ÖZDEMİR ADİ ORTAKLIĞI

MAY 2026

REVISION HISTORY

Rev.	Contractor's Team	Description of Changes	Submission Date	Review Information Provided by the Supervision Consultant	Review Information Provided by DGII PIU for Approval
00	**Prepared by** Emre Erciyas - Environmental Expert Nesrin Kırveli - Environmental Expert Sibel Okdemir Kandt – Social Expert Berat Kar - OHS Specialist Mehmet Gül – Biodiversity Expert Yunus Emre Sevindik - Archaeologist Çiğdem Sena Kızmaz - Community Liaison Officer Ömer Akif Er - Community Liaison Officer **Checked by** Engin Der – Project Manager	First Issue	16 February 2026	Reviewed on 20.02.2026	-
01	**Prepared by** Emre Erciyas - Environmental Expert Nesrin Kırveli - Environmental Expert Sibel Okdemir Kandt – Social Expert Berat Kar - OHS Specialist Mehmet Gül – Biodiversity Expert Yunus Emre Sevindik - Archaeologist Aslı Tek - Community Liaison Officer Ömer Akif Er - Community Liaison Officer **Checked by** Serhan Erdoğan – Project Manager	Revision 1	5 March 2026	Reviewed on 05.03.2026	Reviewed on 09.03.2026
02	**Prepared by** Emre Erciyas - Environmental Expert Nesrin Kırveli - Environmental Expert Sibel Okdemir Kandt – Social Expert Berat Kar - OHS Specialist Mehmet Gül – Biodiversity Expert Yunus Emre Sevindik - Archaeologist Aslı Tek - Community Liaison Officer Ömer Akif Er - Community Liaison Officer **Checked by** Serhan Erdoğan – Project Manager	Revision 2	12 April 2026	Reviewed on 09.04.2026	Reviewed on 12.04.2026
03	**Prepared by** Emre Erciyas - Environmental Expert Nesrin Kırveli - Environmental Expert Sibel Okdemir Kandt – Social Expert Berat Kar - OHS Specialist Mehmet Gül – Biodiversity Expert Yunus Emre Sevindik - Archaeologist Aslı Tek - Community Liaison Officer Ömer Akif Er - Community Liaison Officer **Checked by** Serhan Erdoğan – Project Manager	Final	1 May 2026	Reviewed on 06.05.2026	Reviewed on 06.05.2026

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ABBREVIATIONS AND DEFINITONS

C-BMP	Contractor's Biodiversity Management Plan
C-ESMP	Contractor's Environmental and Social Management Plan
Contractor	Özgün İnşaat - Özdemir İnşaat Partnership
DGII	Directorate General of Infrastructure Investments
ECoW	Ecological Clerk of Works
EHS	Environmental, Health and Safety
ESCP	Environmental and Social Commitment Plan
ESF	Environmental and Social Framework
ESHS	Environmental, Social, Health and Safety
ESIA	Environmental and Social Impact Assessment
ESMP	Environmental and Social Management Plan
ESS	Environmental and Social Standards
GBVH	Gender Based Violence and Harassment
GIIP	Good International Industry Practice
LRP	Livelihood Restoration Plan
MoTI	Ministry of Transport and Infrastructure
OHS	Occupational Health and Safety
OIZ	Organized Industrial Zone
PAPs	Project Affected Persons
PIU	Project Implementation Unit
Project	Cukurova Railway Connection Lines Project
RLIP	Türkiye Rail Logistics Improvement Project
RP	Resettlement Plan
SEA/SH	Sexual Exploitation and Abuse/Sexual Harassment
SEP	Stakeholder Engagement Plan
TAYSEB	Toros, Adana, Yumurtalik Free Zone
WB	World Bank
WBG	World Bank Group

1 INTRODUCTION

1.1 Project Description

The World Bank's Board of Executive Directors approved a loan for the Türkiye Rail Logistics Improvement Project (RLIP) on 30 June 2020. The RLIP is being implemented by the Ministry of Transport and Infrastructure (MoTI) through its Directorate General of Infrastructure Investments (DGII) and aims to enhance rail freight efficiency in Türkiye by improving last-mile infrastructure connectivity, increasing the operational efficiency of rail-enabled logistics centers, and strengthening institutional capacity in the rail intermodal and freight logistics sector.

Within the scope of the Cukurova Railway Connection Lines Project, which is being implemented under the RLIP, it is planned to construct railway connection lines serving industrial facilities and ports in the Cukurova Region and the İskenderun Bay area, including the Toros, Adana, Yumurtalik Free Zone (TAYSEB) industrial centers. The primary objective of the Project is to enhance logistics efficiency and reduce transportation costs for raw materials and finished products by establishing direct railway connections between key industrial zones and port facilities. The risk classification of the project is "Substantial" according to the World Bank (WB) Environmental and Social Framework (ESF).

The construction works is being carried out by the joint venture of Özgün İnşaat – Özdemir İnşaat (Contractor) under the "Construction Works for the Branching Railway Lines to the Industrial Facilities at the Cukurova Region, Yumurtalik Free Zone and the Ports at the Iskenderun Bay" Contract (DGII-YAP-2023-WB 02) dated 26.11.2024. The supervision consultant for the project is OEOE Joint Venture (Consultant). The construction phase is expected to last approximately four (4) years. The site handover for the project was conducted by DGII on December 6, 2024, and the Contractor was given the notice to proceed on December 24, 2024.

1.1.1 Previous Design

Under the previous design developed during the Environmental and Social Impact Assessment (ESIA) phase, the project comprised of four railway lines: the Erzin Station–TAYSEB Connection Line, the OIZ–Port Line, and two additional connection lines (OIZ–Yukarıburnaz and Yukarıburnaz–Port), with a total length of approximately 44 km, including branch lines. The double-track section extended only up to 5.4 km south of the OIZ station. Within this former design, the Erzin Station–TAYSEB line started from the existing Erzin Station, extended westward through Yukarıburnaz to the Toros Adana Yumurtalik Free Zone, had a length of 16.79 km, and included two new stations. The OIZ–Port Line, with a length of 13.05 km under the previous layout, connected the Osmaniye OIZ to the planned Erzin Port and also included two new stations. The remaining two connection lines, measuring approximately 8.2 km and 6.1 km respectively in the earlier design, provided linkage between the OIZ and the port via Yukarıburnaz Station. Most of the alignment in this previous design was located within Hatay Province, with only about 2.5 km lying within Adana Province (see Figure 1).

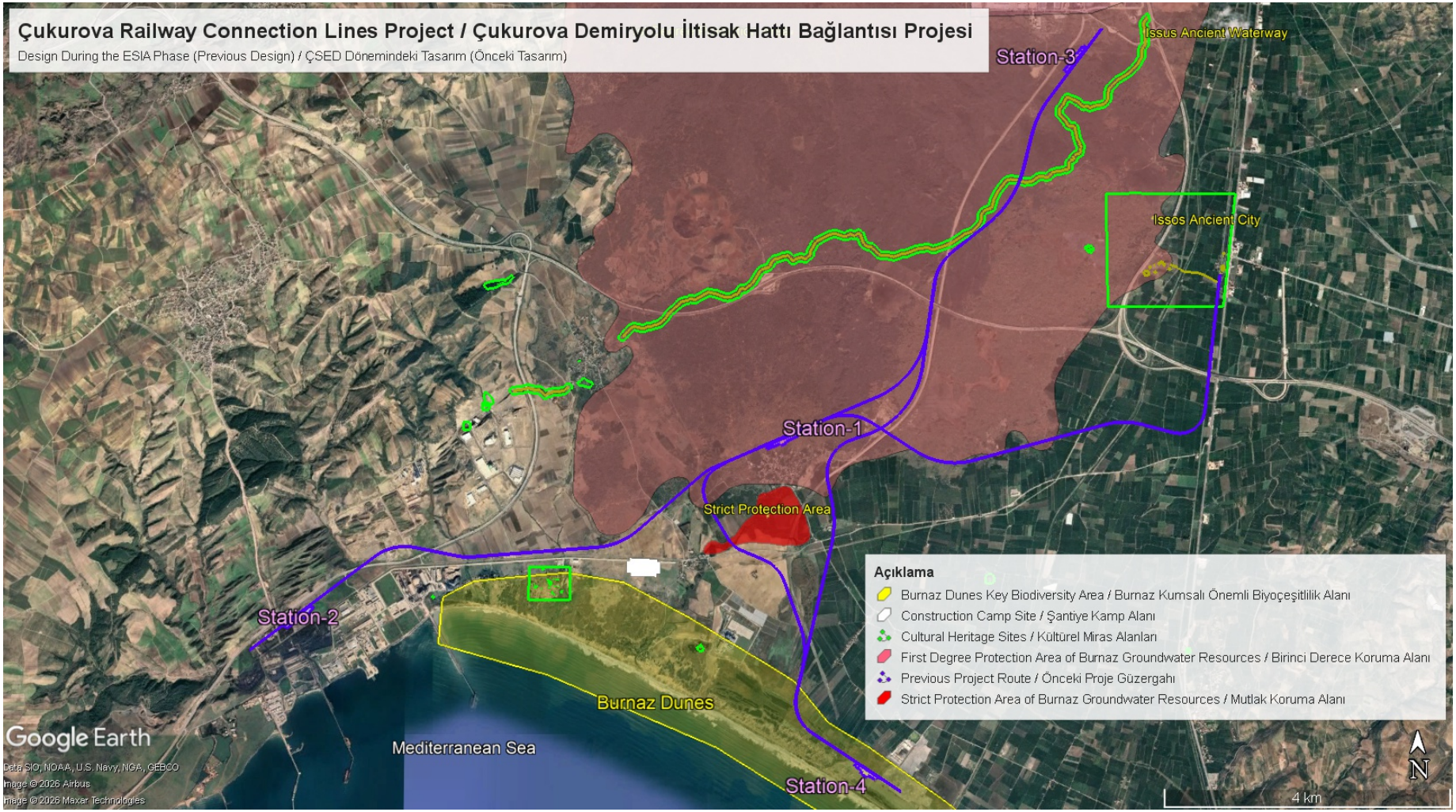


Figure 1. Previous Design of the Project (During ESIA Process)

1.1.2 Current (Revised) Design

The current design was approved by the DGII on September 29, 2025.

The current project route extends across three provinces—Hatay, Osmaniye, and Adana. Within the scope of the Project, three (3) railway lines will be constructed: the Erzin–Yukarıburnaz Line, the Osmaniye Organized Industrial Zone (OIZ)–TAYSEB Line, and the Yukarıburnaz–Erzin Port Line (see Figure 2). The total length of the planned railway lines is approximately 30 km, and all lines (except for the 5.4 km-long section south of the OIZ station) were designed as double-track railways. In addition, four stations will be constructed under the Project: Osmaniye OIZ Station, Yukarıburnaz Station, TAYSEB Station, and Erzin Port Station. The Erzin Construction Camp Site, from which all construction activities will be coordinated and implemented, has also been established within the scope of the Project.

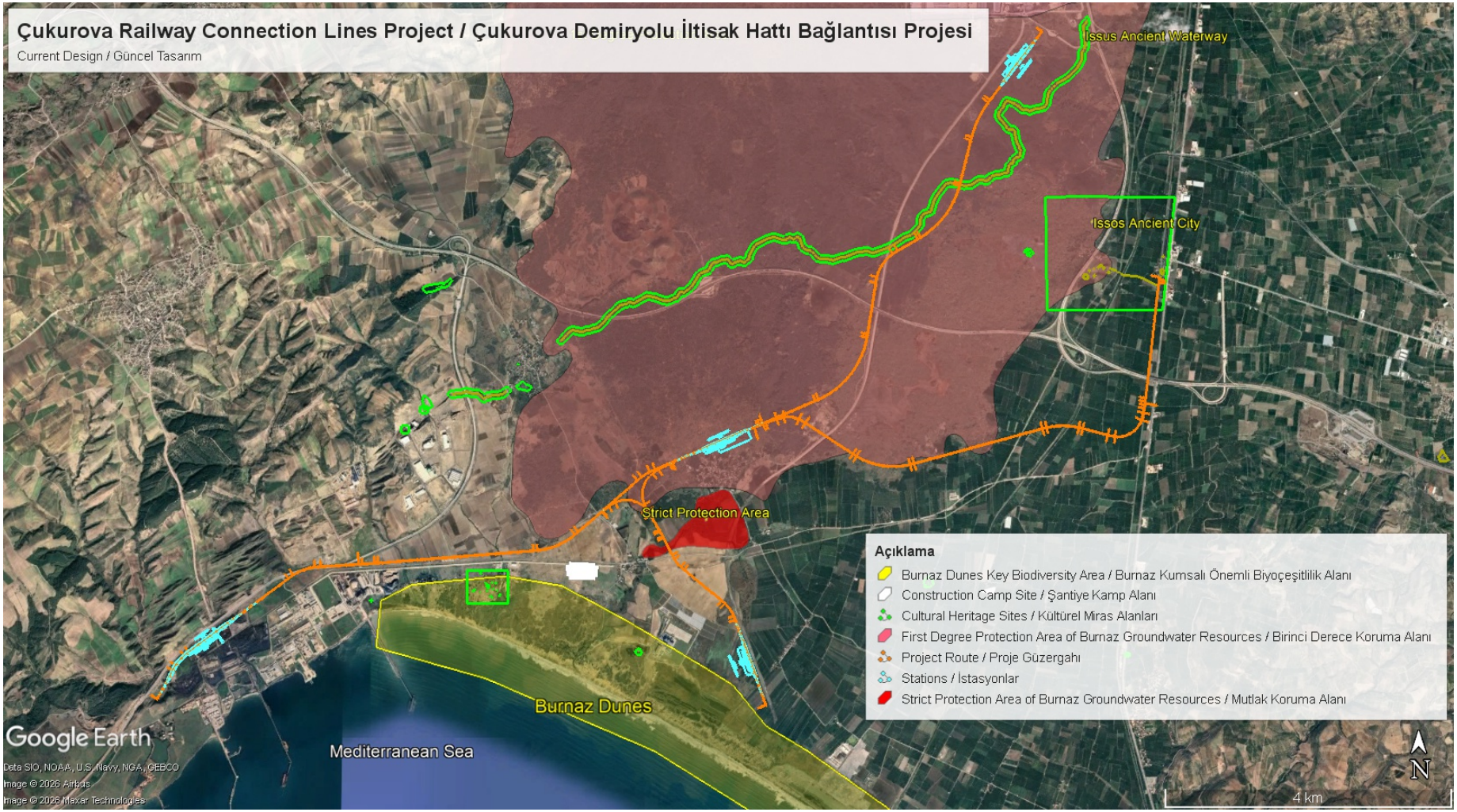


Figure 2. Current (Revised) Design of the Project

1.1.3 Comparison of the Previous and Current Design

Following the selection of the Contractor, detailed and site-specific technical assessments of field conditions were undertaken, supported by targeted consultations with relevant public institutions and regulatory authorities. These assessments focused on the identification and evaluation of environmentally and socially sensitive receptors within and in the vicinity of the project area, including the Burnaz Groundwater Resources Protection Areas, registered cultural heritage assets, and the Burnaz Dunes Key Biodiversity Area. The outcomes of these assessments and institutional consultations demonstrated the need to further align the project layout with applicable protection zones, regulatory constraints, and statutory permitting requirements.

In this context, to ensure full compliance with the commitments and obligations set forth in the Environmental and Social Commitment Plan (ESCP), as well as the timely and complete acquisition of all required permits, approvals, and clearances, technical revisions both for the railway alignment and associated design elements prepared during the ESIA phase were deemed necessary. Accordingly, the project design was revised with the objectives of minimizing the Project's environmental and social footprint, ensuring full compliance with institutional permitting requirements, and enhancing the operational safety, reliability, and security of the railway alignment.

Overall, while maintaining the same number of stations with minor adjustments to their locations, the total length of the railway lines has been reduced, and all lines have been redesigned as double-track. Although the overall project Area of Influence (AoI) has not fundamentally changed, it has been effectively reduced as a result of the shortened alignment. In addition, considering the reductions in total land take and the number of affected parcels shown in Table 1 under the revised design, there is an overall decrease in the amount of land subject to expropriation compared to the previous design. However, while the revised design generally requires less land acquisition, certain locations require more land than the previous design due to the implementation of the double-track configuration. In this context, the railway corridor has been reconfigured to ensure that crossings through protected areas are minimized and limited to the smallest feasible extent (see Figure 3).

The approved design changes within the scope of the Project are presented below as six (6) items:

- **Design Change-1:** The location of TAYSEB Station has been revised.
- **Design Change-2:** The location of the Erzin Port Station has been revised.
- **Design Change-3:** One of the two railway lines (the east line) between Yukarıburnaz Station and Port Station has been cancelled, and the remaining line (the west line) has been converted into a double-track configuration.
- **Design Change-4:** The railway section between Yukarıburnaz Station and TAYSEB Station has been converted into a double-track configuration.
- **Design Change-5:** The railway section between Erzin Station and Yukarıburnaz Station has been converted into a double-track configuration.
- **Design Change-6:** The railway section between Osmaniye OIZ Station and Yukarıburnaz Station, from km 5+400 to Yukarıburnaz Station, has been converted into a double-track configuration.

A summary table presenting the comparison between the previous and revised designs is provided in Table 1.

Table 1. Comparative Summary Table

Issue	Previous Design	Revised Design
Route length (km)	44	30
Double-track length (km)	5.4	30
Number of stations	4	4
Total land take (km^2)	2.97	2.28
Number of affected parcels	143	243
Number of nearby sensitive receptors affected (as settlements)	6	5
Length within Burnaz Dunes Key Biodiversity Area (km)	2.2	0
Length within Strict Protection Area of Burnaz Groundwater Resources (km)	0.115	0.100
Length within First Degree Protection Area of Burnaz Groundwater Resources (km)	12.6	12.9
Length within Issus Ancient City (km)	0.47	0.615
Total length (km) of intersections with the Issus Ancient Waterway	0.02	0.02*

*There are offsets from the Issus Ancient Waterway impact area.

It is foreseen that the number of affected parcels increase under the revised design. During the field study, numerous informal users have been identified, and the expropriation process is ongoing. The results of the design changes will be documented in the addendum for each area.

Considering the formal and informal changes in parcels and land use arising from the design modification and the current situation, along with the number of PAPs, DGII will prepare an amended RP.

The additional impacts associated with these design changes are presented in Section 4.

Minor additions or removals of engineering structures required due to alignment modifications are considered manageable and are not expected to result in significant changes to the project footprint or associated environmental and social impacts. This conclusion is based on the limited scale, localized nature, and temporary duration of the modifications, which do not affect sensitive receptors or critical environmental and social resources, as these have already been affected by or assessed under other major design changes. Therefore, these adjustments have either been addressed at a screening-level assessment or have not been included within the scope of this report, as they are not anticipated to result in significant environmental or social impacts. The assessment focuses on design changes with the potential to result in significant

environmental and social impacts, for which specific mitigation and management measures have been defined. All relevant actions are implemented, monitored, and documented by the Contractor's Environmental, Social, Health and Safety (ESHS) Team and are reported through the Monthly Environmental and Social Monitoring Reports, in accordance with the Project standards and applicable requirements.

At this stage, it is hereby stated that the environmental and biodiversity monitoring points identified and committed to during the ESIA phase have been revised in accordance with the updated project design. Monitoring points assessed as no longer relevant have been excluded, while additional monitoring points considered necessary have been incorporated. Comprehensive information and justifications (where required) regarding these revisions along with their final versions are presented in Appendix-1 and Appendix-2.

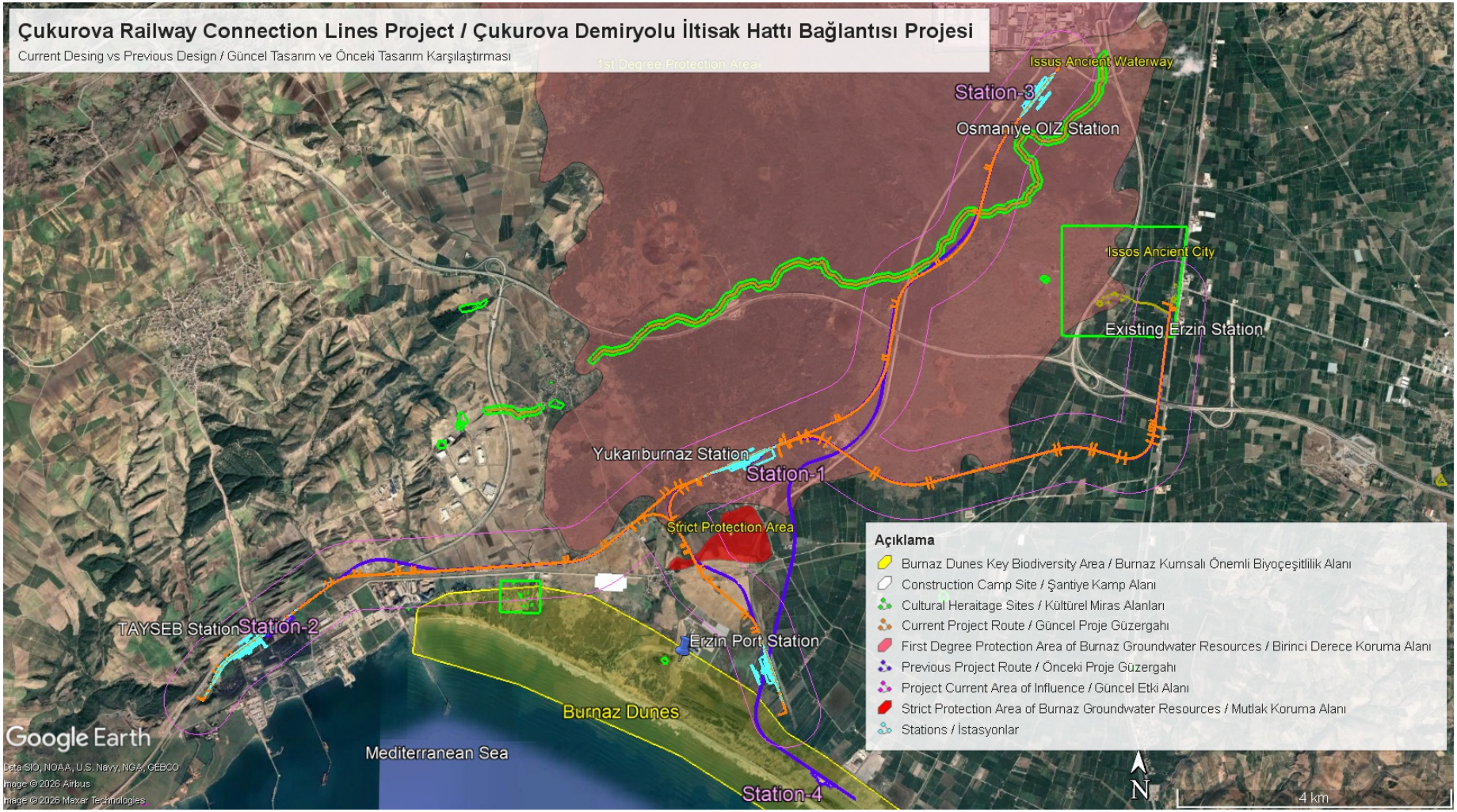


Figure 3. Current Design vs. Previous Desing of the Project

1.2 Objective and Scope

The objective of this Supplementary Environmental and Social Management Plan (ESMP) is to identify, assess, and manage any additional, modified, or newly arising environmental and social risks and impacts resulting from the changes introduced following revisions to the Project layout and associated components. The Supplementary ESMP aims to ensure that all potential impacts associated with the revised design are effectively mitigated, monitored, and managed in full compliance with applicable national legislation and international standards.

The scope of this Supplementary ESMP includes a systematic and comparative review of the revised design against the ESIA-phase design, with a specific focus on determining whether the design changes result in additional, increased, reduced, or new environmental and social impacts. Within this framework, the Supplementary ESMP addresses potential impacts, mitigation measures, and monitoring requirements related to noise and vibration, air quality, water resources and wastewater management, resource efficiency and waste management, community health and safety, biodiversity, cultural heritage, occupational health and safety, socio-economic conditions, labor and working conditions, and land acquisition and resettlement.

The Supplementary ESMP defines updated mitigation and management measures, institutional roles and responsibilities, monitoring indicators, and reporting requirements necessary to effectively manage any impacts associated with the revised design. It complements and builds upon the existing Project ESMP and the approved ESIA and does not replace these instruments; rather, it serves as an addendum to ensure the continued fulfillment of environmental and social requirements throughout the construction phase of the Project, in accordance with the Contractor's defined roles and responsibilities.

It should be noted that the "Management of Change Process Form," which constitutes one of the core requirements of the ESMP under the ESIA process (see Main ESMP, Appendix-13), has been further detailed and strengthened within the scope of this supplementary ESMP document addressing design changes. Furthermore, since the construction camp site and the concrete batching plant had not been clearly determined during the ESIA process, a site-specific supplementary ESMP was prepared for these facilities and subsequently finalized following its approval by the World Bank on January 20, 2026.

This supplementary ESMP document will be treated as a dynamic document and will be regularly updated to reflect any future design changes. In the event that a new auxiliary or associated facility is introduced, instead of completing the Management of Change Process Form, a separate supplementary ESMP document will be prepared accordingly and in detail.

1.3 Limitations of the Study

Due to design changes and the fact that certain studies prepared under the previous design have not yet been fully finalized or formally approved, difficulties were encountered in obtaining complete and finalized technical data during the preparation of this ESMP.

Minor additions or removals of engineering structures resulting from alignment modifications are considered manageable and are not expected to result in significant changes to the project footprint or associated environmental and social impacts. Such minor adjustments have either been addressed through screening-level assessments or excluded from the scope of this ESMP, as no significant impacts are anticipated.

Within the scope of the Social Impact Assessment (SIA), the evaluation of positive and adverse changes within the project footprint has been undertaken on the premise that a quantitative comparative analysis of affected land areas, number of parcels, and number of landowners and users constitutes a fundamental component of impact assessment as well as the qualitative analysis.

However, a review of the design studies associated with the previous alignment indicates that no comprehensive baseline census of landowners and users was conducted in a manner sufficient to establish a robust basis for comparative assessment. The previous Resettlement Plan (RP) study did not cover all Project Affected People (PAP), particularly informal land users.

In addition, as the expropriation corridor was not defined during the earlier design phase, reliable data regarding the extent of land acquisition and associated physical and economic displacement are not available. In light of revisions to the project design, relevant addenda to the Resettlement Plan (RP) and Livelihood Restoration Plan (LRP) will be prepared by DGII.

Notwithstanding these data limitations, this report presents the positive and adverse impact parameters in quantitative terms to the extent feasible (e.g., total railway length, proximity to settlements, etc.), in order to support an evidence-based assessment process.

1.4 Key References

The following documents are the key documents that have been used during the development of this supplementary ESMP.

Guiding Framework Documents[1]

- Environmental and Social Impact Assessment (ESIA) Report,
- Environmental and Social Management Plan (ESMP),
- Stakeholder Engagement Plan (SEP),
- Resettlement Plan (RP).
- SEA/SH Action Plan and an Accountability Response Framework[2]

Principal Documents Developed by the Contractor

- Contractor's Environmental and Social Management Plan (C-ESMP)
- Construction Biodiversity Management Procedure
- Construction Cultural Heritage Management Procedure
- Design Change and Management Procedure
- Air Quality and Dust Management Plan
- Traffic Management Procedure
- Construction Rehabilitation and Landscape Management Procedure
- Noise and Vibration Management Procedure
- Waste Management Procedure
- Pollution Prevention Procedure
- Community Health, Safety, and Security Management Procedure

[1] The relevant documents were approved by the World Bank and published on the DGII's official website on September 24, 2025 (see https://aygm.uab.gov.tr/dunya-bankasi-turkiye-de-demiryolu-lojistigini-gelistirme-projesi).

[2] These documents will be prepared for the Rail Logistics Improvement Project by the DGII

- Water Resources Management Procedure
- Human Resources Management Procedure
- Employment and Training Procedure
- Construction Materials Management Plan
- Occupational Health and Safety Management Plan
- Emergency Preparedness and Response Plan
- Accident, Incident, and Near Miss Management Procedure
- Labor Management Plan

The supplementary ESMP focuses on additional impacts arising from design changes, and in order to avoid repetition, provisions already included in the Principal Documents developed by the Contractor have not been further elaborated. Capacity Development and Training requirements are detailed in the Main Project ESMP and the Contractor's C-ESMP document package and continue to be implemented in accordance with the established project standards and procedures.

1.5 Impact Significance Matrix for Additional Environmental and Social Impacts

Impact significance was classified based on a systematic evaluation of receptor sensitivity and impact magnitude criteria (based on the methodology in the ESIA Report, Chapter 4.2). The methodology in the approved ESIA, used as a basis, has been slightly modified within the scope of this plan to enable a comparative assessment of the previous and revised designs, while also incorporating neutral and positive impacts into the evaluation. The assessment considered the vulnerability, importance, and resilience of the affected receptors, as well as the geographical extent, duration, frequency, and reversibility of the additional impacts arising from the design modification. By combining these factors, the overall significance of potential impacts was determined in a transparent and consistent manner, enabling the identification of appropriate mitigation measures and management requirements where necessary (see Table 2).

Table 2. Overall Impact Significance Matrix for the Assessments

		Receptor Sensitivity				
	Impact Magnitude	**High** Highly important, legally protected, rare, or internationally/nationally significant receptors with very low tolerance to additional impacts arising from the design modification. Even small incremental changes may result in significant consequences.	**Moderate** Regionally important receptors with moderate vulnerability and limited substitution potential. They have some capacity to adapt, but additional impacts from the design change may still be notable.	**Low** Locally important receptors with low vulnerability and good resilience. They are generally able to tolerate and recover from additional impacts related to the design modification.	**Neutral** Receptors with negligible importance or sensitivity, or cases where the design modification does not create additional interaction. No meaningful consequence is expected from the incremental change.	**Positive** Situations where the design modification reduces pressure on receptors, decreases interaction with sensitive areas, or improves environmental or social conditions compared to the previous design.
Overall Impact Significance	**High** The design modification results in impacts with large geographical extent, long-term or permanent duration, and/or high frequency or continuous occurrence. Effects are difficult or not fully reversible, and represent a substantial increase compared to the previous design.					
	Moderate The design modification results in impacts with moderate geographical extent (site to local level), medium-term duration, and/or periodic frequency. Effects are generally reversible, but recovery may require time and targeted mitigation measures.					
	Low The design modification results in impacts with limited geographical extent (site-specific), short-term duration, and/or infrequent occurrence. Effects are readily reversible and can be effectively managed through standard mitigation and routine management practices.					
	Neutral The design modification does not change the geographical extent, duration, frequency, or reversibility of impacts compared to the previous design. No additional impact magnitude is introduced.					
	Positive The design modification results in a reduction in geographical extent, duration, and/or frequency, and/or improves the reversibility of impacts compared to the previous design, leading to an overall beneficial outcome.					

Source: Adapted from IEMA, 2011; UK HA 205/08 Volume 11, Section 2; Canter, L., 1993; and other impact assessment methodology guidance/handbooks.

The following classification system is used to assess the significance of each impact resulting from design changes (see Table 3). This assessment is based on the overall impact significance matrix criteria, as presented in Table 2. The resulting significance category determines the level of impact, which is then assigned a corresponding color code for easy identification and management. A comparative assessment has been conducted between the current and previous designs to determine the direction and significance of any additional impacts arising from the design modification.

Table 3. Impact Significance Classification and Color Coding

Impact Significance Category	Definition	Color Code
High Additional Impact	A substantial increase in adverse impact under the current design compared to the previous design, resulting in critical, potentially irreversible effects on sensitive environmental or social receptors. Such impacts may extend over the long term or on a wider geographical scale and require significant design revision, as well as extensive mitigation and enhanced monitoring measures.	**Red**
Moderate Additional Impact	A noticeable increase in adverse impact relative to the previous design, affecting receptors at a local scale and/or over the medium term. These impacts necessitate targeted mitigation measures, possible design adjustments, and regular monitoring but remain manageable without leading to critical or irreversible consequences.	**Orange**
Low Additional Impact	A minor increase in adverse impact compared to the previous design, typically localized and/or temporary in nature. These impacts can be effectively addressed through routine good international industry practice (GIIP), standard mitigation measures, and ongoing management procedures, with limited long-term implications.	**Yellow**
Neutral Impact (No Additional Impact)	No measurable change in impact significance between the current and previous designs. The design modification does not result in additional adverse or beneficial effects; therefore, existing mitigation measures and management commitments remain sufficient.	**Gray**
Positive Impact	An improvement in environmental or social conditions under the current design compared to the previous design. The modification reduces adverse impacts and/or enhances beneficial outcomes (e.g., reduced footprint, improved safety, minimized resource use), potentially offsetting impacts identified in the earlier design.	**Green**

This methodology establishes a structured and transparent approach for assessing the significance of additional environmental and social impacts resulting from project design changes during the design development, construction, or operation phases. It is intended for use within the ESMP to:

- Identify newly introduced or modified impacts,
- Evaluate their significance in a consistent manner,
- Determine the level of mitigation, monitoring, and management required.

2 ROLES AND RESPONSIBILITIES

The roles and responsibilities of the Contractor's Environmental, Social, Health and Safety (ESHS) Project Management Team, the Supervision Consultant, and the DGII Project Implementation Unit (PIU) are described in detail in the main ESMP (Section 5.2, Table 3) and in the Contractor's ESMP (Section 2, Table 2).

3 PROJECT STANDARDS

As part of the Project standards, full compliance will be ensured with national Turkish legislation, the Environmental and Social Standards (ESSs) defined under the World Bank Environmental and Social Framework (ESF) (with the exception of ESS7 and ESS9), the World Bank Group (WBG) Environmental, Health and Safety (EHS) Guidelines, IFC and EBRD Guide to Workers' Accommodation: Processes and Standards, ILO Conventions and Good International Industry Practice (GIIP).

In cases where there is a conflict between Turkish legislation and World Bank requirements, the stricter standard shall prevail to ensure maximum protection.

In this context, all project activities will be implemented in full compliance with these requirements, thereby ensuring that environmental and social performance is maintained at the highest applicable standards (see the documents prepared under the scope of the Project, as specified in Section 1.3, for further details).

4 CONSTRUCTION PHASE ENVIRONMENTAL AND SOCIAL RISKS&IMPACTS, MITIGATION MEASURES AND MONITORING ACTIVITIES

4.1 Description of the Design Change-1

Design Change Remarks: The location of TAYSEB Station has been revised. According to the updated design, the TAYSEB Station has been shifted approximately 100 meters to the west, in parallel with its previous alignment. The station will be constructed in an area that was previously used for industrial purposes, subsequently abandoned, and is currently anthropogenically disturbed. The Project Area of Influence has remained largely unchanged, despite the minor extension of the railway alignment.

Previous Design

Revised Design

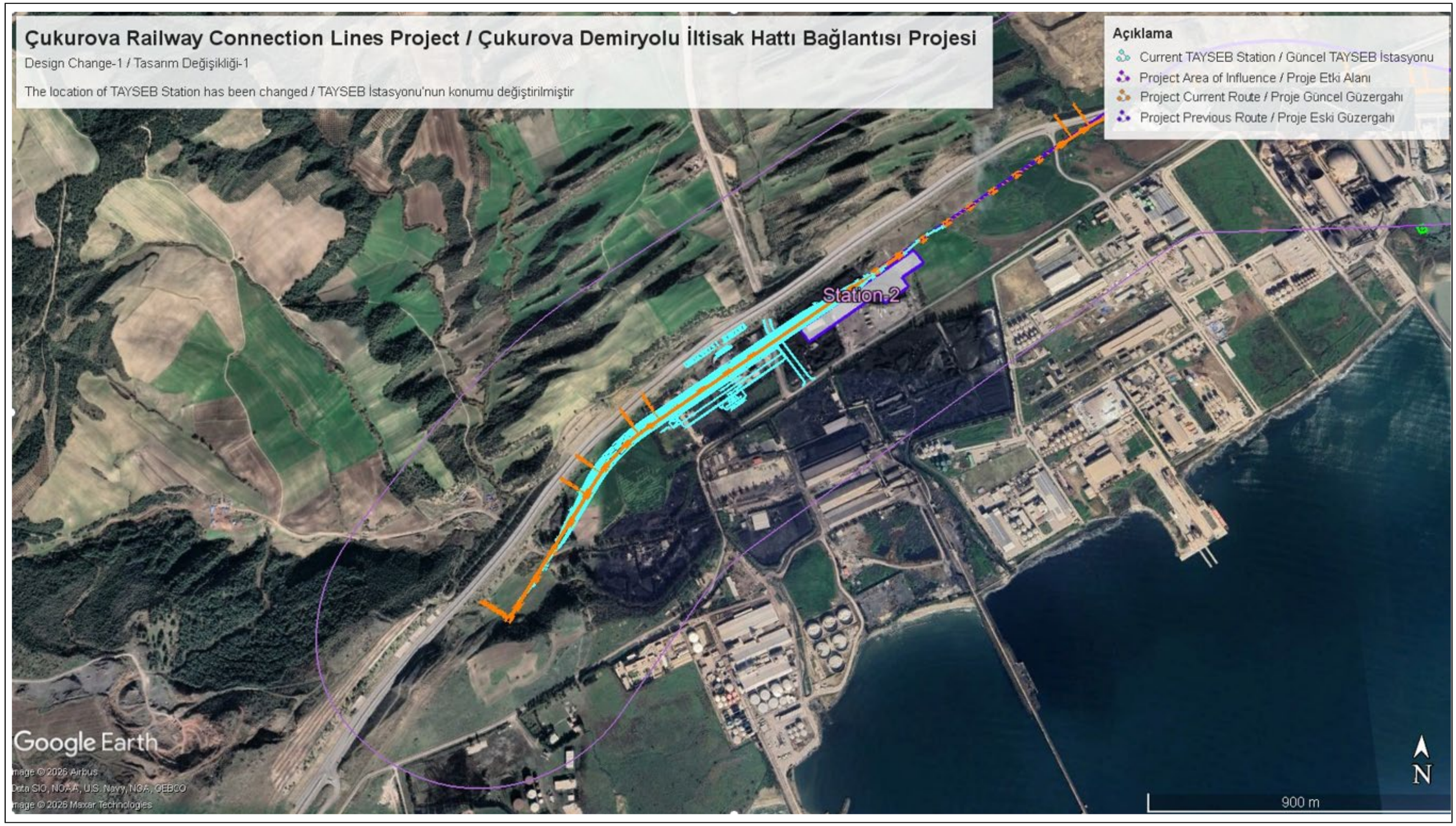


Figure 4. Previous Design vs. Revised Design for Design Change-1

Table 4. E&S Impact Management Due to Design Change-1

E&S Issue	Assessment of Impact Management Due to Design Change-1	Additional Mitigation Measures (If any)	Comparative Assessment of Impact Significance for the Current Design (High / Moderate / Low / Neutral / Positive)	Monitoring Parameter	Key Performance Indicator/Target	Monitoring Frequency	Key References (Relevant Plans/Procedures)	Responsible Party and Expert
Noise and Vibration	Considering that the relocation distance of the station and its area of influence remain largely unchanged, no additional mitigation measures are deemed necessary, as the change is not expected to trigger any new sensitive receptors. In accordance with the requirements of the C-ESMP, the obligation to conduct quarterly noise measurements (48 hours without interruption) at the previously identified N/AQ-5 monitoring point (36.920118°, 35.978256°) shall remain in effect throughout the period during which active construction activities continue. Full compliance will be ensured with the plans and procedures already in place. The Grievance Mechanism will be actively implemented, and corrective and preventive actions will be taken within the defined timeframe based on the grievances and notifications received.	-	**Neutral**	▪ Noise and/or vibration level measurements at project boundaries and nearest sensitive receptors ▪ Compliance status of measured noise and vibration levels with legal limits and standards ▪ Number of noise- and vibration-related grievances received ▪ Percentage of grievances resolved within the defined timeframe ▪ Implementation status of noise and vibration mitigation measures ▪ Number and percentage of personnel trained in noise and vibration management practices ▪ Records of non-compliance and corrective actions ▪ Regular reporting of noise and vibration monitoring results	▪ Full compliance with the project standards and no exceedance of noise and/or vibration limit values ▪ Zero grievances related to noise and vibration ▪ 100% of relevant personnel trained annually	▪ Daily (on-site inspection) ▪ In case of noise/vibration related grievance ▪ Quarterly (noise and/or vibration measurements) ▪ Monthly (Review of Site Inspection Records and Periodic Environmental and Social Monitoring Reports)	▪ National Legislation ▪ World Bank (WB) ESS1: Assessment and Management of Environmental and Social Risks and Impacts ▪ WB ESS3: Resource Efficiency and Pollution Prevention and Management ▪ World Bank Group (WBG) Environmental, Health and Safety (EHS) Guidelines ▪ C-ESMP ▪ Noise and Vibration Management Procedure ▪ Pollution Prevention Procedure ▪ Community Health, Safety and Security Management Procedure ▪ Traffic Management Plan	**Implementation:** ▪ Contractor's Project Manager ▪ Contractor's Construction Site Manager ▪ Contractor's Environmental Team **Audit:** ▪ Supervision Consultant and/or DGII PIU
Air Quality	Considering that the relocation distance of the station and its area of influence remain largely unchanged, no additional mitigation measures are deemed necessary, as the change is not expected to trigger any new sensitive receptors. In accordance with the requirements of the C-ESMP, quarterly air quality measurements of PM_{10}, $PM_{2.5}$, and settled dust are required to be conducted at the previously identified N/AQ-5 monitoring point (36.920118°, 35.978256°)	-	**Neutral**	▪ Air quality measurement results at project boundaries and nearest sensitive receptors ▪ Compliance status of monitored air quality parameters with applicable limit values ▪ Number of air quality–related grievances received ▪ Implementation status of dust and odor control measures	▪ Full compliance with the project standards and no exceedance of air quality limit values ▪ Zero grievances related to air quality ▪ 100% of relevant personnel trained annually	▪ Daily (on-site inspection) ▪ In case of air quality related grievance ▪ Quarterly (air quality measurements) ▪ Monthly (Review of Site Inspection Records and Periodic Environmental and Social Monitoring Reports)	▪ National Legislation ▪ WB ESS1: Assessment and Management of Environmental and Social Risks and Impacts ▪ WB ESS3: Resource Efficiency and Pollution Prevention and Management ▪ WBG EHS Guidelines ▪ C-ESMP ▪ Air Quality and Dust Management Plan ▪ Pollution Prevention Procedure ▪ Community Health, Safety and Security Management Procedure	**Implementation:** ▪ Contractor's Project Manager ▪ Contractor's Construction Site Manager ▪ Contractor's Environmental Team **Audit:** ▪ Supervision Consultant and/or DGII PIU

E&S Issue	Assessment of Impact Management Due to Design Change-1	Additional Mitigation Measures (If any)	Comparative Assessment of Impact Significance for the Current Design (High / Moderate / Low / Neutral / Positive)	Monitoring Parameter	Key Performance Indicator/Target	Monitoring Frequency	Key References (Relevant Plans/Procedures)	Responsible Party and Expert
	shall remain in effect throughout the period during which active construction activities continue. Full compliance will be ensured with the plans and procedures already in place. The Grievance Mechanism will be actively implemented, and corrective and preventive actions will be taken within the defined timeframe based on the grievances and notifications received.			▪ Number and percentage of personnel trained in air quality management practices ▪ Records of non-compliance and corrective actions ▪ Regular reporting of air quality monitoring results			▪ Traffic Management Plan	
Water Resources and Wastewater Management	As the relocation distance of the station and its area of influence remain largely unchanged, no additional mitigation measures are required, as the proposed change is not expected to result in any new or additional impacts on water resources. Management of wastewater, liquid waste, and hazardous materials will continue in full compliance with the C-ESMP and the relevant sub-management plans. All domestic and process wastewater will be collected in leak-proof tanks, temporarily stored, and disposed of through authorized and approved systems in accordance with applicable national regulations. Accordingly, all mitigation measures defined in these documents to prevent soil and water contamination will be consistently implemented. These measures include the application of secondary containment during short-term chemical use in open areas, the storage of hazardous materials in impermeable and enclosed areas under appropriate conditions, and the activation of the Emergency Preparedness and Response Procedure in the event of environmental incidents or accidents.	-	**Neutral**	▪ Surface water and groundwater quality monitoring results at project boundaries and relevant receptors (in case of grievances or where leakage is suspected/observed) ▪ Quantity of domestic wastewater generated ▪ Operational condition and capacity of septic tanks ▪ Presence of leaks, overflows, or seepage ▪ Septic tank emptying frequency and licensed disposal records ▪ Transport and disposal conditions of septic waste ▪ Presence of stagnant wastewater or unsanitary conditions ▪ Number of wastewater-related grievances received ▪ Percentage of grievances resolved within the defined timeframe	▪ 100% of generated wastewater collected and disposed appropriately ▪ Full compliance with national and project water quality standards ▪ Zero spill incidents ▪ Zero grievances related to water resources and wastewater management	▪ Daily (on-site inspection) ▪ Monthly (Review of Site Inspection Records and Periodic Environmental and Social Monitoring Reports)	▪ National Legislation ▪ WB ESS1: Assessment and Management of Environmental and Social Risks and Impacts ▪ WB ESS3: Resource Efficiency and Pollution Prevention and Management ▪ WBG EHS Guidelines ▪ C-ESMP ▪ Water Resources Management Procedure ▪ Pollution Prevention Procedure ▪ Community Health, Safety and Security Management Procedure ▪ Emergency Preparedness and Response Plan	**Implementation:** ▪ Contractor's Project Manager ▪ Contractor's Construction Site Manager ▪ Contractor's Environmental Team **Audit:** ▪ Supervision Consultant and/or DGII PIU

E&S Issue	Assessment of Impact Management Due to Design Change-1	Additional Mitigation Measures (If any)	Comparative Assessment of Impact Significance for the Current Design (High / Moderate / Low / Neutral / Positive)	Monitoring Parameter	Key Performance Indicator/Target	Monitoring Frequency	Key References (Relevant Plans/Procedures)	Responsible Party and Expert
				▪ Training of personnel on wastewater management ▪ Records of non-compliance and corrective actions				
Resource and Waste Management	As the scope of activities to be carried out within the Project remains largely unchanged, the types of wastes generated and resources used are not expected to change; however, variations in their quantities may occur. Such fluctuations will be effectively managed through the consistent implementation of existing plans and procedural requirements, the application of the waste management hierarchy, and the adoption of resource efficiency and zero-waste principles. All wastes will be recorded through the construction camp site using the National Environmental Information System, and health and safety measures will be ensured through the establishment of project-compliant temporary waste storage areas/containers. Upon completion of the works, no visual pollution elements will be left on site. Surplus excavation material and topsoil will, to the extent possible, be reused for landscaping and site rehabilitation purposes.	-	**Neutral**	▪ Reduction rate in resource and energy use, based on the Resource Usage Monitoring Chart ▪ The ratio of reused, recycled, or recovered waste to total waste produced ▪ Waste segregation by hazardous classification and type (hazardous, non-hazardous, recyclable, organic, etc.) ▪ Transfer of all waste types to appropriate licensed recycling or disposal facilities ▪ Compliance rate with timely and comprehensive waste reporting requirements (including online reporting via the National Environmental Information System, where applicable) ▪ Number of incidents involving soil contamination due to improper waste management ▪ Total number and percentage of personnel trained in resource efficiency and waste management practices	▪ Reduction rate in resource and energy use ▪ 100% segregation at source and proper storage with labeling ▪ All waste types transferred to appropriate recycling or disposal facilities ▪ Zero contamination incidents ▪ 100% of relevant personnel trained annually ▪ Zero grievances related to resource and waste management	▪ Daily (on-site inspection) ▪ Monthly (Review of Site Inspection Records and Periodic Environmental and Social Monitoring Reports)	▪ National Legislation ▪ WB ESS1: Assessment and Management of Environmental and Social Risks and Impacts ▪ WB ESS3: Resource Efficiency and Pollution Prevention and Management ▪ WBG EHS Guidelines ▪ C-ESMP ▪ Waste Management Procedure ▪ Pollution Prevention Procedure ▪ Community Health, Safety and Security Management Procedure ▪ Supplementary ESMP for Construction Camp Site and Concrete Batching Plant ▪ Construction Rehabilitation and Landscape Management Procedure	**Implementation:** ▪ Contractor's Project Manager ▪ Contractor's Construction Site Manager ▪ Contractor's Environmental Team **Audit:** ▪ Supervision Consultant and/or DGII PIU
Community Health and Safety	The relocation of the station was initially estimated to reduce the distance by approximately 650 meters. However, based on	Warning signs indicating animal crossings and speed limit signs shall be	**Low**	▪ Number and effectiveness of preventive and	▪ Zero incidents of animal injury or loss during the reporting period	▪ Daily observations during the construction	▪ C-ESMP ▪ Community Health, Safety and Security Management Procedure	**Implementation:** ▪ Project Manager ▪ Contractor's Social Team

E&S Issue	Assessment of Impact Management Due to Design Change-1	Additional Mitigation Measures (If any)	Comparative Assessment of Impact Significance for the Current Design (High / Moderate / Low / Neutral / Positive)	Monitoring Parameter	Key Performance Indicator/Target	Monitoring Frequency	Key References (Relevant Plans/Procedures)	Responsible Party and Expert
	updated data, the actual distance is 150–200 meters to the northwest of the area where nomadic communities conduct livestock activities. Prior to the initiation of construction works, a detailed assessment is being undertaken by Contractor's Social Expert and CLOs to determine the grazing periods of nomadic groups and any existing pasture users in the area, as well as the number of households engaged in such activities and the associated livestock inventory. In addition, any assistance needed to facilitate the relocation of nomadic groups will be provided by the Contractor. In order to address community health and safety risks, specific signage and warning measures will be installed in the relevant area. The measures to be implemented in this regard will be carried out in line with the requirements of the C-ESMP, all identified community health and safety and traffic-related measures will be implemented as originally defined.	installed in this area. Regular engagement will be maintained with nomadic groups, and training shall be provided on the implemented measures and applicable traffic rules.		corrective actions implemented ▪ Number of consultations with nomads during the livestock activity season ▪ Presence and number of warning signs correctly installed at designated locations ▪ Feedback and information collected through public consultations ▪ Training activities on pollution prevention, SEA/SH, Code of Conduct and GBVH ▪ Grievance records related to land and pasture access, workers, traffic and construction activities. ▪ Vehicle maintenance records	▪ Zero recorded traffic accidents associated with livestock activities ▪ Zero grievances recorded related to community health, safety and security issues ▪ 100% of warning signs correctly installed at all designated locations, in adequate number ▪ %100 staff completion of safety training ▪ 100% vehicle safety inspection compliance ▪ 100% of grievances closed or adequately responded to within 15 days	▪ Monthly Environmental and Social Monitoring reports	▪ Traffic Management Plan ▪ ESS 4, ESS 10 ▪ SEP including GM ▪ Contractor's Traffic Management Plan ▪ Contractor's Emergency Preparedness and Response Procedure ▪ Contractor's Community Health, Safety and Security Management Procedure	▪ Contractor's Environmental Team ▪ OHS Expert ▪ Contractor's Construction Site Manager **Audit:** Supervision Consultant and/or DGII PIU
Biodiversity	The biodiversity inventory study conducted at the station point forming the basis of the design change did not reveal any critical habitats or species that trigger critical habitats. Furthermore, the station point forming the basis of the design change exhibits characteristics of a degraded area, with the natural vegetation largely lost its properties. Currently, the area is also weak in terms of wildlife due to the degradation. Therefore, no additional impact on biodiversity values is expected from the design change. However, the existing and currently enforced C-BMP requirements will be complied	▪ A minimum number of service roads will be created, unnecessary service roads will not be opened, and roads other than the designated service roads will not be used. ▪ Herbicides will not be used during vegetation clearing to reduce the risk of injury/death to fauna species. The area to be cleared will be inspected before	**Neutral**	▪ Service roads must be in compliance with existing plans ▪ Herbicide use control ▪ Placement of warning traffic signs and markers	▪ 100% compliance with service roads in the plans ▪ No use of herbicides ▪ Photographing and recording of locations where warning traffic signs and marker boards are placed ▪ Completion of translocation registration form	Weekly	▪ Environmental Law ▪ National Parks Law ▪ Terrestrial Hunting Law ▪ Animal Protection Law ▪ Forest Law ▪ Pasture Law ▪ Fisheries Law ▪ Wetlands Protection Regulation ▪ Regulation on the Implementation of the Convention on International Trade in Endangered Species of Wild Fauna and Flora ▪ Regulation on the Protection of Wildlife and Wildlife Development Areas ▪ Regulation on the Production, Collection	▪ ECoW ▪ Environmental Leader ▪ Project Manager **Audit:** Supervision Consultant and/or DGII PIU

E&S Issue	Assessment of Impact Management Due to Design Change-1	Additional Mitigation Measures (If any)	Comparative Assessment of Impact Significance for the Current Design (High / Moderate / Low / Neutral / Positive)	Monitoring Parameter	Key Performance Indicator/Target	Monitoring Frequency	Key References (Relevant Plans/Procedures)	Responsible Party and Expert
	with within the scope of the design change.	construction. If a nest is found, it will be checked with endoscopic cameras, and if a live specimen is observed, it will be expected to move away on its own. ▪ Construction activities will be carried out in stages to allow fauna elements to move away from the area on their own. Individuals that do not move away on their own will be encouraged to leave the area using natural stimuli (food, pheromones, etc.), loud noises, etc. ▪ Warning traffic signs and markers will be placed on the service roads to be used, as wild animals may be encountered.					from Nature, and Export of Natural Flower Bulbs ▪ European Convention on the Conservation of European Wildlife and Natural Habitats (BERN) ▪ Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) ▪ International Union for Conservation of Nature (IUCN) ▪ Ramsar Convention ▪ EU Habitat Directives ▪ EU Birds Directives ▪ WB ESS 6	
Cultural Heritage	The implemented design modification does not result in any adverse impacts on registered cultural heritage assets located within the relevant sections of the project. In addition, the design modification is not considered to be within areas identified as having potential for cultural or archaeological finds. However, should any cultural heritage asset be encountered during project implementation, the Cultural Heritage and Chance Finds Procedure will be implemented in accordance with the World Bank Environmental and Social Framework.	-	**Neutral**	▪ Conducting archaeological site surveys and archaeological assessment ▪ Defining "no-trespassing'' areas ▪ Providing training on cultural heritage and chance finds procedures ▪ Fencing and boundary demarcation	▪ 100% compliance with Chance Find Procedure and proper reporting of all chance finds ▪ Zero irreversible damage to cultural heritage assets	▪ Periodic observations during the construction ▪ Monthly Environmental and Social Monitoring reports	▪ Law No. 2863 on the Protection of Cultural and Natural Assets ▪ UNESCO World Heritage Convention ▪ European Cultural Heritage Conservation Standards ▪ World Bank Environmental and Social Standards (World Bank ESS8) ▪ Relevant provincial and municipal decisions. ▪ C-ESMP ▪ Cultural Heritage and Chance Finds Procedure	**Implementation:** ▪ Project Manager ▪ Deputy Project Manager ▪ Contractor's Archaeological Specialist ▪ Construction Team Supervisors ▪ Construction Site Engineers **Audit:** Supervision Consultant and/or DGII PIU

E&S Issue	Assessment of Impact Management Due to Design Change-1	Additional Mitigation Measures (If any)	Comparative Assessment of Impact Significance for the Current Design (High / Moderate / Low / Neutral / Positive)	Monitoring Parameter	Key Performance Indicator/Target	Monitoring Frequency	Key References (Relevant Plans/Procedures)	Responsible Party and Expert
	The actions to be undertaken to address potential risks that may arise in areas affected by the design modification are outlined below: ▪ Implementation of the Cultural Heritage and Chance Finds Procedure. ▪ Ensuring that construction activities carried out in areas with high archaeological potential are conducted under the supervision of a qualified archaeologist. ▪ Provision of cultural heritage awareness training to all personnel working within the project site. The training shall cover, at a minimum, the significance of cultural heritage assets, principles of their protection, and the procedures to be followed in the event that potential cultural heritage assets are encountered, particularly in the absence of an archaeologist. The scope and content of the trainings shall be documented in detail and recorded through signed attendance and training records.							
Occupational Health and Safety	As the design modification entails work scopes, construction activities, and risk profiles that are largely comparable to those of the previous design, occupational health and safety (OHS)–related impacts and risks are assessed to remain predominantly at the same level. No new high-risk activities or materially different hazard categories are anticipated as a result of the revision. Accordingly, the effective and diligent implementation of established good international industry practices (GIIP), applicable national legislation,	-	**Neutral**	▪ Number and content of OHS training and educational activities conducted (induction and periodic), including participant records ▪ Implementation status and effectiveness of preventive and corrective actions taken ▪ Work accident and incident records (including near misses, lost time injuries, severity	▪ 100% compliance with the approved Annual Work Plan. ▪ 100% compliance with the Work Contract requirements and Project Standards. ▪ 100% compliance with the approved Annual Training Plan. ▪ Full adherence to the Annual Emergency Drill Plan. ▪ Zero work-related fatalities ▪ Year-on-year reduction in recordable OHS incidents. ▪ 100% of recordable incidents formally investigated through Root	▪ Daily (on-site inspection) ▪ Monthly (Review of Site Inspection Records and Periodic Environmental and Social Monitoring Reports)	▪ Occupational Health and Safety Law No. 6331 and related legislation ▪ ESS2 ▪ WBG EHS Guidelines ▪ C-ESMP ▪ Occupational Health and Safety Management Plan ▪ Accident, Incident, and Near Miss Management Procedure ▪ Emergency Preparedness and Response Plan ▪ Labor Management Plan	**Implementation:** ▪ Project Manager ▪ Contractor's OHS Team ▪ Contractor's Construction Site Manager **Audit:** Supervision Consultant and/or DGII PIU

E&S Issue	Assessment of Impact Management Due to Design Change-1	Additional Mitigation Measures (If any)	Comparative Assessment of Impact Significance for the Current Design (High / Moderate / Low / Neutral / Positive)	Monitoring Parameter	Key Performance Indicator/Target	Monitoring Frequency	Key References (Relevant Plans/Procedures)	Responsible Party and Expert
	project standards, the C-ESMP, and the relevant sub-management plans is of critical importance. Strict adherence to risk assessment procedures, permit-to-work systems, training programs, supervision mechanisms, and monitoring requirements will ensure that OHS risks continue to be systematically identified, mitigated, and controlled throughout the construction phase. Continuous oversight, regular inspections, and timely closure of corrective actions will further safeguard worker health and safety and maintain compliance with project commitments.			rates, and root cause analyses) ▪ Compliance of on-site OHS practices with project standards, national legislation, and C-ESMP requirements ▪ Availability and validity of work permits (e.g., hot work, confined space, excavation, lifting operations, electrical works) ▪ Implementation records of the Emergency Preparedness and Response Plan (drills conducted, response times, corrective actions identified) ▪ Internal audit and inspection records, including identified non-conformities and follow-up actions ▪ Proper use and availability of Personal Protective Equipment (PPE) in the field ▪ Housekeeping conditions and general site safety compliance ▪ Status and compliance of chemical storage areas (labeling, secondary containment, MSDS availability) ▪ Records of toolbox talks and daily safety briefings conducted ▪ Monitoring of high-risk activities (working at height, lifting operations, excavation works,	Cause Analysis within the agreed timeframe. ▪ 100% of corrective and preventive actions closed within the agreed timeframe. ▪ 100% compliance with mandatory PPE usage in designated work areas. ▪ Timely notification of notifiable incidents to the Administration and relevant authorities in accordance with legal requirements. ▪ ≥95% (or 100%, if contractually required) of OHS-related findings, audit non-conformities, and worker grievances closed or adequately responded to within 15 days.			

E&S Issue	Assessment of Impact Management Due to Design Change-1	Additional Mitigation Measures (If any)	Comparative Assessment of Impact Significance for the Current Design (High / Moderate / Low / Neutral / Positive)	Monitoring Parameter	Key Performance Indicator/Target	Monitoring Frequency	Key References (Relevant Plans/Procedures)	Responsible Party and Expert
				rail installation activities) ▪ Subcontractor OHS performance and compliance monitoring				
Socio-Economic Conditions	On the opposite side of the area where the station will be constructed, across a roadway, there is a pastureland where seasonal livestock grazers (nomadic groups) are settled, and the construction site has come 650 meters closer to this pastureland after the design change. It is located approximately 150–200 meters northwest of the construction area. An underpass (culvert) for animal crossings was included in the initial construction design and remains applicable under the current design. The mitigation measures defined in the C-ESMP for population and local communities, local employment, vulnerable groups, stakeholder engagement, and the grievance mechanism will remain in force. In addition, for this specific location, supplementary measures concerning monitoring and reporting periods have been incorporated. Besides, as a result of the design change, some existing parcels cultivated by informal land users have been enlarged and an additional parcel has been added into the land required for the project area. As a result, an increase in livelihood impact has been identified. These impacts will be addressed in accordance with the relevant provisions of the RP and LRP.	▪ Prior to the initiation of construction works, a detailed assessment will be undertaken by Contractor's Social Expert and CLOs to determine the grazing periods of nomadic groups and any existing pasture users in the area, as well as the number of households engaged in such activities and the associated livestock inventory. ▪ Impacts on livestock activities arising from construction activities shall be monitored, and regular consultations shall be held with relevant stakeholders. ▪ The fences surrounding the construction site shall be inspected daily to prevent potential animal entry.	**Low**	▪ Number of consultations with nomads during the livestock activity season ▪ Presence and number of warning signs correctly installed at designated locations ▪ Feedback and information collected through public consultations ▪ Training activities ▪ Grievance records related to construction activities, including complaints from seasonal livestock grazers and informal land users, and tracking of their timely resolution in accordance with the Project Grievance Mechanism	▪ Ensure 100% daily inspection of construction site perimeter fencing to prevent animal entry ▪ Zero incidents of animal injury or loss during the reporting period ▪ 100% completion of staff training on the presence of nomadic groups and ensure that all necessary awareness briefings are conducted	▪ Daily observations during the construction ▪ Monthly Environmental and Social Monitoring reports	▪ C-ESMP ▪ Contractor's Labor Management Plan ▪ Contractor's Construction Environmental and Social Monitoring and Training Procedure ▪ ESS10 ▪ Stakeholder Engagement Plan ▪ Community Health, Safety and Security Management Procedure (including Community Relations Management Procedure) ▪ Labor Law ▪ Construction E&S Monitoring and Training Procedure ▪ Employment and Training Management Procedure ▪ Addenda to the RP andLRP	**Implementation:** ▪ Project Manager ▪ Contractor's Social Team ▪ Contractor's Construction Site Manager **Audit:** Supervision Consultant and/or DGII PIU
Labor and Working Conditions	No significant changes to labor and working conditions are expected as a result of the	-	**Neutral**	▪ Compliance status with project standards, national	▪ 100% compliance with the project standards	▪ Daily (on-site inspection) ▪ Monthly (Review of Site Inspection Records and Periodic Environmental	▪ C-ESMP ▪ ESS2 ▪ Law Number 4857, 6331	**Implementation:** ▪ Project Manager ▪ Contractor's Social Team

E&S Issue	Assessment of Impact Management Due to Design Change-1	Additional Mitigation Measures (If any)	Comparative Assessment of Impact Significance for the Current Design (High / Moderate / Low / Neutral / Positive)	Monitoring Parameter	Key Performance Indicator/Target	Monitoring Frequency	Key References (Relevant Plans/Procedures)	Responsible Party and Expert
	design revision. Labor and working conditions will be managed in accordance with the implementation principles defined in the Contractor's Labor Management Plan and Human Resource Management Plan prepared for the Project, as well as applicable national legislation and relevant applicable standards. The design change will not result in any changes to these arrangements or practices. Given the proximity to nomadic communities, particular attention will be paid to labor influx risks as the presence of workers on-site during construction activities may pose risks to nomadic families. The implementation of existing training and mitigation measures will be closely monitored. The needs and demands of nomadic family members will be assessed, and appropriate support will be provided by the Contractor.			legislation, and applicable labor requirements ▪ Percentage of project workers employed under written employment contracts ▪ Number of non-compliance cases related to working hours, wages, and benefits ▪ Number and percentage of workers receiving induction and periodic training on OHS, workers' rights, Code of Conduct, and labor influx management ▪ Implementation status of labor influx mitigation measures and number of related incidents ▪ Percentage of workers who have signed and comply with the Project Code of Conduct ▪ Number of child labor and forced labor incidents identified ▪ Functionality of the worker grievance mechanism and percentage of grievances addressed within the defined timeframe ▪ Frequency and completeness of labor and working conditions monitoring and reporting ▪ Assessment of potential impacts of design changes on labor and working conditions	▪ Written employment contracts provided to all project workers (100%) ▪ No non-compliance with legal requirements on working hours, wages, and benefits (0 violations) ▪ Induction and periodic training on OHS, workers' rights, Code of Conduct, and labor influx management provided to all workers (100%) ▪ Full implementation of labor influx mitigation measures, with no major incidents recorded (0 major cases) ▪ All workers to sign and comply with the Project Code of Conduct (100%) ▪ Zero tolerance and zero incidents of child labor and forced labor ▪ Effective worker grievance mechanism in place, with all grievances addressed within the defined timeframe (100%) ▪ Regular monitoring and reporting of labor and working conditions during construction (monthly) ▪ Design changes do not result in any negative impact on labor and working conditions (100% continuity) ▪ No significant conflicts or substantiated complaints between the workforce and nearby nomadic communities (0 significant cases)	and Social Monitoring Reports)	▪ Employment and Training Management Plan ▪ Human Resources Management Procedure ▪ Labor Management Plan	▪ Contractor's Construction Site Manager **Audit:** Supervision Consultant and/or DGII PIU

E&S Issue	Assessment of Impact Management Due to Design Change-1	Additional Mitigation Measures (If any)	Comparative Assessment of Impact Significance for the Current Design (High / Moderate / Low / Neutral / Positive)	Monitoring Parameter	Key Performance Indicator/Target	Monitoring Frequency	Key References (Relevant Plans/Procedures)	Responsible Party and Expert
				▪ Number of significant conflicts or substantiated complaints involving the workforce and nearby nomadic communities				
Land Acquisition and Resettlement	With the design change, it has been identified that some informal users' land, who had not previously been subject to land acquisition, has now been included in the project. In addition, a larger portion of the existing parcels (No. 538/2 and No. 537/1) have been incorporated into the project area, and a new parcel (No. 538/4) has been added. As a result, there will be an increase in expropriation and livelihood impacts.	▪ To mitigate these impacts, an up-to-date population census (inventory study) has already been conducted for the lands affected by the Project, and the findings will be incorporated into the Project's LRP and RP documents.	**Low**	▪ Number of grievances related to land acquisition ▪ Number of disclosure meetings and people contacted ▪ Site inspection reports regarding access to, pastures, and lands ▪ Incident records related to damage or obstruction of land access.	▪ Full compliance with ESS 5 and national legislation ▪ Full compliance with RP and LRP that has been prepared in compliance with the national legislation and ESF ▪ Timely acknowledgment of the grievances ▪ Resolution rates	▪ Anytime upon the request of stakeholders ▪ Monthly (Review of Site Inspection Records and Periodic Environmental and Social Monitoring Reports)	▪ Expropriation Law ▪ Forest Law (No. 6831) ▪ Pasture Law (No. 4342) ▪ Cadastral Law (No. 3402) ▪ Agricultural Reform Law (No. 3083) ▪ Notification Law (No. 7201) ▪ Land Registry Code (Official Gazette No. 28738) ▪ ESS5 ▪ ESS10 ▪ RP and LRP	**Implementation:** ▪ Project Manager ▪ Contractor's Social Team **Audit:** Supervision Consultant and/or DGII PIU

4.2 Description of the Design Change-2

Design Change Remarks: The location of the Erzin Port Station has been revised. By relocating the Erzin Port Station outside the boundaries of the Burnaz Dunes Key Biodiversity Area, which is one of the critical habitats, the station has been moved to a more feasible location in order to reduce and minimize its environmental impacts. On the other hand, due to the closer proximity of the Erzin Port Station to the residential areas of Aşağıburnaz Neighborhood and agricultural lands, the effective implementation and strengthened monitoring of environmental and social mitigation measures will be required, with particular emphasis on community health, safety, and security along with socio-economic conditions.

Previous Design

Revised Design

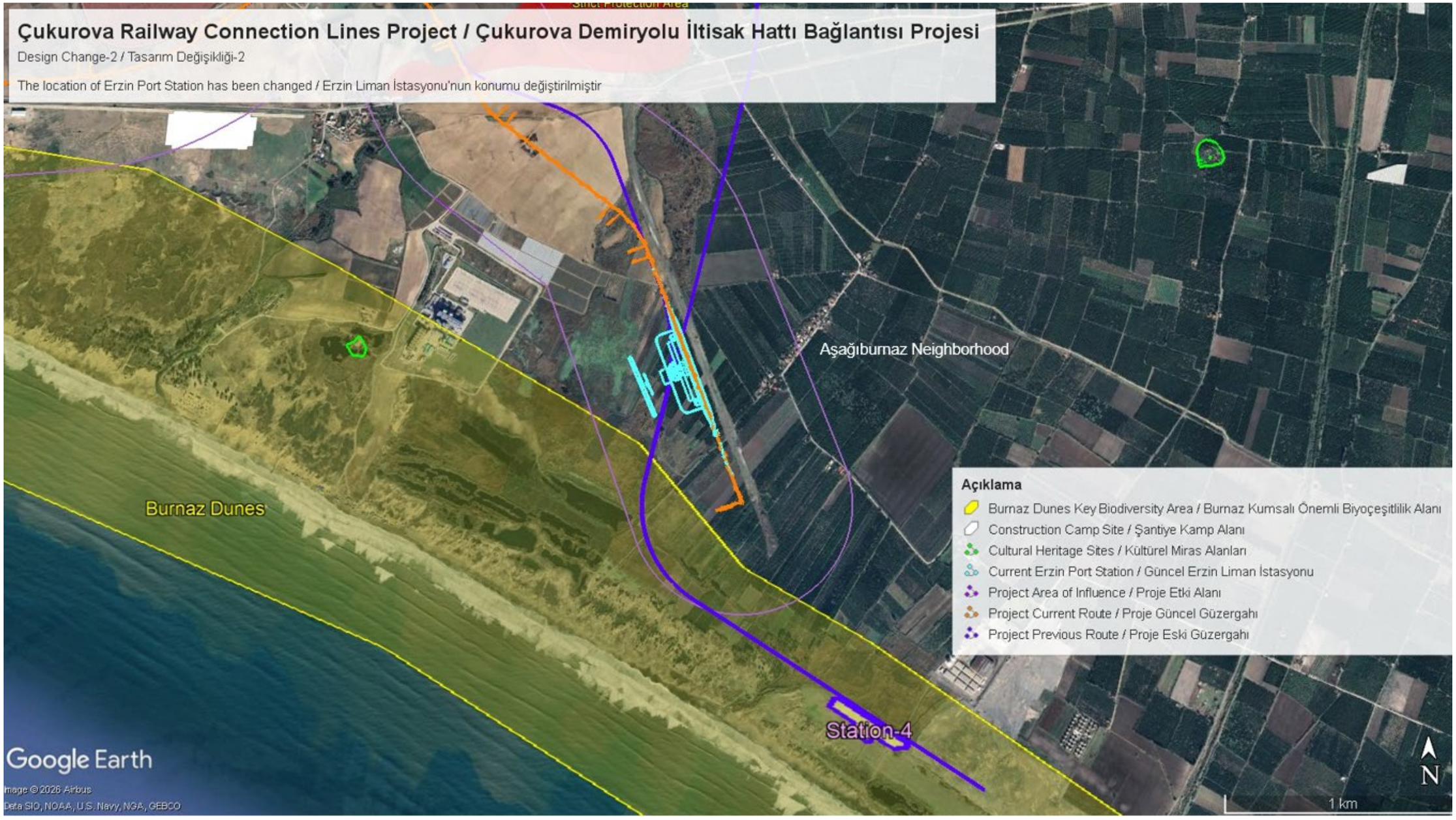


Figure 5. Previous Design vs. Revised Design for Design Change-2

Table 5. E&S Impact Management Due to Design Change-2

E&S Issue	Assessment of Impact Management Due to Design Change-2	Additional Mitigation Measures (If any)	Comparative Assessment of Impact Significance for the Current Design (High / Moderate / Low / Neutral / Positive)	Monitoring Parameter	Key Performance Indicator/Target	Monitoring Frequency	Key References (Relevant Plans/Procedures)	Responsible Party and Expert
Noise and Vibration	As noise- and vibration-generating activities remain largely unchanged under the revised design, no additional mitigation measures are required beyond those already defined in the C-ESMP document package. However, as a result of the increased concentration of activities in close proximity to the Aşağıburnaz Neighborhood during both the construction and operation phases, noise and vibration levels at nearby sensitive receptors are expected to increase. Furthermore, in accordance with the requirements of the C-ESMP, the obligation to conduct quarterly noise measurements (continuous monitoring for 48 hours) at the previously identified N/AQ-4 monitoring point (36.922945°, 36.068324°), located near the worksite, shall remain in effect throughout the period during which active construction activities continue. Full compliance with the existing plans and procedures will be ensured. The Grievance Mechanism will be actively implemented, and corrective and preventive actions (such as the installation of noise barrier structures/panels and additional measurements based on the received grievances/notifications, as defined in Noise and Vibration Management Procedure) will be taken within the defined timeframes.	-	**Low**	▪ Noise and/or vibration level measurements at project boundaries and nearest sensitive receptors ▪ Compliance status of measured noise and vibration levels with legal limits and standards ▪ Number of noise- and vibration-related grievances received ▪ Percentage of grievances resolved within the defined timeframe ▪ Implementation status of noise and vibration mitigation measures ▪ Number and percentage of personnel trained in noise and vibration management practices ▪ Records of non-compliance and corrective actions ▪ Regular reporting of noise and vibration monitoring results	▪ Full compliance with the project standards and no exceedance of noise and/or vibration limit values ▪ Zero grievances related to noise and vibration ▪ 100% of relevant personnel trained annually	▪ Daily (on-site inspection) ▪ In case of noise/vibration related grievance ▪ Quarterly (noise and/or vibration measurements) ▪ Monthly (Review of Site Inspection Records and Periodic Environmental and Social Monitoring Reports)	▪ National Legislation ▪ WB ESS1: Assessment and Management of Environmental and Social Risks and Impacts ▪ WB ESS3: Resource Efficiency and Pollution Prevention and Management ▪ WBG EHS Guidelines ▪ C-ESMP ▪ Noise and Vibration Management Procedure ▪ Pollution Prevention Procedure ▪ Community Health, Safety and Security Management Procedure ▪ Traffic Management Plan	**Implementation:** ▪ Contractor's Project Manager ▪ Contractor's Construction Site Manager ▪ Contractor's Environmental Team **Audit:** ▪ Supervision Consultant and/or DGII PIU
Air Quality	As air quality–related activities and emission sources remain largely unchanged under the revised design, no additional mitigation measures are	-	**Low**	▪ Air quality measurement results at project boundaries and	▪ Full compliance with the project standards and no exceedance of air quality limit values ▪ Zero grievances related to air quality	▪ Daily (on-site inspection) ▪ In case of air quality related grievance ▪ Quarterly (air quality measurements)	▪ National Legislation ▪ WB ESS1: Assessment and Management of Environmental and Social Risks and Impacts	**Implementation:** ▪ Contractor's Project Manager

E&S Issue	Assessment of Impact Management Due to Design Change-2	Additional Mitigation Measures (If any)	Comparative Assessment of Impact Significance for the Current Design (High / Moderate / Low / Neutral / Positive)	Monitoring Parameter	Key Performance Indicator/Target	Monitoring Frequency	Key References (Relevant Plans/Procedures)	Responsible Party and Expert
	required beyond those already defined in the C-ESMP document package. However, due to the increased concentration of activities in close proximity to the Aşağıburnaz Neighborhood during both construction and operation phases, dust generation and air pollutant concentrations at nearby sensitive receptors are expected to increase. Furthermore, in accordance with the requirements of the C-ESMP, the obligation to conduct quarterly air quality measurements of PM_{10}, $PM_{2.5}$, and settled dust at the previously identified N/AQ-4 monitoring point (36.922945°, 36.068324°), located near the worksite, shall remain in effect throughout the period during which active construction activities continue. Full compliance with the existing plans and procedures will be ensured. The Grievance Mechanism will be actively implemented, and corrective and preventive actions (such as adjustment of dust suppression measures, prevention of dust generation from vehicle traffic and loading activities, and implementation of additional measurements based on received grievances or notifications.) will be taken within the defined timeframes.			nearest sensitive receptors ▪ Compliance status of monitored air quality parameters with applicable limit values ▪ Number of air quality–related grievances received ▪ Implementation status of dust and odor control measures ▪ Number and percentage of personnel trained in air quality management practices ▪ Records of non-compliance and corrective actions ▪ Regular reporting of air quality monitoring results	▪ 100% of relevant personnel trained annually	▪ Monthly (Review of Site Inspection Records and Periodic Environmental and Social Monitoring Reports)	▪ WB ESS3: Resource Efficiency and Pollution Prevention and Management ▪ WBG EHS Guidelines ▪ C-ESMP ▪ Air Quality and Dust Management Plan ▪ Pollution Prevention Procedure ▪ Community Health, Safety and Security Management Procedure ▪ Traffic Management Plan	▪ Contractor's Construction Site Manager ▪ Contractor's Environmental Team **Audit:** ▪ Supervision Consultant and/or DGII PIU
Water Resources and Wastewater Management	Under the revised design, although the Erzin Port Station has been relocated further from the marine ecosystem, critical habitats, and transitional waters/lentic zones, similar impact pathways associated with anthropogenic activities remain applicable; however, the likelihood and potential magnitude of such impacts	-	**Neutral**	▪ Surface water and groundwater quality monitoring results at project boundaries and relevant receptors (in case of grievances and/or as required under the project commitments)	▪ 100% of generated wastewater collected and disposed appropriately ▪ Full compliance with national and project water quality standards ▪ Zero spill incidents ▪ Zero grievances related to water resources and wastewater management	▪ Daily (on-site inspection) ▪ Monthly (Review of Site Inspection Records and Periodic Environmental and Social Monitoring Reports) ▪ Biannually (surface water quality sampling and analysis)	▪ National Legislation ▪ WB ESS1: Assessment and Management of Environmental and Social Risks and Impacts ▪ WB ESS3: Resource Efficiency and Pollution Prevention and Management ▪ WBG EHS Guidelines ▪ C-ESMP	**Implementation:** ▪ Contractor's Project Manager ▪ Contractor's Construction Site Manager ▪ Contractor's Environmental Team **Audit:**

E&S Issue	Assessment of Impact Management Due to Design Change-2	Additional Mitigation Measures (If any)	Comparative Assessment of Impact Significance for the Current Design (High / Moderate / Low / Neutral / Positive)	Monitoring Parameter	Key Performance Indicator/Target	Monitoring Frequency	Key References (Relevant Plans/Procedures)	Responsible Party and Expert
	have decreased. Accordingly, no additional mitigation measures are required, as the proposed design change is not expected to result in any new or additional adverse impacts on water resources. On the other hand, although the water quality monitoring point identified and committed to during the ESIA phase (SW-1: 36.910747°, 36.068118°) now remains outside the area of influence, it has not been excluded from the monitoring scope. Semi-annual surface water analyses will be carried out throughout the duration of active construction activities. Management of wastewater, liquid waste, and hazardous materials will continue in full compliance with the C-ESMP and the relevant sub-management plans. All domestic and process wastewater will be collected in leak-proof tanks, temporarily stored, and disposed of through authorized and approved systems in accordance with applicable national regulations. Accordingly, all mitigation measures defined in these documents to prevent soil and water contamination will be consistently implemented. These measures include the application of secondary containment during short-term chemical use in open areas, the storage of hazardous materials in impermeable and enclosed areas under appropriate conditions, and the activation of the Emergency Preparedness and Response Procedure in the event of environmental incidents or accidents.			▪ Quantity of domestic wastewater generated ▪ Operational condition and capacity of septic tanks ▪ Presence of leaks, overflows, or seepage ▪ Septic tank emptying frequency and licensed disposal records ▪ Transport and disposal conditions of septic waste ▪ Presence of stagnant wastewater or unsanitary conditions ▪ Number of wastewater-related grievances received ▪ Percentage of grievances resolved within the defined timeframe ▪ Training of personnel on wastewater management ▪ Records of non-compliance and corrective actions			▪ Water Resources Management Procedure ▪ Pollution Prevention Procedure ▪ Community Health, Safety and Security Management Procedure ▪ Emergency Preparedness and Response Plan	▪ Supervision Consultant and/or DGII PIU

E&S Issue	Assessment of Impact Management Due to Design Change-2	Additional Mitigation Measures (If any)	Comparative Assessment of Impact Significance for the Current Design (High / Moderate / Low / Neutral / Positive)	Monitoring Parameter	Key Performance Indicator/Target	Monitoring Frequency	Key References (Relevant Plans/Procedures)	Responsible Party and Expert
Resource and Waste Management	As the scope of activities to be carried out within the Project remains largely unchanged, the types of wastes generated and resources used are not expected to change; however, variations in their quantities may occur. Such fluctuations will be effectively managed through the consistent implementation of existing plans and procedural requirements, the application of the waste management hierarchy, and the adoption of resource efficiency and zero-waste principles. All wastes will be recorded through the construction camp site using the National Environmental Information System, and health and safety measures will be ensured through the establishment of project-compliant temporary waste storage areas/containers. Upon completion of the works, no visual pollution elements will be left on site. Surplus excavation material and topsoil will, to the extent possible, be reused for landscaping and site rehabilitation purposes.	-	**Neutral**	▪ Reduction rate in resource and energy use, based on the Resource Usage Monitoring Chart ▪ The ratio of reused, recycled, or recovered waste to total waste produced ▪ Waste segregation by hazardous classification and type (hazardous, non-hazardous, recyclable, organic, etc.) ▪ Transfer of all waste types to appropriate licensed recycling or disposal facilities ▪ Compliance rate with timely and comprehensive waste reporting requirements (including online reporting via the National Environmental Information System, where applicable) ▪ Number of incidents involving soil contamination due to improper waste management ▪ Total number and percentage of personnel trained in resource efficiency and waste management practices	▪ Reduction rate in resource and energy use ▪ 100% segregation at source and proper storage with labeling ▪ All waste types transferred to appropriate recycling or disposal facilities ▪ Zero contamination incidents ▪ 100% of relevant personnel trained annually ▪ Zero grievances related to resource and waste management	▪ Daily (on-site inspection) ▪ Monthly (Review of Site Inspection Records and Periodic Environmental and Social Monitoring Reports)	▪ National Legislation ▪ WB ESS1: Assessment and Management of Environmental and Social Risks and Impacts ▪ WB ESS3: Resource Efficiency and Pollution Prevention and Management ▪ WBG EHS Guidelines ▪ C-ESMP ▪ Waste Management Procedure ▪ Pollution Prevention Procedure ▪ Community Health, Safety and Security Management Procedure ▪ Supplementary ESMP for Construction Camp Site and Concrete Batching Plant ▪ Construction Rehabilitation and Landscape Management Procedure	**Implementation:** ▪ Contractor's Project Manager ▪ Contractor's Construction Site Manager ▪ Contractor's Environmental Team **Audit:** ▪ Supervision Consultant and/or DGII PIU
Community Health and Safety	As a result of the design modification, the Erzin Port Station has been shifted approximately 1800 meters	-	**Low**	▪ Number and effectiveness of preventive and	▪ Zero incidents of animal injury or loss during the reporting period	▪ Daily observations during the construction ▪ Monthly Environmental and Social Monitoring reports	▪ C-ESMP ▪ Community Health, Safety and Security Management Procedure	**Implementation:** ▪ Project Manager ▪ Contractor's site manager ▪ Contractor's Social Team

E&S Issue	Assessment of Impact Management Due to Design Change-2	Additional Mitigation Measures (If any)	Comparative Assessment of Impact Significance for the Current Design (High / Moderate / Low / Neutral / Positive)	Monitoring Parameter	Key Performance Indicator/Target	Monitoring Frequency	Key References (Relevant Plans/Procedures)	Responsible Party and Expert
	farther from the shoreline and approximately 400 meters closer to the residential areas of Aşağıburnaz Neighborhood, with the total population of 68-70. Accordingly, due to its increased proximity to sensitive receptors, effective implementation and strengthened monitoring of environmental and social mitigation measures will be required, with particular emphasis on community health, safety, and security. In this context, mitigation measures related to noise, air quality/dust, traffic management, access control, and occupational and community safety will be strictly enforced, and the frequency of monitoring and site inspections will be increased to ensure continued compliance with the C-ESMP document package and relevant international standards.			corrective actions implemented ▪ Presence and number of warning signs correctly installed at designated locations ▪ Feedback and information collected through public consultations ▪ Training activities on pollution prevention, SEA/SH, Code of Conduct and GBVH ▪ Grievance records related to land and pasture access, workers, traffic and construction activities. ▪ Vehicle maintenance records	▪ Zero recorded traffic accidents associated with livestock activities ▪ Zero grievances recorded related to community health, safety and security issues ▪ 100% of warning signs correctly installed at all designated locations, in adequate number ▪ %100 staff completion of safety training ▪ 100% vehicle safety inspection compliance ▪ 100% of grievances closed or adequately responded to within 15 days		▪ Traffic Management Plan ▪ ESS 4, ESS 10 ▪ SEP including GM ▪ Contractor's Traffic Management Plan ▪ Contractor's Emergency Preparedness and Response Procedure ▪ Contractor's Community Health, Safety and Security Management Procedure	▪ Contractor's Environmental Team ▪ Contractor's Environmental Team **Audit:** Supervision Consultant and/or DGII PIU
Biodiversity	As a result of the design change, the railway route has been moved out of the critical habitat area. However, the area of influence is still located within the critical habitat. A relatively positive impact has been achieved on the critical habitat and the species triggering it, namely *Echinops dumanii, Astragalus antiochianus,* and *Acanthodactylus schreiberi*. Specifically, *Echinops dumanii* and *Astragalus antiochianus* are no longer within the impact area and have therefore been excluded from the monitoring studies in 2026. Accordingly, no additional impact on biodiversity values is expected as a result of the design modification. Nevertheless, the existing and enforceable C-BMP requirements will be complied with within the scope of the design modification. C-BMP will	▪ If necessary, individuals of the species *Acanthodactylus schreiberi* will be transported. ▪ Field personnel working on *Acanthodactylus schreiberi* will be informed. ▪ Critical habitat monitoring will continue.	**Positive**	▪ Individuals belonging to the species *Acanthodactylus schreiberi* ▪ Raising awareness about the species ▪ Critical habitat	▪ Completion of translocation registration form ▪ Biodiversity education records ▪ Degradation of critical habitats.	Weekly	▪ Environmental Law ▪ National Parks Law ▪ Terrestrial Hunting Law ▪ Animal Protection Law ▪ Forest Law ▪ Pasture Law ▪ Fisheries Law ▪ Wetlands Protection Regulation ▪ Regulation on the Implementation of the Convention on International Trade in Endangered Species of Wild Fauna and Flora ▪ Regulation on the Protection of Wildlife and Wildlife Development Areas ▪ Regulation on the Production, Collection from Nature, and Export of Natural Flower Bulbs ▪ European Convention on the Conservation of	▪ ECoW ▪ Environmental Leader ▪ Project Manager **Audit:** Supervision Consultant and/or DGII PIU

E&S Issue	Assessment of Impact Management Due to Design Change-2	Additional Mitigation Measures (If any)	Comparative Assessment of Impact Significance for the Current Design (High / Moderate / Low / Neutral / Positive)	Monitoring Parameter	Key Performance Indicator/Target	Monitoring Frequency	Key References (Relevant Plans/Procedures)	Responsible Party and Expert
	be revised to reflect the current design and conditions and/or in the event of any design changes or similar circumstances. A "Biodiversity Note" document has been prepared for informational purposes regarding biodiversity-related matters in connection with the design change.						European Wildlife and Natural Habitats (BERN) ▪ Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) ▪ International Union for Conservation of Nature (IUCN) ▪ Ramsar Convention ▪ EU Habitat Directives ▪ EU Birds Directives ▪ WB ESS 6	
Cultural Heritage	The implemented design modification does not result in any adverse impacts on registered cultural heritage assets located within the relevant sections of the project. In addition, the design modification is not considered to be within areas identified as having potential for cultural or archaeological finds. However, should any cultural heritage asset be encountered during project implementation, the Cultural Heritage and Chance Finds Procedure will be implemented in accordance with the World Bank Environmental and Social Framework. The actions to be undertaken to address potential risks that may arise in areas affected by the design modification are outlined below: ▪ Implementation of the Cultural Heritage and Chance Finds Procedure. ▪ Ensuring that construction activities carried out in areas with high archaeological potential are conducted under the supervision of a qualified archaeologist. ▪ Provision of cultural heritage awareness training to all personnel working within the project site. The training	-	**Neutral**	▪ Conducting archaeological site surveys and archaeological assessment ▪ Defining "no-trespassing'' areas ▪ Providing training on cultural heritage and chance finds procedures ▪ Fencing and boundary demarcation	▪ 100% compliance with Chance Find Procedure and proper reporting of all chance finds ▪ Zero irreversible damage to cultural heritage assets	▪ Periodic observations during the construction ▪ Monthly Environmental and Social Monitoring reports	▪ Law No. 2863 on the Protection of Cultural and Natural Assets ▪ UNESCO World Heritage Convention ▪ European Cultural Heritage Conservation Standards ▪ World Bank Environmental and Social Standards (World Bank ESS8) ▪ Relevant provincial and municipal decisions. ▪ C-ESMP ▪ Cultural Heritage and Chance Finds Procedure	**Implementation:** ▪ Project Manager ▪ Deputy Project Manager ▪ Contractor's Archaeological Specialist ▪ Construction Team Supervisors ▪ Construction Site Engineers **Audit:** Supervision Consultant and/or DGII PIU

E&S Issue	Assessment of Impact Management Due to Design Change-2	Additional Mitigation Measures (If any)	Comparative Assessment of Impact Significance for the Current Design (High / Moderate / Low / Neutral / Positive)	Monitoring Parameter	Key Performance Indicator/Target	Monitoring Frequency	Key References (Relevant Plans/Procedures)	Responsible Party and Expert
	shall cover, at a minimum, the significance of cultural heritage assets, principles of their protection, and the procedures to be followed in the event that potential cultural heritage assets are encountered, particularly in the absence of an archaeologist. The scope and content of the trainings shall be documented in detail and recorded through signed attendance and training records.							
Occupational Health and Safety	As the design modification entails work scopes, construction activities, and risk profiles that are largely comparable to those of the previous design, occupational health and safety (OHS)–related impacts and risks are assessed to remain predominantly at the same level. No new high-risk activities or materially different hazard categories are anticipated as a result of the revision. Accordingly, the effective and diligent implementation of established good international industry practices (GIIP), applicable national legislation, project standards, the C-ESMP, and the relevant sub-management plans is of critical importance. Strict adherence to risk assessment procedures, permit-to-work systems, training programs, supervision mechanisms, and monitoring requirements will ensure that OHS risks continue to be systematically identified, mitigated, and controlled throughout the construction phase. Continuous oversight, regular inspections, and timely closure of corrective actions will further safeguard worker health and safety and maintain	-	**Neutral**	▪ Number and content of OHS training and educational activities conducted (induction and periodic), including participant records ▪ Implementation status and effectiveness of preventive and corrective actions taken ▪ Work accident and incident records (including near misses, lost time injuries, severity rates, and root cause analyses) ▪ Compliance of on-site OHS practices with project standards, national legislation, and C-ESMP requirements ▪ Availability and validity of work permits (e.g., hot work, confined space, excavation, lifting operations, electrical works) ▪ Implementation records of the	▪ 100% compliance with the approved Annual Work Plan. ▪ 100% compliance with the Work Contract requirements and Project Standards. ▪ 100% compliance with the approved Annual Training Plan. ▪ Full adherence to the Annual Emergency Drill Plan. ▪ Zero work-related fatalities ▪ Year-on-year reduction in recordable OHS incidents. ▪ 100% of recordable incidents formally investigated through Root Cause Analysis within the agreed timeframe. ▪ 100% of corrective and preventive actions closed within the agreed timeframe. ▪ 100% compliance with mandatory PPE usage in designated work areas. ▪ Timely notification of notifiable incidents to the Administration and relevant authorities in accordance with legal requirements. ▪ ≥95% (or 100%, if contractually required) of OHS-related findings, audit non-conformities,	▪ Daily (on-site inspection) ▪ Monthly (Review of Site Inspection Records and Periodic Environmental and Social Monitoring Reports)	▪ Occupational Health and Safety Law No. 6331 and related legislation ▪ ESS2 ▪ WBG EHS Guidelines ▪ C-ESMP ▪ Occupational Health and Safety Management Plan ▪ Accident, Incident, and Near Miss Management Procedure ▪ Emergency Preparedness and Response Plan ▪ Labor Management Plan	**Implementation:** ▪ Project Manager ▪ Contractor's OHS Team ▪ Contractor's Construction Site Manager **Audit:** Supervision Consultant and/or DGII PIU

E&S Issue	Assessment of Impact Management Due to Design Change-2	Additional Mitigation Measures (If any)	Comparative Assessment of Impact Significance for the Current Design (High / Moderate / Low / Neutral / Positive)	Monitoring Parameter	Key Performance Indicator/Target	Monitoring Frequency	Key References (Relevant Plans/Procedures)	Responsible Party and Expert
	compliance with project commitments.			Emergency Preparedness and Response Plan (drills conducted, response times, corrective actions identified) ▪ Internal audit and inspection records, including identified non-conformities and follow-up actions ▪ Proper use and availability of Personal Protective Equipment (PPE) in the field ▪ Housekeeping conditions and general site safety compliance ▪ Status and compliance of chemical storage areas (labeling, secondary containment, MSDS availability) ▪ Records of toolbox talks and daily safety briefings conducted ▪ Monitoring of high-risk activities (working at height, lifting operations, excavation works, rail installation activities) ▪ Subcontractor OHS performance and compliance monitoring	and worker grievances closed or adequately responded to within 15 days.			
Socio-Economic Conditions	Under the previous design, the Erzin Port Station was planned to be located at Burnaz Beach. In the revised design, however, the station and rail line have been relocated to agricultural land. This unavoidably resulted in additional livelihood impacts.	▪ The number of additional affected persons due to the design change will be determined, and this will be addressed in the	**Low**	▪ Number of grievances related to land acquisition and construction ▪ Number of disclosure meetings and people contacted ▪ Site inspection reports regarding	▪ Full compliance with ESS 10 ▪ Full compliance with C-ESMP ▪ Full compliance with SEP ▪ Full compliance with RP and LRP ▪ Full compliance with National law	▪ Anytime upon the request of stakeholders ▪ Monthly (Review of Site Inspection Records and Periodic Environmental and Social Monitoring Reports)	▪ C-ESMP ▪ Contractor's Labor Management Plan ▪ Contractor's Construction Environmental and Social Monitoring and Training Procedure ▪ ESS10	**Implementation:** ▪ Project Manager ▪ Contractor's Social Team **Audit:** Supervision Consultant and/or DGII PIU

E&S Issue	Assessment of Impact Management Due to Design Change-2	Additional Mitigation Measures (If any)	Comparative Assessment of Impact Significance for the Current Design (High / Moderate / Low / Neutral / Positive)	Monitoring Parameter	Key Performance Indicator/Target	Monitoring Frequency	Key References (Relevant Plans/Procedures)	Responsible Party and Expert
	It has been identified that, in these areas, the lands belonging to Project Affected Persons (PAPs) are formally registered and will be subject to land acquisition through expropriation. In addition, as the highway previously passed through this area under a different project, any further land loss is expected to result in cumulative livelihood impacts; therefore, the sensitivities of the affected people (landowners and land users) will be duly taken into consideration. In this context, the measures set out in the C-ESMP and the relevant Management Plans, together with stakeholder engagement activities, will be implemented accordingly. Nevertheless, monitoring frequency will be increased to ensure more responsive communication with affected farmers and local stakeholders.	revised RP to be prepared by DGII.		access to, pastures, and lands ▪ Incident records related to damage or obstruction of land access. ▪ Grievance records related to land acquisition, livelihood impacts, and construction activities, including tracking of their timely resolution	▪ Zero grievance		▪ Stakeholder Engagement Plan ▪ Community Health, Safety and Security Management Procedure (including Community Relations Management Procedure) ▪ Construction E&S Monitoring and Training Procedure ▪ Relevant Addenda to the RP and LRP.	
Labor and Working Conditions	No significant changes to labor and working conditions are expected as a result of the design revision. Labor and working conditions will be managed in accordance with the implementation principles defined in the Contractor's Labor Management Plan and Human Resource Management Plan prepared for the Project, as well as applicable national legislation and relevant applicable standards. The design change will not result in any changes to these arrangements or practices.	-	**Neutral**	▪ Compliance status with project standards, national legislation, and applicable labor requirements ▪ Percentage of project workers employed under written employment contracts ▪ Number of non-compliance cases related to working hours, wages, and benefits ▪ Number and percentage of workers receiving induction and periodic training on OHS, workers' rights, Code of Conduct, and labor influx management	▪ 100% compliance with the project standards ▪ Written employment contracts provided to all project workers (100%) ▪ No non-compliance with legal requirements on working hours, wages, and benefits (0 violations) ▪ Induction and periodic training on OHS, workers' rights, Code of Conduct, and labor influx management provided to all workers (100%) ▪ Full implementation of labor influx mitigation measures, with no major incidents recorded (0 major cases) ▪ All workers to sign and comply with the Project Code of Conduct (100%) ▪ Zero tolerance and zero incidents of child labor and forced labor	▪ Daily (on-site inspection) ▪ Monthly (Review of Site Inspection Records and Periodic Environmental and Social Monitoring Reports)	▪ C-ESMP ▪ ESS2 ▪ Law Number 4857, 6331 ▪ Employment and Training Management Plan ▪ Human Resources Management Procedure ▪ Labor Management Plan	**Implementation:** ▪ Project Manager ▪ Contractor's Social Team **Audit:** Supervision Consultant and/or DGII PIU

E&S Issue	Assessment of Impact Management Due to Design Change-2	Additional Mitigation Measures (If any)	Comparative Assessment of Impact Significance for the Current Design (High / Moderate / Low / Neutral / Positive)	Monitoring Parameter	Key Performance Indicator/Target	Monitoring Frequency	Key References (Relevant Plans/Procedures)	Responsible Party and Expert
				▪ Implementation status of labor influx mitigation measures and number of related incidents ▪ Percentage of workers who have signed and comply with the Project Code of Conduct ▪ Number of child labor and forced labor incidents identified ▪ Functionality of the worker grievance mechanism and percentage of grievances addressed within the defined timeframe ▪ Frequency and completeness of labor and working conditions monitoring and reporting ▪ Assessment of potential impacts of design changes on labor and working conditions ▪ Number of significant conflicts or substantiated complaints involving the workforce and nearby nomadic communities	▪ Effective worker grievance mechanism in place, with all grievances addressed within the defined timeframe (100%) ▪ Regular monitoring and reporting of labor and working conditions during construction (monthly) ▪ Design changes do not result in any negative impact on labor and working conditions (100% continuity) ▪ No significant conflicts or substantiated complaints between the workforce and nearby nomadic communities (0 significant cases)			
Land Acquisition and Resettlement	Under the revised design, the location of the Erzin Port Station and the railway alignment will require the acquisition of additional agricultural parcels not included in the initial design. The corresponding mitigation and livelihood restoration measures will be incorporated into the Project's RP and LRP, to be prepared in line with the	▪ Monitoring frequency will be increased. to ensure more responsive communication with affected farmers and local stakeholders.	**Low**	▪ Number of grievances related to land acquisition ▪ Number of disclosure meetings and people contacted ▪ Site inspection reports regarding access to, pastures, and lands ▪ GM logbook entries related to public land	▪ Full compliance with ESS 5 and national standards ▪ Full compliance with RP and LRP ▪ Timely acknowledgment of the grievances ▪ Resolution rates	▪ Anytime upon the request of stakeholders ▪ Monthly (Review of Site Inspection Records and Periodic Environmental and Social Monitoring Reports)	▪ Expropriation Law ▪ Forest Law (No. 6831) ▪ Pasture Law (No. 4342) ▪ Cadastral Law (No. 3402) ▪ Agricultural Reform Law (No. 3083) ▪ Notification Law (No. 7201) ▪ Land Registry Code (Official Gazette No. 28738) ▪ ESS5 ▪ ESS10 ▪ RP and LRP	**Implementation:** ▪ Project Manager ▪ Contractor's Social Team **Audit:** Supervision Consultant and/or DGII PIU

E&S Issue	Assessment of Impact Management Due to Design Change-2	Additional Mitigation Measures (If any)	Comparative Assessment of Impact Significance for the Current Design (High / Moderate / Low / Neutral / Positive)	Monitoring Parameter	Key Performance Indicator/Target	Monitoring Frequency	Key References (Relevant Plans/Procedures)	Responsible Party and Expert
	findings of the updated inventory study. Accordingly, no further mitigation measures have been identified beyond those already incorporated into the RP and LRP.			or common property issues ▪ Incident records related to damage or obstruction of land access.				

4.3 Description of the Design Change-3

Design Change Remarks: One of the two railway lines (the east line) between Yukarıburnaz Station and Port Station has been cancelled, and the remaining line (the west line) has been converted into a double-track configuration. Additionally, following the relocation of Erzin Port Station, a minor southwestward shift was implemented to improve the line geometry and achieve a smoother horizontal alignment. The length of the railway segment within the Strict Protection Area of the Burnaz Groundwater Resources has been reduced; moreover, despite the adoption of a double-track configuration, the elimination of the additional connection line has led to an overall reduction in the project's environmental and social footprint, with the exception of a minor land acquisition and resettlement impact at one location in Yukarıburnaz Neighborhood (Block 594, Parcel 1). The Project Area of Influence remains substantially unchanged under the revised design.

Previous Design

Revised Design

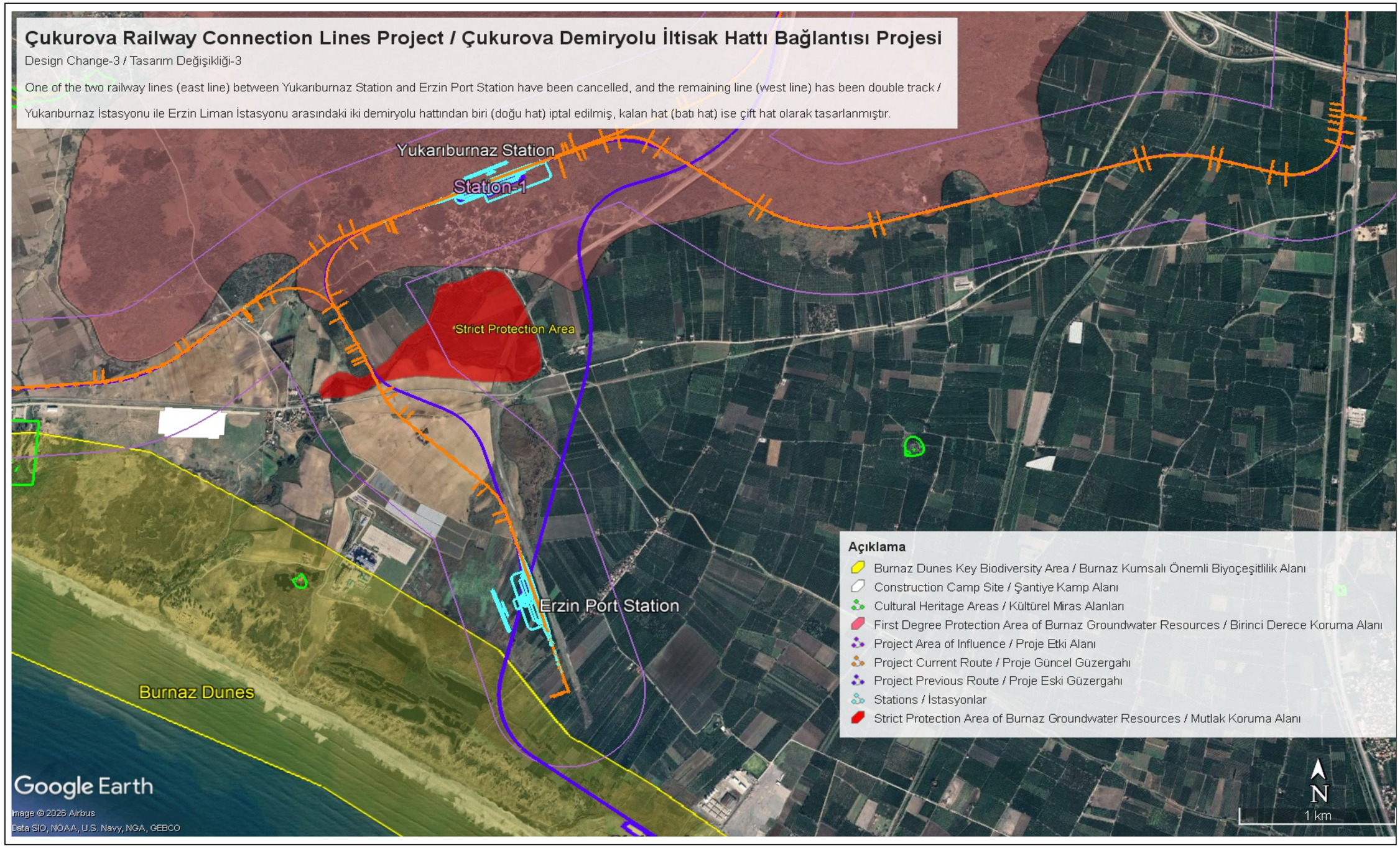


Figure 6. Previous Design vs. Revised Design for Design Change-3

Table 6. E&S Impact Management Due to Design Change-3

E&S Issue	Assessment of Impact Management Due to Design Change-3	Additional Mitigation Measures (If any)	Comparative Assessment of Impact Significance for the Current Design (High / Moderate / Low / Neutral / Positive)	Monitoring Parameter	Key Performance Indicator/Target	Monitoring Frequency	Key References (Relevant Plans/Procedures)	Responsible Party and Expert
Noise and Vibration	With the cancellation of the Eastern Line, the Project's area of influence will be reduced, resulting in a localized decrease in noise and vibration generated by construction and logistics activities, despite the double-track configuration of the Western Line. Provided that full compliance with the existing C-ESMP and relevant sub-management plans is maintained—including noise and vibration mitigation measures such as equipment maintenance, restriction of high-noise activities to daytime hours, speed limits for vehicles, and controlled access to sensitive areas—and that the Grievance Mechanism is actively implemented to address any community concerns, this change is expected to have a positive effect on the Project by reducing potential noise and vibration impacts on nearby communities and sensitive receptors.	-	**Positive**	▪ Noise and/or vibration level measurements at project boundaries and nearest sensitive receptors (in case of any grievances) ▪ Compliance status of measured noise and vibration levels with legal limits and standards ▪ Number of noise- and vibration-related grievances received ▪ Percentage of grievances resolved within the defined timeframe ▪ Implementation status of noise and vibration mitigation measures ▪ Number and percentage of personnel trained in noise and vibration management practices ▪ Records of non-compliance and corrective actions	▪ Full compliance with the project standards and no exceedance of noise and/or vibration limit values ▪ Zero grievances related to noise and vibration ▪ 100% of relevant personnel trained annually	▪ Daily (on-site inspection) ▪ In case of noise/vibration related grievance ▪ Monthly (Review of Site Inspection Records and Periodic Environmental and Social Monitoring Reports)	▪ National Legislation ▪ WB ESS1: Assessment and Management of Environmental and Social Risks and Impacts ▪ WB ESS3: Resource Efficiency and Pollution Prevention and Management ▪ WBG EHS Guidelines ▪ C-ESMP ▪ Noise and Vibration Management Procedure ▪ Pollution Prevention Procedure ▪ Community Health, Safety and Security Management Procedure ▪ Traffic Management Plan	**Implementation:** ▪ Contractor's Project Manager ▪ Contractor's Construction Site Manager ▪ Contractor's Environmental Team **Audit:** ▪ Supervision Consultant and/or DGII PIU
Air Quality	With the cancellation of the Eastern Line, the Project's area of influence will be reduced, resulting in a localized decrease in emissions and dust dispersion generated by construction and logistics activities. Provided that full compliance with the existing C-ESMP and relevant sub-management plans is maintained, including dust control measures such as water spraying, vehicle speed limits, and material covering, and that the Grievance Mechanism is	-	**Positive**	▪ Air quality measurement results at project boundaries and nearest sensitive receptors (in case of any grievances) ▪ Compliance status of monitored air quality parameters with applicable limit values ▪ Number of air quality–related grievances received	▪ Full compliance with the project standards and no exceedance of air quality limit values ▪ Zero grievances related to air quality ▪ 100% of relevant personnel trained annually	▪ Daily (on-site inspection) ▪ In case of air quality related grievance ▪ Monthly (Review of Site Inspection Records and Periodic Environmental and Social Monitoring Reports)	▪ National Legislation ▪ WB ESS1: Assessment and Management of Environmental and Social Risks and Impacts ▪ WB ESS3: Resource Efficiency and Pollution Prevention and Management ▪ WBG EHS Guidelines ▪ C-ESMP ▪ Air Quality and Dust Management Plan ▪ Pollution Prevention Procedure	**Implementation:** ▪ Contractor's Project Manager ▪ Contractor's Construction Site Manager ▪ Contractor's Environmental Team **Audit:** ▪ Supervision Consultant and/or DGII PIU

E&S Issue	Assessment of Impact Management Due to Design Change-3	Additional Mitigation Measures (If any)	Comparative Assessment of Impact Significance for the Current Design (High / Moderate / Low / Neutral / Positive)	Monitoring Parameter	Key Performance Indicator/Target	Monitoring Frequency	Key References (Relevant Plans/Procedures)	Responsible Party and Expert
	actively implemented to address any community concerns, this change is expected to have a positive effect on the Project by reducing potential air quality impacts on nearby communities and sensitive receptors despite the double-track configuration of the Western Line.			▪ Implementation status of dust and odor control measures ▪ Number and percentage of personnel trained in air quality management practices ▪ Records of non-compliance and corrective actions			▪ Community Health, Safety and Security Management Procedure ▪ Traffic Management Plan	
Water Resources and Wastewater Management	The cancellation of the eastern route passing through the First-Degree Protection Area of the Burnaz Groundwater Resources, the revision of the alignment within the Strict Protection Area, and the reduction of the overall project footprint are expected to result in a net positive impact, despite the adoption of a double-track configuration. While no additional mitigation measures are proposed, full compliance with the existing ESMP and relevant sub-management plans/procedures, as well as adherence to the criteria set or to be set by the State Hydraulic Works 6th Regional Directorate (Adana), is required. Additionally, groundwater quality measurements must be conducted every six months at the monitoring point identified during the ESIA process (36.936039° N, 36.046942° E), as specified in the C-ESMP, for the duration of the ongoing works.	-	**Positive**	▪ Surface water and groundwater quality monitoring results at project boundaries and relevant receptors (in case of grievances and/or as required under the project commitments) ▪ Quantity of domestic wastewater generated ▪ Operational condition and capacity of septic tanks ▪ Presence of leaks, overflows, or seepage ▪ Septic tank emptying frequency and licensed disposal records ▪ Transport and disposal conditions of septic waste ▪ Presence of stagnant wastewater or unsanitary conditions ▪ Number of wastewater-related grievances received	▪ 100% of generated wastewater collected and disposed appropriately ▪ Full compliance with national and project water quality standards ▪ Zero spill incidents ▪ Zero grievances related to water resources and wastewater management	▪ Daily (on-site inspection) ▪ Monthly (Review of Site Inspection Records and Periodic Environmental and Social Monitoring Reports) ▪ Biannually (surface water quality sampling and analysis)	▪ National Legislation ▪ WB ESS1: Assessment and Management of Environmental and Social Risks and Impacts ▪ WB ESS3: Resource Efficiency and Pollution Prevention and Management ▪ WBG EHS Guidelines ▪ C-ESMP ▪ Water Resources Management Procedure ▪ Pollution Prevention Procedure ▪ Community Health, Safety and Security Management Procedure ▪ Emergency Preparedness and Response Plan	**Implementation:** ▪ Contractor's Project Manager ▪ Contractor's Construction Site Manager ▪ Contractor's Environmental Team **Audit:** ▪ Supervision Consultant and/or DGII PIU

E&S Issue	Assessment of Impact Management Due to Design Change-3	Additional Mitigation Measures (If any)	Comparative Assessment of Impact Significance for the Current Design (High / Moderate / Low / Neutral / Positive)	Monitoring Parameter	Key Performance Indicator/Target	Monitoring Frequency	Key References (Relevant Plans/Procedures)	Responsible Party and Expert
				▪ Percentage of grievances resolved within the defined timeframe ▪ Training of personnel on wastewater management ▪ Records of non-compliance and corrective actions				
Resource and Waste Management	The cancellation of the eastern route, combined with the concentration of activities along a single alignment despite the availability of a dual-track configuration, is expected to have a positive impact by reducing the project footprint and minimizing environmental disturbance. As the scope of activities within the Project remains largely unchanged, the types of wastes generated and resources used are not expected to change; however, decreases in their quantities—particularly excavation material, topsoil, and fuel consumption—may occur. Such fluctuations will be effectively managed through the consistent implementation of existing plans and procedural requirements, the application of the waste management hierarchy, and the adoption of resource efficiency and zero-waste principles. All wastes will be recorded at the construction camp site using the National Environmental Information System, and health and safety will be ensured through the establishment of project-compliant temporary waste storage areas and containers. Upon completion of the works, no visual pollution elements will remain on site, and surplus excavation material and topsoil will, to the extent possible, be	-	**Positive**	▪ Reduction rate in resource and energy use based on the Resource Usage Monitoring Chart ▪ The ratio of reused, recycled, or recovered waste to total waste produced ▪ Waste segregation by hazardous classification and type (hazardous, non-hazardous, recyclable, organic, etc.) ▪ Transfer of all waste types to appropriate licensed recycling or disposal facilities ▪ Compliance rate with timely and comprehensive waste reporting requirements (including online reporting via the National Environmental Information System, where applicable) ▪ Number of incidents involving soil contamination due to improper waste management	▪ Reduction rate in resource and energy use ▪ 100% segregation at source and proper storage with labeling ▪ All waste types transferred to appropriate recycling or disposal facilities ▪ Zero contamination incidents ▪ 100% of relevant personnel trained annually ▪ Zero grievances related to resource and waste management	▪ Daily (on-site inspection) ▪ Monthly (Review of Site Inspection Records and Periodic Environmental and Social Monitoring Reports)	▪ National Legislation ▪ WB ESS1: Assessment and Management of Environmental and Social Risks and Impacts ▪ WB ESS3: Resource Efficiency and Pollution Prevention and Management ▪ WBG EHS Guidelines ▪ C-ESMP ▪ Waste Management Procedure ▪ Pollution Prevention Procedure ▪ Community Health, Safety and Security Management Procedure ▪ Supplementary ESMP for Construction Camp Site and Concrete Batching Plant ▪ Construction Rehabilitation and Landscape Management Procedure	**Implementation:** ▪ Contractor's Project Manager ▪ Contractor's Construction Site Manager ▪ Contractor's Environmental Team **Audit:** ▪ Supervision Consultant and/or DGII PIU

E&S Issue	Assessment of Impact Management Due to Design Change-3	Additional Mitigation Measures (If any)	Comparative Assessment of Impact Significance for the Current Design (High / Moderate / Low / Neutral / Positive)	Monitoring Parameter	Key Performance Indicator/Target	Monitoring Frequency	Key References (Relevant Plans/Procedures)	Responsible Party and Expert
	reused for landscaping and site rehabilitation purposes.			▪ Total number and percentage of personnel trained in resource efficiency and waste management practices				
Community Health and Safety	The cancellation of the railway line passing near Yukarıburnaz Neighborhood under the previous design has reduced community health and safety impacts.	-	**Positive**	▪ Number and effectiveness of preventive and corrective actions implemented ▪ Number of consultations with nomads during the livestock activity season ▪ Presence and number of warning signs correctly installed at designated locations ▪ Feedback and information collected through public consultations ▪ Training activities on pollution prevention, SEA/SH, Code of Conduct and GBVH ▪ Grievance records related to land and pasture access, workers, traffic and construction activities. ▪ Vehicle maintenance records	▪ Zero incidents of animal injury or loss during the reporting period ▪ Zero recorded traffic accidents associated with livestock activities ▪ Zero grievances recorded related to community health, safety and security issues ▪ 100% of warning signs correctly installed at all designated locations, in adequate number ▪ %100 staff completion of safety training ▪ 100% vehicle safety inspection compliance ▪ 100% of grievances closed or adequately responded to within 15 days	▪ Daily observations during the construction ▪ Monthly Environmental and Social Monitoring reports	▪ C-ESMP ▪ Community Health, Safety and Security Management Procedure ▪ Traffic Management Plan ▪ ESS 4, ESS 10 ▪ SEP including GM ▪ Contractor's Traffic Management Plan ▪ Contractor's Emergency Preparedness and Response Procedure ▪ Contractor's Community Health, Safety and Security Management Procedure	**Implementation:** ▪ Project Manager ▪ Contractor's OHS expert ▪ Contractor's Social Team ▪ Contractor's Environmental Team **Audit:** Supervision Consultant and/or DGII PIU
Biodiversity	The cancellation of the eastern section due to the design change has reduced natural habitat loss. Therefore, a relatively positive effect has been achieved. On the other hand, the biodiversity inventory study conducted in the section where the line geometry was	▪ A minimum number of service roads will be created, unnecessary service roads will not be opened, and roads other than the designated	**Positive**	▪ Service roads must be in compliance with existing plans ▪ Herbicide use control	▪ 100% compliance with service roads in the plans ▪ No use of herbicides ▪ Photographing and recording of locations where warning traffic signs and marker boards are placed	Weekly	▪ Environmental Law ▪ National Parks Law ▪ Terrestrial Hunting Law ▪ Animal Protection Law ▪ Forest Law ▪ Pasture Law ▪ Fisheries Law ▪ Wetlands Protection Regulation	▪ ECoW ▪ Environmental Leader ▪ Project Manager **Audit:** Supervision Consultant and/or DGII PIU

E&S Issue	Assessment of Impact Management Due to Design Change-3	Additional Mitigation Measures (If any)	Comparative Assessment of Impact Significance for the Current Design (High / Moderate / Low / Neutral / Positive)	Monitoring Parameter	Key Performance Indicator/Target	Monitoring Frequency	Key References (Relevant Plans/Procedures)	Responsible Party and Expert
	changed did not reveal any critical habitats or species that trigger critical habitats. However, the existing and current C-BMP requirements will be complied with within the scope of the design change.	service roads will not be used. ▪ Herbicides will not be used during vegetation clearing to reduce the risk of injury/death to fauna species. The area to be cleared will be inspected before construction. If a nest is found, it will be checked with endoscopic cameras, and if a live specimen is observed, it will be expected to move away on its own. ▪ Construction activities will be carried out in stages to allow fauna elements to move away from the area on their own. Individuals that do not move away on their own will be encouraged to leave the area using natural stimuli (food, pheromones, etc.), loud noises, etc. ▪ Warning traffic signs and markers will be placed on the service roads to be used, as wild animals may be encountered.		Placement of warning traffic signs and markers	Completion of translocation registration form		▪ Regulation on the Implementation of the Convention on International Trade in Endangered Species of Wild Fauna and Flora ▪ Regulation on the Protection of Wildlife and Wildlife Development Areas ▪ Regulation on the Production, Collection from Nature, and Export of Natural Flower Bulbs ▪ European Convention on the Conservation of European Wildlife and Natural Habitats (BERN) ▪ Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) ▪ International Union for Conservation of Nature (IUCN) ▪ Ramsar Convention ▪ EU Habitat Directives ▪ EU Birds Directives ▪ WB ESS 6	
Cultural Heritage	The implemented design modification does not result in any adverse impacts on registered cultural heritage assets located within the relevant sections of the project. In addition, the design modification is not considered to be within areas identified as having potential for cultural or	-	**Positive**	▪ Conducting archaeological site surveys and archaeological assessment ▪ Defining "no-trespassing'' areas ▪ Providing training on cultural heritage	▪ 100% compliance with Chance Find Procedure and proper reporting of all chance finds ▪ Zero irreversible damage to cultural heritage assets	▪ Periodic observations during the construction ▪ Monthly Environmental and Social Monitoring reports	▪ Law No. 2863 on the Protection of Cultural and Natural Assets ▪ UNESCO World Heritage Convention ▪ European Cultural Heritage Conservation Standards	**Implementation:** ▪ Project Manager ▪ Deputy Project Manager ▪ Contractor's Archaeological Specialist ▪ Construction Team Supervisors ▪ Construction Site Engineers

E&S Issue	Assessment of Impact Management Due to Design Change-3	Additional Mitigation Measures (If any)	Comparative Assessment of Impact Significance for the Current Design (High / Moderate / Low / Neutral / Positive)	Monitoring Parameter	Key Performance Indicator/Target	Monitoring Frequency	Key References (Relevant Plans/Procedures)	Responsible Party and Expert
	archaeological finds. However, should any cultural heritage asset be encountered during project implementation, the Cultural Heritage and Chance Finds Procedure will be implemented in accordance with the World Bank Environmental and Social Framework. The actions to be undertaken to address potential risks that may arise in areas affected by the design modification are outlined below: ▪ Implementation of the Cultural Heritage and Chance Finds Procedure. ▪ Ensuring that construction activities carried out in areas with high archaeological potential are conducted under the supervision of a qualified archaeologist. ▪ Provision of cultural heritage awareness training to all personnel working within the project site. The training shall cover, at a minimum, the significance of cultural heritage assets, principles of their protection, and the procedures to be followed in the event that potential cultural heritage assets are encountered, particularly in the absence of an archaeologist. The scope and content of the trainings shall be documented in detail and recorded through signed attendance and training records.			and chance finds procedures ▪ Fencing and boundary demarcation			▪ World Bank Environmental and Social Standards (World Bank ESS8) ▪ Relevant provincial and municipal decisions. ▪ C-ESMP ▪ Cultural Heritage and Chance Finds Procedure	**Audit:** Supervision Consultant and/or DGII PIU
Occupational Health and Safety	As the design modification entails work scopes, construction activities, and risk profiles that are largely comparable to those of the previous design, occupational health and safety (OHS)–related impacts and risks are assessed to remain	-	**Neutral**	▪ Number and content of OHS training and educational activities conducted (induction and periodic), including participant records	▪ 100% compliance with the approved Annual Work Plan. ▪ 100% compliance with the Work Contract requirements and Project Standards.	▪ Daily (on-site inspection) ▪ Monthly (Review of Site Inspection Records and Periodic Environmental and Social Monitoring Reports)	▪ Occupational Health and Safety Law No. 6331 and related legislation ▪ ESS2 ▪ WBG EHS Guidelines ▪ C-ESMP ▪ Occupational Health and Safety Management Plan	**Implementation:** ▪ Project Manager ▪ Contractor's OHS Team ▪ Contractor's Construction Site Manager **Audit:**

E&S Issue	Assessment of Impact Management Due to Design Change-3	Additional Mitigation Measures (If any)	Comparative Assessment of Impact Significance for the Current Design (High / Moderate / Low / Neutral / Positive)	Monitoring Parameter	Key Performance Indicator/Target	Monitoring Frequency	Key References (Relevant Plans/Procedures)	Responsible Party and Expert
	predominantly at the same level. No new high-risk activities or materially different hazard categories are anticipated as a result of the revision. Accordingly, the effective and diligent implementation of established good international industry practices (GIIP), applicable national legislation, project standards, the C-ESMP, and the relevant sub-management plans is of critical importance. Strict adherence to risk assessment procedures, permit-to-work systems, training programs, supervision mechanisms, and monitoring requirements will ensure that OHS risks continue to be systematically identified, mitigated, and controlled throughout the construction phase. Continuous oversight, regular inspections, and timely closure of corrective actions will further safeguard worker health and safety and maintain compliance with project commitments.			▪ Implementation status and effectiveness of preventive and corrective actions taken ▪ Work accident and incident records (including near misses, lost time injuries, severity rates, and root cause analyses) ▪ Compliance of on-site OHS practices with project standards, national legislation, and C-ESMP requirements ▪ Availability and validity of work permits (e.g., hot work, confined space, excavation, lifting operations, electrical works) ▪ Implementation records of the Emergency Preparedness and Response Plan (drills conducted, response times, corrective actions identified) ▪ Internal audit and inspection records, including identified non-conformities and follow-up actions ▪ Proper use and availability of Personal Protective Equipment (PPE) in the field ▪ Housekeeping conditions and general site safety compliance ▪ Status and compliance of	▪ 100% compliance with the approved Annual Training Plan. ▪ Full adherence to the Annual Emergency Drill Plan. ▪ Zero work-related fatalities ▪ Year-on-year reduction in recordable OHS incidents. ▪ 100% of recordable incidents formally investigated through Root Cause Analysis within the agreed timeframe. ▪ 100% of corrective and preventive actions closed within the agreed timeframe. ▪ 100% compliance with mandatory PPE usage in designated work areas. ▪ Timely notification of notifiable incidents to the Administration and relevant authorities in accordance with legal requirements. ▪ ≥95% (or 100%, if contractually required) of OHS-related findings, audit non-conformities, and worker grievances closed or adequately responded to within 15 days.		▪ Accident, Incident, and Near Miss Management Procedure ▪ Emergency Preparedness and Response Plan ▪ Labor Management Plan	▪ Supervision Consultant and/or DGII PIU

E&S Issue	Assessment of Impact Management Due to Design Change-3	Additional Mitigation Measures (If any)	Comparative Assessment of Impact Significance for the Current Design (High / Moderate / Low / Neutral / Positive)	Monitoring Parameter	Key Performance Indicator/Target	Monitoring Frequency	Key References (Relevant Plans/Procedures)	Responsible Party and Expert
				chemical storage areas (labeling, secondary containment, MSDS availability) ▪ Records of toolbox talks and daily safety briefings conducted ▪ Monitoring of high-risk activities (working at height, lifting operations, excavation works, rail installation activities) ▪ Subcontractor OHS performance and compliance monitoring				
Socio-Economic Conditions	With the design revision, the railway line passing through agricultural land has been cancelled. As a result, the livelihood impacts arising from land acquisition have been reduced.	-	**Positive**	▪ Number of consultations with nomads during the livestock activity season ▪ Presence and number of warning signs correctly installed at designated locations ▪ Feedback and information collected through public consultations ▪ Training activities ▪ Grievance records, including the number, type, and resolution status of grievances related to land acquisition and livelihood impacts	▪ Ensure 100% daily inspection of construction site perimeter fencing to prevent animal entry Zero incidents of animal injury or loss during the reporting period ▪ 100% completion of staff training on the presence of nomadic groups and ensure that all necessary awareness briefings are conducted	▪ Daily observations during the construction ▪ Monthly Environmental and Social Monitoring reports	▪ C-ESMP ▪ Contractor's Labor Management Plan ▪ Contractor's Construction Environmental and Social Monitoring and Training Procedure ▪ ESS10 ▪ Stakeholder Engagement Plan ▪ Community Health, Safety and Security Management Procedure (including Community Relations Management Procedure) ▪ Labor Law and Regulation on Classification, Labelling and Packaging of Substances and Mixtures ▪ Construction E&S Monitoring and Training Procedure ▪ Employment and Training Management Procedure	**Implementation:** ▪ Project Manager ▪ Contractor's Social Team **Audit:** Supervision Consultant and/or DGII PIU
Labor and Working Conditions	No significant changes to labor and working conditions are expected as a result of the design revision. Labor and working conditions will be managed in accordance with the implementation principles defined in the Contractor's Labor Management Plan and	-	**Neutral**	▪ Compliance status with project standards, national legislation, and applicable labor requirements ▪ Percentage of project workers employed under	▪ 100% compliance with the project standards ▪ Written employment contracts provided to all project workers (100%) ▪ No non-compliance with legal requirements on working hours, wages, and benefits (0 violations)	▪ Daily (on-site inspection) ▪ Monthly (Review of Site Inspection Records and Periodic Environmental and Social Monitoring Reports)	▪ C-ESMP ▪ ESS2 ▪ Law Number 4857, 6331 ▪ Employment and Training Management Plan ▪ Human Resources Management Procedure ▪ Labor Management Plan	**Implementation:** ▪ Project Manager ▪ Contractor's Social Team **Audit:** Supervision Consultant and/or DGII PIU

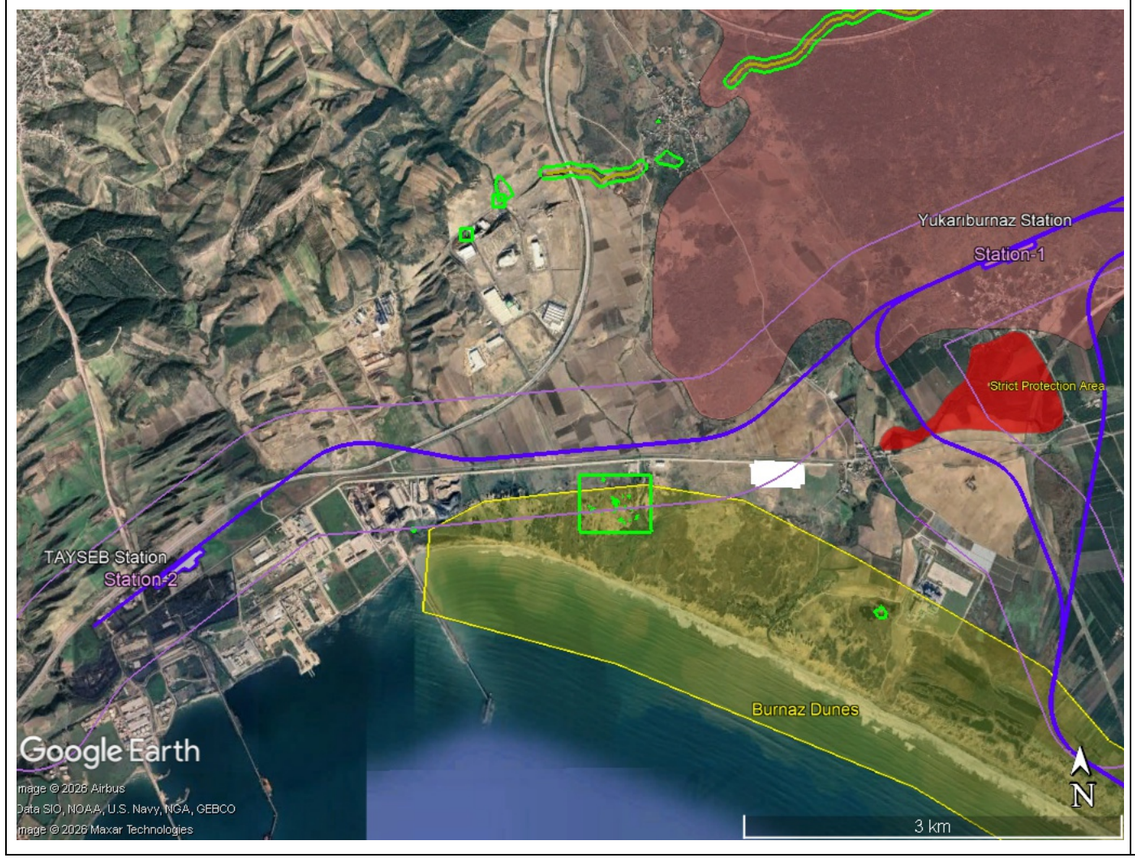
E&S Issue	Assessment of Impact Management Due to Design Change-3	Additional Mitigation Measures (If any)	Comparative Assessment of Impact Significance for the Current Design (High / Moderate / Low / Neutral / Positive)	Monitoring Parameter	Key Performance Indicator/Target	Monitoring Frequency	Key References (Relevant Plans/Procedures)	Responsible Party and Expert
	Human Resource Management Plan prepared for the Project, as well as applicable national legislation and relevant applicable standards. The design change will not result in any changes to these arrangements or practices.			written employment contracts ▪ Number of non-compliance cases related to working hours, wages, and benefits ▪ Number and percentage of workers receiving induction and periodic training on OHS, workers' rights, Code of Conduct, and labor influx management ▪ Implementation status of labor influx mitigation measures and number of related incidents ▪ Percentage of workers who have signed and comply with the Project Code of Conduct ▪ Number of child labor and forced labor incidents identified ▪ Functionality of the worker grievance mechanism and percentage of grievances addressed within the defined timeframe ▪ Frequency and completeness of labor and working conditions monitoring and reporting ▪ Assessment of potential impacts of design changes on labor and working conditions ▪ Number of significant conflicts or substantiated	▪ Induction and periodic training on OHS, workers' rights, Code of Conduct, and labor influx management provided to all workers (100%) ▪ Full implementation of labor influx mitigation measures, with no major incidents recorded (0 major cases) ▪ All workers to sign and comply with the Project Code of Conduct (100%) ▪ Zero tolerance and zero incidents of child labor and forced labor ▪ Effective worker grievance mechanism in place, with all grievances addressed within the defined timeframe (100%) ▪ Regular monitoring and reporting of labor and working conditions during construction (monthly) ▪ Design changes do not result in any negative impact on labor and working conditions (100% continuity) ▪ No significant conflicts or substantiated complaints between the workforce and nearby nomadic communities (0 significant cases)			

E&S Issue	Assessment of Impact Management Due to Design Change-3	Additional Mitigation Measures (If any)	Comparative Assessment of Impact Significance for the Current Design (High / Moderate / Low / Neutral / Positive)	Monitoring Parameter	Key Performance Indicator/Target	Monitoring Frequency	Key References (Relevant Plans/Procedures)	Responsible Party and Expert
				complaints involving the workforce and nearby nomadic communities				
Land Acquisition and Resettlement	With the design revision, the railway line section previously planned to pass through agricultural land has been cancelled. As a result, land acquisition requirements have been significantly reduced, leading to a corresponding decrease in livelihood impacts, particularly for informal land users and farmer stakeholders. However, the realigned railway (a minor southwestward shift) overlaps with a guard house, two water well with pumps, a solar energy installation, and some irrigation pipes located on the affected land (Yukarıburnaz Location, Block 594, Parcel 1). As a result, livelihood impacts have increased in this specific area. Nevertheless, no additional mitigation measures have been proposed, given that the updated inventory study will document the affected assets and ensure that all livelihood losses are appropriately assessed and addressed within the framework of the Project's RP and LRP along with ESS5. Nevertheless, targeted stakeholder engagement will be conducted with affected land users, and compensation and livelihood restoration measures will be implemented and monitored in accordance with the Project's RP and LRP to ensure that all livelihood impacts are properly addressed and livelihoods are sustainably restored.	-	**Low**	▪ Number of grievances related to land acquisition ▪ Number of disclosure meetings and people contacted ▪ Incident records related to damage or obstruction of land access.	▪ Full compliance with ESS 5 and national standards ▪ Full compliance with RP and LRP ▪ Timely acknowledgment of the grievances ▪ Resolution rates	▪ Anytime upon the request of stakeholders ▪ Monthly (Review of Site Inspection Records and Periodic Environmental and Social Monitoring Reports)	▪ Expropriation Law ▪ Forest Law (No. 6831) ▪ Pasture Law (No. 4342) ▪ Cadastral Law (No. 3402) ▪ Agricultural Reform Law (No. 3083) ▪ Notification Law (No. 7201) ▪ Land Registry Code (Official Gazette No. 28738) ▪ ESS5 ▪ ESS10 ▪ RP and LRP	**Implementation:** ▪ Project Manager ▪ Contractor's Social Team **Audit:** Supervision Consultant and/or DGII PIU

4.4 Description of the Design Change-4

Design Change Remarks: The railway section between Yukarıburnaz Station and TAYSEB Station has been converted to a double track (resulting in an increased construction corridor width and an increased level of work), with adjustments made to achieve a smoother alignment; however, no significant changes are expected within the area of influence.

Previous Design



Revised Design

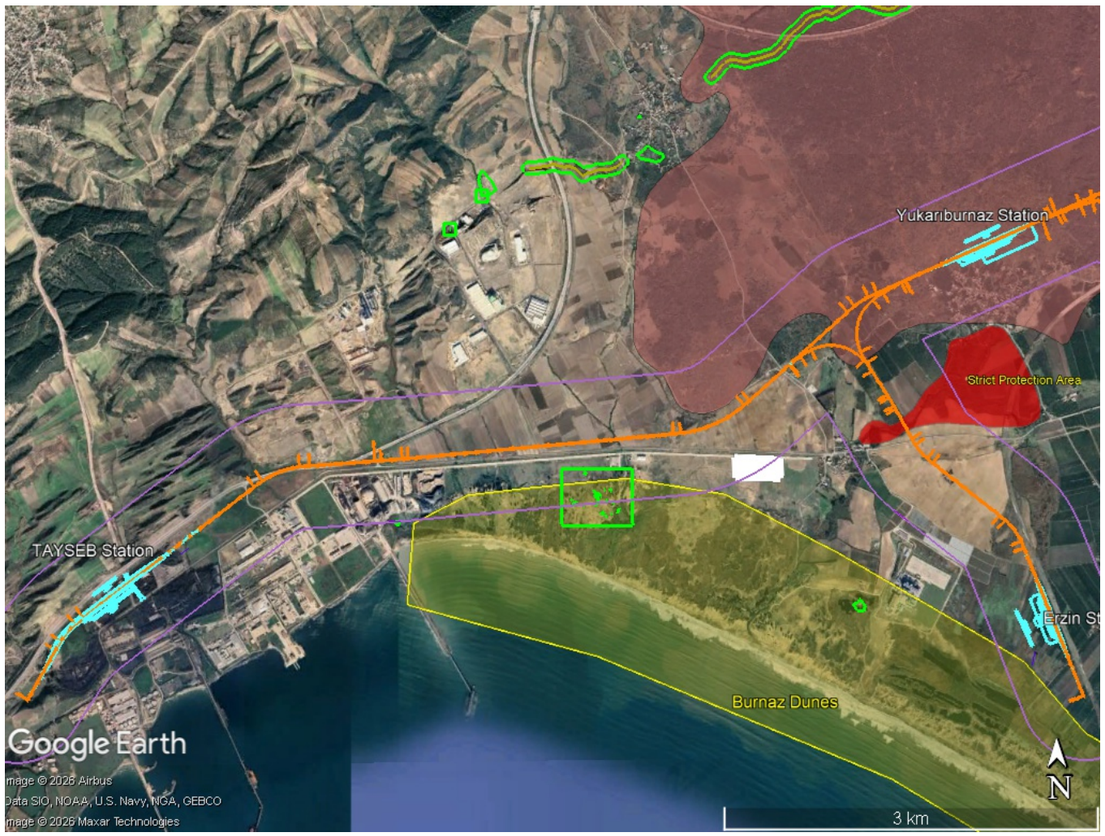


Figure 7. Previous Design vs. Revised Design for Design Change-4

Table 7. E&S Impact Management Due to Design Change-4

E&S Issue	Assessment of Impact Management Due to Design Change-4	Additional Mitigation Measures (If any)	Comparative Assessment of Impact Significance for the Current Design (High / Moderate / Low / Neutral / Positive)	Monitoring Parameter	Key Performance Indicator/Target	Monitoring Frequency	Key References (Relevant Plans/Procedures)	Responsible Party and Expert
Noise and Vibration	The transition to a double-track configuration is expected to result in only minor additional impacts from construction and logistics activities. As the impact area remains largely unchanged, no new sensitive receptors are anticipated to be affected. With the effective implementation of the existing C-ESMP and its relevant sub-management plans, alongside the active operation of the grievance mechanism, these impacts are expected to be minimized, and no additional mitigation measures are required. In accordance with C-ESMP requirements, quarterly noise measurements (continuous monitoring for 48 hours) at the N/AQ-2 (36.948578°, 36.058337°) and N/AQ-3 (36.942579°, 36.045017°) monitoring points within the project's area of influence will be conducted continuously throughout the active construction period.	-	**Low**	▪ Noise and/or vibration level measurements at project boundaries and nearest sensitive receptors ▪ Compliance status of measured noise and vibration levels with legal limits and standards ▪ Number of noise- and vibration-related grievances received ▪ Percentage of grievances resolved within the defined timeframe ▪ Implementation status of noise and vibration mitigation measures ▪ Number and percentage of personnel trained in noise and vibration management practices ▪ Records of non-compliance and corrective actions ▪ Regular reporting of noise and vibration monitoring results	▪ Full compliance with the project standards and no exceedance of noise and/or vibration limit values ▪ Zero grievances related to noise and vibration ▪ 100% of relevant personnel trained annually	▪ Daily (on-site inspection) ▪ In case of noise/vibration related grievance ▪ Quarterly (noise and/or vibration measurements) ▪ Monthly (Review of Site Inspection Records and Periodic Environmental and Social Monitoring Reports)	▪ National Legislation ▪ WB ESS1: Assessment and Management of Environmental and Social Risks and Impacts ▪ WB ESS3: Resource Efficiency and Pollution Prevention and Management ▪ WBG EHS Guidelines ▪ C-ESMP ▪ Noise and Vibration Management Procedure ▪ Pollution Prevention Procedure ▪ Community Health, Safety and Security Management Procedure ▪ Traffic Management Plan	**Implementation:** ▪ Contractor's Project Manager ▪ Contractor's Construction Site Manager ▪ Contractor's Environmental Team **Audit:** ▪ Supervision Consultant and/or DGII PIU
Air Quality	The transition to a double-track configuration is expected to result in only minor additional impacts on air quality arising from construction and logistics activities. As the project's area of influence remains largely unchanged, no new sensitive receptors are anticipated to be affected. With the effective implementation of the existing C-ESMP and its relevant sub-management plans, including dust and emission control	-	**Low**	▪ Air quality measurement results at project boundaries and nearest sensitive receptors ▪ Compliance status of monitored air quality parameters with applicable limit values ▪ Number of air quality–related	▪ Full compliance with the project standards and no exceedance of air quality limit values ▪ Zero grievances related to air quality ▪ 100% of relevant personnel trained annually	▪ Daily (on-site inspection) ▪ In case of air quality related grievance ▪ Quarterly (air quality measurements) ▪ Monthly (Review of Site Inspection Records and Periodic Environmental and Social Monitoring Reports)	▪ National Legislation ▪ WB ESS1: Assessment and Management of Environmental and Social Risks and Impacts ▪ WB ESS3: Resource Efficiency and Pollution Prevention and Management ▪ WBG EHS Guidelines ▪ C-ESMP ▪ Air Quality and Dust Management Plan ▪ Pollution Prevention Procedure	**Implementation:** ▪ Contractor's Project Manager ▪ Contractor's Construction Site Manager ▪ Contractor's Environmental Team **Audit:** ▪ Supervision Consultant and/or DGII PIU

E&S Issue	Assessment of Impact Management Due to Design Change-4	Additional Mitigation Measures (If any)	Comparative Assessment of Impact Significance for the Current Design (High / Moderate / Low / Neutral / Positive)	Monitoring Parameter	Key Performance Indicator/Target	Monitoring Frequency	Key References (Relevant Plans/Procedures)	Responsible Party and Expert
	measures, and the active operation of the grievance mechanism, these impacts are expected to be minimized, and no additional mitigation measures are required. In accordance with C-ESMP requirements, quarterly air quality monitoring of PM_{10}, $PM_{2.5}$, and/or settled dust will be conducted at the N/AQ-2 (36.948578°, 36.058337°) and N/AQ-3 (36.942579°, 36.045017°) monitoring points within the project's area of influence throughout the active construction period.			grievances received ▪ Implementation status of dust and odor control measures ▪ Number and percentage of personnel trained in air quality management practices ▪ Records of non-compliance and corrective actions ▪ Regular reporting of air quality monitoring results			▪ Community Health, Safety and Security Management Procedure ▪ Traffic Management Plan	
Water Resources and Wastewater Management	The transition to a double-track configuration is expected to result in only minor additional impacts related to water and wastewater management arising from construction and logistics activities. As the project's area of influence remains largely unchanged, no new sensitive receptors are anticipated to be affected. With the effective implementation of the existing C-ESMP and its relevant sub-management plans, alongside the active operation of the grievance mechanism, these impacts are expected to be minimized, and no additional mitigation measures are required. In line with the ESIA process and in accordance with the C-ESMP, surface water quality monitoring will be conducted at the SW-3 (36.936440°, 36.025834°) and SW-4 (36.934162°, 35.992744°) monitoring points at six-month intervals throughout periods of active construction activities. Management of wastewater, liquid waste, and hazardous materials will continue in full compliance with the C-ESMP	-	**Low**	▪ Surface water and groundwater quality monitoring results at project boundaries and relevant receptors (in case of grievances and/or as required under the project commitments) ▪ Quantity of domestic wastewater generated ▪ Operational condition and capacity of septic tanks ▪ Presence of leaks, overflows, or seepage ▪ Septic tank emptying frequency and licensed disposal records ▪ Transport and disposal conditions of septic waste ▪ Presence of stagnant wastewater or unsanitary conditions	▪ 100% of generated wastewater collected and disposed appropriately ▪ Full compliance with national and project water quality standards ▪ Zero spill incidents ▪ Zero grievances related to water resources and wastewater management	▪ Daily (on-site inspection) ▪ Monthly (Review of Site Inspection Records and Periodic Environmental and Social Monitoring Reports) ▪ Biannually (surface water quality sampling and analysis)	▪ National Legislation ▪ WB ESS1: Assessment and Management of Environmental and Social Risks and Impacts ▪ WB ESS3: Resource Efficiency and Pollution Prevention and Management ▪ WBG EHS Guidelines ▪ C-ESMP ▪ Water Resources Management Procedure ▪ Pollution Prevention Procedure ▪ Community Health, Safety and Security Management Procedure ▪ Emergency Preparedness and Response Plan	**Implementation:** ▪ Contractor's Project Manager ▪ Contractor's Construction Site Manager ▪ Contractor's Environmental Team **Audit:** ▪ Supervision Consultant and/or DGII PIU

E&S Issue	Assessment of Impact Management Due to Design Change-4	Additional Mitigation Measures (If any)	Comparative Assessment of Impact Significance for the Current Design (High / Moderate / Low / Neutral / Positive)	Monitoring Parameter	Key Performance Indicator/Target	Monitoring Frequency	Key References (Relevant Plans/Procedures)	Responsible Party and Expert
	and the relevant sub-management plans. All domestic and process wastewater will be collected in leak-proof tanks, temporarily stored, and disposed of through authorized and approved systems in accordance with applicable national regulations. Accordingly, all mitigation measures defined in these documents to prevent soil and water contamination will be consistently implemented. These measures include the application of secondary containment during short-term chemical use in open areas, the storage of hazardous materials in impermeable and enclosed areas under appropriate conditions, and the activation of the Emergency Preparedness and Response Procedure in the event of environmental incidents or accidents.			▪ Number of wastewater-related grievances received ▪ Percentage of grievances resolved within the defined timeframe ▪ Training of personnel on wastewater management ▪ Records of non-compliance and corrective actions				
Resource and Waste Management	The transition to a double-track configuration is expected to result in minor additional impacts associated with increased quantities of construction-related wastes and resource utilization, particularly excavation material, topsoil, and fuel. As the project scope and area of influence remain unchanged, no new sensitive receptors are anticipated to be affected. These increases will be effectively managed through the continued implementation of the C-ESMP and relevant sub-management plans, in line with the waste management hierarchy, resource efficiency, and zero-waste principles. Waste types are not expected to change, and all generated wastes will be recorded at the construction camp site through the National Environmental	-	**Low**	▪ Reduction rate in resource and energy use, based on the Resource Usage Monitoring Chart ▪ The ratio of reused, recycled, or recovered waste to total waste produced ▪ Waste segregation by hazardous classification and type (hazardous, non-hazardous, recyclable, organic, etc.) ▪ Transfer of all waste types to appropriate licensed recycling or disposal facilities ▪ Compliance rate with timely and comprehensive waste reporting	▪ Reduction rate in resource and energy use ▪ 100% segregation at source and proper storage with labeling ▪ All waste types transferred to appropriate recycling or disposal facilities ▪ Zero contamination incidents ▪ 100% of relevant personnel trained annually ▪ Zero grievances related to resource and waste management	▪ Daily (on-site inspection) ▪ Monthly (Review of Site Inspection Records and Periodic Environmental and Social Monitoring Reports)	▪ National Legislation ▪ WB ESS1: Assessment and Management of Environmental and Social Risks and Impacts ▪ WB ESS3: Resource Efficiency and Pollution Prevention and Management ▪ WBG EHS Guidelines ▪ C-ESMP ▪ Waste Management Procedure ▪ Pollution Prevention Procedure ▪ Community Health, Safety and Security Management Procedure ▪ Supplementary ESMP for Construction Camp Site and Concrete Batching Plant ▪ Construction Rehabilitation and Landscape Management Procedure	**Implementation:** ▪ Contractor's Project Manager ▪ Contractor's Construction Site Manager ▪ Contractor's Environmental Team **Audit:** ▪ Supervision Consultant and/or DGII PIU

E&S Issue	Assessment of Impact Management Due to Design Change-4	Additional Mitigation Measures (If any)	Comparative Assessment of Impact Significance for the Current Design (High / Moderate / Low / Neutral / Positive)	Monitoring Parameter	Key Performance Indicator/Target	Monitoring Frequency	Key References (Relevant Plans/Procedures)	Responsible Party and Expert
	Information System. Project-compliant temporary waste storage areas and containers will be maintained to ensure health and safety requirements. Upon completion of construction activities, no visual pollution elements will remain on site, and surplus excavation material and topsoil will, to the extent possible, be reused for landscaping and site rehabilitation purposes. Accordingly, no additional mitigation measures are required.			requirements (including online reporting via the National Environmental Information System, where applicable) ▪ Number of incidents involving soil contamination due to improper waste management ▪ Total number and percentage of personnel trained in resource efficiency and waste management practices				
Community Health and Safety	Based on the current assessment, no significant community health and safety impacts are expected to arise from the design modification, despite the increase in construction workload and operational intensity. Where the design change relates to the conversion of the railway to a double track, the measures defined in the C-ESMP and the relevant Management Plans—particularly those concerning safety precautions in areas adjacent to the construction site and access to land—will be fully implemented.	-	**Low**	▪ Number and effectiveness of preventive and corrective actions implemented ▪ Number of consultations with nomads during the livestock activity season ▪ Presence and number of warning signs correctly installed at designated locations ▪ Feedback and information collected through public consultations ▪ Training activities on pollution prevention, SEA/SH, Code of Conduct and GBVH ▪ Grievance records related to land and pasture access, workers, traffic and	▪ Zero incidents of animal injury or loss during the reporting period ▪ Zero recorded traffic accidents associated with livestock activities ▪ Zero grievances recorded related to community health, safety and security issues ▪ 100% of warning signs correctly installed at all designated locations, in adequate number ▪ %100 staff completion of safety training ▪ 100% vehicle safety inspection compliance ▪ 100% of grievances closed or adequately responded to within 15 days	▪ Daily observations during the construction ▪ Monthly Environmental and Social Monitoring reports	▪ C-ESMP ▪ Community Health, Safety and Security Management Procedure ▪ Traffic Management Plan ▪ ESS 4, ESS 10 ▪ SEP including GM ▪ Contractor's Traffic Management Plan ▪ Contractor's Emergency Preparedness and Response Procedure ▪ Contractor's Community Health, Safety and Security Management Procedure	**Implementation:** ▪ Project Manager ▪ Contractor's Social Team ▪ Contractor's Environmental Team **Audit:** Supervision Consultant and/or DGII PIU

E&S Issue	Assessment of Impact Management Due to Design Change-4	Additional Mitigation Measures (If any)	Comparative Assessment of Impact Significance for the Current Design (High / Moderate / Low / Neutral / Positive)	Monitoring Parameter	Key Performance Indicator/Target	Monitoring Frequency	Key References (Relevant Plans/Procedures)	Responsible Party and Expert
				construction activities. ▪ Vehicle maintenance records				
Biodiversity	No critical habitats or species triggering critical habitats were found in the inventory study of the sections subject to the design change. Additional natural habitat loss will occur in a very small area after the design change. Therefore, the impact of the design change on biodiversity values will be very small. Existing and current C-BMP requirements will be complied with within the scope of the design change.	▪ A minimum number of service roads will be created, unnecessary service roads will not be opened, and roads other than the designated service roads will not be used. ▪ Herbicides will not be used during vegetation clearing to reduce the risk of injury/death to fauna species. The area to be cleared will be inspected before construction. If a nest is found, it will be checked with endoscopic cameras, and if a live specimen is observed, it will be expected to move away on its own. ▪ Construction activities will be carried out in stages to allow fauna elements to move away from the area on their own. Individuals that do not move away on their own will be encouraged to leave the area using natural stimuli (food, pheromones, etc.), loud noises, etc. ▪ Warning traffic signs and markers will be placed on the service roads to	**Low**	▪ Service roads must be in compliance with existing plans ▪ Herbicide use control ▪ Placement of warning traffic signs and markers	▪ 100% compliance with service roads in the plans ▪ No use of herbicides ▪ Photographing and recording of locations where warning traffic signs and marker boards are placed ▪ Completion of translocation registration form	Weekly	▪ Environmental Law ▪ National Parks Law ▪ Terrestrial Hunting Law ▪ Animal Protection Law ▪ Forest Law ▪ Pasture Law ▪ Fisheries Law ▪ Wetlands Protection Regulation ▪ Regulation on the Implementation of the Convention on International Trade in Endangered Species of Wild Fauna and Flora ▪ Regulation on the Protection of Wildlife and Wildlife Development Areas ▪ Regulation on the Production, Collection from Nature, and Export of Natural Flower Bulbs ▪ European Convention on the Conservation of European Wildlife and Natural Habitats (BERN) ▪ Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) ▪ International Union for Conservation of Nature (IUCN) ▪ Ramsar Convention ▪ EU Habitat Directives ▪ EU Birds Directives ▪ WB ESS 6	▪ ECoW ▪ Environmental Leader ▪ Project Manager **Audit:** Supervision Consultant and/or DGII PIU

E&S Issue	Assessment of Impact Management Due to Design Change-4	Additional Mitigation Measures (If any)	Comparative Assessment of Impact Significance for the Current Design (High / Moderate / Low / Neutral / Positive)	Monitoring Parameter	Key Performance Indicator/Target	Monitoring Frequency	Key References (Relevant Plans/Procedures)	Responsible Party and Expert
		be used, as wild animals may be encountered.						
Cultural Heritage	The implemented design modification does not result in any adverse impacts on registered cultural heritage assets located within the relevant sections of the project. The nearest designated site to the project area is the Burnaz Adsız Harabeler 1st Degree Archaeological Site, located approximately 200 meters south of the alignment. This site is situated within a designated portion of parcel no. 72, block 956, within the boundaries of Turunçlu Neighborhood, Erzin District, Hatay Province, and was officially registered by the Adana Regional Council for the Conservation of Cultural and Natural Assets under its decision dated 22.03.2007 and numbered 2489. Considering the presence of similar archaeological sites in the vicinity and the archaeological potential of the area, there is a possibility of encountering chance finds during project implementation. In such cases, the Cultural Heritage and Chance Finds Procedure will be implemented. The actions to be undertaken to address potential risks that may arise in areas affected by the design modification are outlined below: ▪ Implementation of the Cultural Heritage and Chance Finds Procedure. ▪ Ensuring that construction activities carried out in areas with high archaeological potential are conducted under the supervision of a qualified archaeologist.	-	**Low**	▪ Conducting archaeological site surveys and archaeological assessment ▪ Defining “no-trespassing’’ areas ▪ Providing training on cultural heritage and chance finds procedures ▪ Fencing and boundary demarcation	▪ 100% compliance with Chance Find Procedure and proper reporting of all chance finds ▪ Zero irreversible damage to cultural heritage assets	▪ Periodic observations during the construction ▪ Monthly Environmental and Social Monitoring reports	▪ Law No. 2863 on the Protection of Cultural and Natural Assets ▪ UNESCO World Heritage Convention ▪ European Cultural Heritage Conservation Standards ▪ World Bank Environmental and Social Standards (World Bank ESS8) ▪ Relevant provincial and municipal decisions. ▪ C-ESMP ▪ Cultural Heritage and Chance Finds Procedure	**Implementation:** ▪ Project Manager ▪ Deputy Project Manager ▪ Contractor’s Archaeological Specialist ▪ Construction Team Supervisors ▪ Construction Site Engineers **Audit:** Supervision Consultant and/or DGII PIU

E&S Issue	Assessment of Impact Management Due to Design Change-4	Additional Mitigation Measures (If any)	Comparative Assessment of Impact Significance for the Current Design (High / Moderate / Low / Neutral / Positive)	Monitoring Parameter	Key Performance Indicator/Target	Monitoring Frequency	Key References (Relevant Plans/Procedures)	Responsible Party and Expert
	▪ Provision of cultural heritage awareness training to all personnel working within the project site. The training shall cover, at a minimum, the significance of cultural heritage assets, principles of their protection, and the procedures to be followed in the event that potential cultural heritage assets are encountered, particularly in the absence of an archaeologist. The scope and content of the trainings shall be documented in detail and recorded through signed attendance and training records							
Occupational Health and Safety	As the design modification entails work scopes, construction activities, and risk profiles that are largely comparable to those of the previous design, occupational health and safety (OHS)–related impacts and risks are assessed to remain predominantly at the same level (provided that there is no increase in personnel working hours or workforce workload). No new high-risk activities or materially different hazard categories are anticipated as a result of the revision. Accordingly, the effective and diligent implementation of established good international industry practices (GIIP), applicable national legislation, project standards, the C-ESMP, and the relevant sub-management plans is of critical importance. Strict adherence to risk assessment procedures, permit-to-work systems, training programs, supervision mechanisms, and monitoring requirements will ensure that OHS risks continue to be systematically identified, mitigated, and controlled	-	**Neutral**	▪ Number and content of OHS training and educational activities conducted (induction and periodic), including participant records ▪ Implementation status and effectiveness of preventive and corrective actions taken ▪ Work accident and incident records (including near misses, lost time injuries, severity rates, and root cause analyses) ▪ Compliance of on-site OHS practices with project standards, national legislation, and C-ESMP requirements ▪ Availability and validity of work permits (e.g., hot work, confined space, excavation,	▪ 100% compliance with the approved Annual Work Plan. ▪ 100% compliance with the Work Contract requirements and Project Standards. ▪ 100% compliance with the approved Annual Training Plan. ▪ Full adherence to the Annual Emergency Drill Plan. ▪ Zero work-related fatalities ▪ Year-on-year reduction in recordable OHS incidents. ▪ 100% of recordable incidents formally investigated through Root Cause Analysis within the agreed timeframe. ▪ 100% of corrective and preventive actions closed within the agreed timeframe. ▪ 100% compliance with mandatory PPE usage in designated work areas. ▪ Timely notification of notifiable incidents to the Administration and relevant authorities in accordance with legal requirements.	▪ Daily (on-site inspection) ▪ Monthly (Review of Site Inspection Records and Periodic Environmental and Social Monitoring Reports)	▪ Occupational Health and Safety Law No. 6331 and related legislation ▪ ESS2 ▪ WBG EHS Guidelines ▪ C-ESMP ▪ Occupational Health and Safety Management Plan ▪ Accident, Incident, and Near Miss Management Procedure ▪ Emergency Preparedness and Response Plan ▪ Labor Management Plan	**Implementation:** ▪ Project Manager ▪ Contractor's OHS Team ▪ Contractor's Construction Site Manager **Audit:** Supervision Consultant and/or DGII PIU

E&S Issue	Assessment of Impact Management Due to Design Change-4	Additional Mitigation Measures (If any)	Comparative Assessment of Impact Significance for the Current Design (High / Moderate / Low / Neutral / Positive)	Monitoring Parameter	Key Performance Indicator/Target	Monitoring Frequency	Key References (Relevant Plans/Procedures)	Responsible Party and Expert
	throughout the construction phase. Continuous oversight, regular inspections, and timely closure of corrective actions will further safeguard worker health and safety and maintain compliance with project commitments.			lifting operations, electrical works) ▪ Implementation records of the Emergency Preparedness and Response Plan (drills conducted, response times, corrective actions identified) ▪ Internal audit and inspection records, including identified non-conformities and follow-up actions ▪ Proper use and availability of Personal Protective Equipment (PPE) in the field ▪ Housekeeping conditions and general site safety compliance ▪ Status and compliance of chemical storage areas (labeling, secondary containment, MSDS availability) ▪ Records of toolbox talks and daily safety briefings conducted ▪ Monitoring of high-risk activities (working at height, lifting operations, excavation works, rail installation activities) ▪ Subcontractor OHS performance and compliance monitoring	▪ ≥95% (or 100%, if contractually required) of OHS-related findings, audit non-conformities, and worker grievances closed or adequately responded to within 15 days.			
Socio-Economic Conditions	As the railway line along the same corridor has been designed as a double track, livelihood impacts on informal	-	**Low**	▪ Number of grievances related to land acquisition and construction	▪ Full compliance with ESS 10 ▪ Full compliance with C-ESMP ▪ Full compliance with SEP	▪ Anytime upon the request of stakeholders ▪ Monthly (Review of Site Inspection Records and Periodic Environmental	▪ C-ESMP ▪ ESS10 ▪ Stakeholder Engagement Plan	**Implementation:** ▪ Project Manager ▪ Contractor's Social Team

E&S Issue	Assessment of Impact Management Due to Design Change-4	Additional Mitigation Measures (If any)	Comparative Assessment of Impact Significance for the Current Design (High / Moderate / Low / Neutral / Positive)	Monitoring Parameter	Key Performance Indicator/Target	Monitoring Frequency	Key References (Relevant Plans/Procedures)	Responsible Party and Expert
	users engaged in agricultural activities in this area have increased due to land acquisition. The measures defined in the C-ESMP and the relevant Management Plans, as well as the RP and LRP, including their relevant Addenda, will be fully implemented.			▪ Number of disclosure meetings and people contacted ▪ Site inspection reports regarding access to, pastures, and lands ▪ Incident records related to damage or obstruction of land access. ▪ Grievance records related to land acquisition and livelihood impacts, including resolution status	▪ Full compliance with National law ▪ Full compliance with the RP and LRP, including their relevant Addenda ▪ Zero grievance	and Social Monitoring Reports)	▪ Community Health, Safety and Security Management Procedure (including Community Relations Management Procedure) ▪ Construction E&S Monitoring and Training Procedure. ▪ Relevant Addenda to the RP and LRP.	**Audit:** Supervision Consultant and/or DGII PIU
Labor and Working Conditions	No significant changes to labor and working conditions are expected as a result of the design revision. Labor and working conditions will be managed in accordance with the implementation principles defined in the Contractor's Labor Management Plan and Human Resource Management Plan prepared for the Project, as well as applicable national legislation and relevant applicable standards. The design change will not result in any changes to these arrangements or practices.	-	**Neutral**	▪ Compliance status with project standards, national legislation, and applicable labor requirements ▪ Percentage of project workers employed under written employment contracts ▪ Number of non-compliance cases related to working hours, wages, and benefits ▪ Number and percentage of workers receiving induction and periodic training on OHS, workers' rights, Code of Conduct, and labor influx management ▪ Implementation status of labor influx mitigation measures and number of related incidents ▪ Percentage of workers who have	▪ 100% compliance with the project standards ▪ Written employment contracts provided to all project workers (100%) ▪ No non-compliance with legal requirements on working hours, wages, and benefits (0 violations) ▪ Induction and periodic training on OHS, workers' rights, Code of Conduct, and labor influx management provided to all workers (100%) ▪ Full implementation of labor influx mitigation measures, with no major incidents recorded (0 major cases) ▪ All workers to sign and comply with the Project Code of Conduct (100%) ▪ Zero tolerance and zero incidents of child labor and forced labor ▪ Effective worker grievance mechanism in place, with all grievances addressed within the defined timeframe (100%) ▪ Regular monitoring and reporting of labor and working conditions during construction (monthly)	▪ Daily (on-site inspection) ▪ Monthly (Review of Site Inspection Records and Periodic Environmental and Social Monitoring Reports)	▪ C-ESMP ▪ ESS2 ▪ Law Number 4857, 6331 ▪ Employment and Training Management Plan ▪ Human Resources Management Procedure ▪ Labor Management Plan	**Implementation:** ▪ Project Manager ▪ Contractor's Social Team **Audit:** Supervision Consultant and/or DGII PIU

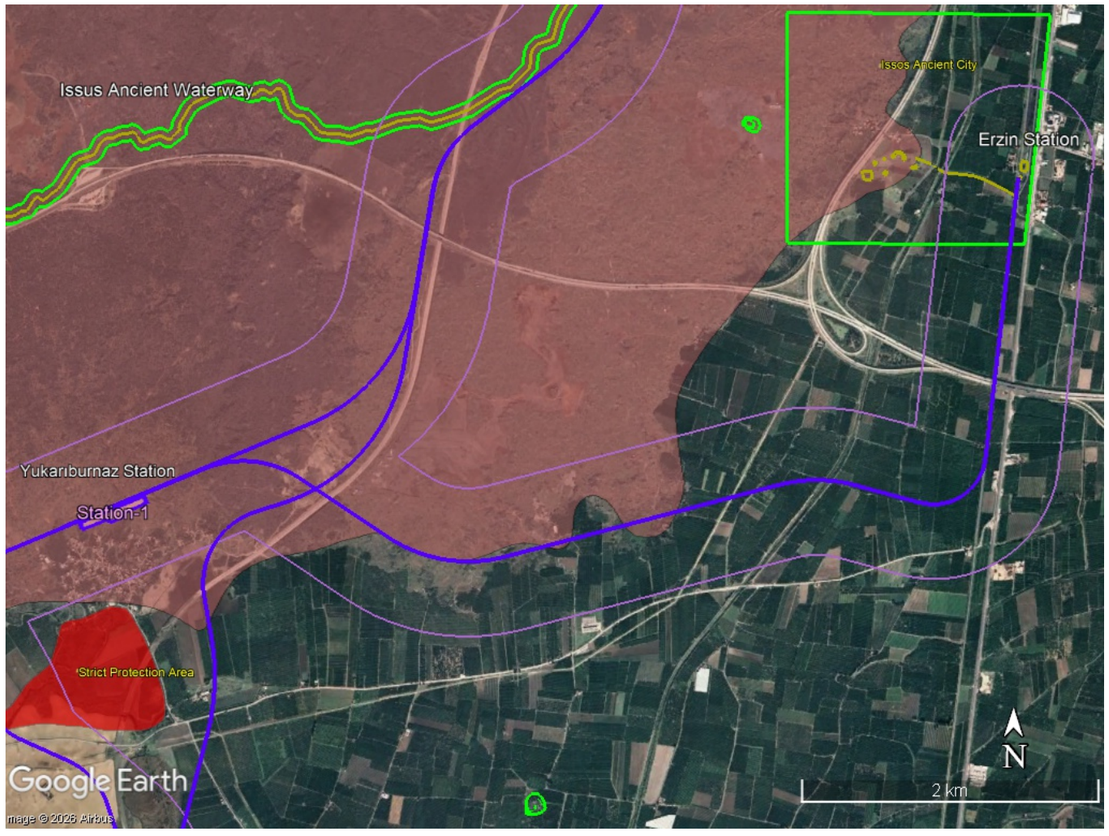
E&S Issue	Assessment of Impact Management Due to Design Change-4	Additional Mitigation Measures (If any)	Comparative Assessment of Impact Significance for the Current Design (High / Moderate / Low / Neutral / Positive)	Monitoring Parameter	Key Performance Indicator/Target	Monitoring Frequency	Key References (Relevant Plans/Procedures)	Responsible Party and Expert
				signed and comply with the Project Code of Conduct ▪ Number of child labor and forced labor incidents identified ▪ Functionality of the worker grievance mechanism and percentage of grievances addressed within the defined timeframe ▪ Frequency and completeness of labor and working conditions monitoring and reporting ▪ Assessment of potential impacts of design changes on labor and working conditions ▪ Number of significant conflicts or substantiated complaints involving the workforce and nearby nomadic communities	▪ Design changes do not result in any negative impact on labor and working conditions (100% continuity) ▪ No significant conflicts or substantiated complaints between the workforce and nearby nomadic communities (0 significant cases)			
Land Acquisition and Resettlement	Due to the railway being designed as a double track, the area of land to be acquired has expanded. Consequently, a greater amount of land acquisition will be required overall. Nevertheless, no further mitigation measures are deemed necessary at this stage, as the updated inventory study will capture the affected assets and the resulting livelihood losses will be assessed and compensated in accordance with the provisions of the Project's RP and LRP, ESS5 and Turkish legislation	▪ The updated inventory will verify affected assets, and livelihood losses will be compensated and restored in accordance with the Project's RP and LRP, with monitoring to ensure effective implementation.	**Low**	▪ Number of grievances related to land acquisition ▪ Number of disclosure meetings and people contacted ▪ Site inspection reports regarding access to, pastures, and lands ▪ GM logbook entries related to public land or common property issues ▪ Incident records related to damage	▪ Full compliance with ESS 5 and national standards ▪ Full compliance with RP and LRP ▪ Timely acknowledgment of the grievances ▪ Resolution rates	▪ Anytime upon the request of stakeholders ▪ Monthly (Review of Site Inspection Records and Periodic Environmental and Social Monitoring Reports)	▪ Expropriation Law ▪ Forest Law (No. 6831) ▪ Pasture Law (No. 4342) ▪ Cadastral Law (No. 3402) ▪ Agricultural Reform Law (No. 3083) ▪ Notification Law (No. 7201) ▪ Land Registry Code (Official Gazette No. 28738) ▪ ESS5 ▪ ESS10 ▪ RP and LRP	**Implementation:** ▪ Project Manager ▪ Contractor's Social Team **Audit:** Supervision Consultant and/or DGII PIU

E&S Issue	Assessment of Impact Management Due to Design Change-4	Additional Mitigation Measures (If any)	Comparative Assessment of Impact Significance for the Current Design (High / Moderate / Low / Neutral / Positive)	Monitoring Parameter	Key Performance Indicator/Target	Monitoring Frequency	Key References (Relevant Plans/Procedures)	Responsible Party and Expert
				or obstruction of land access.				

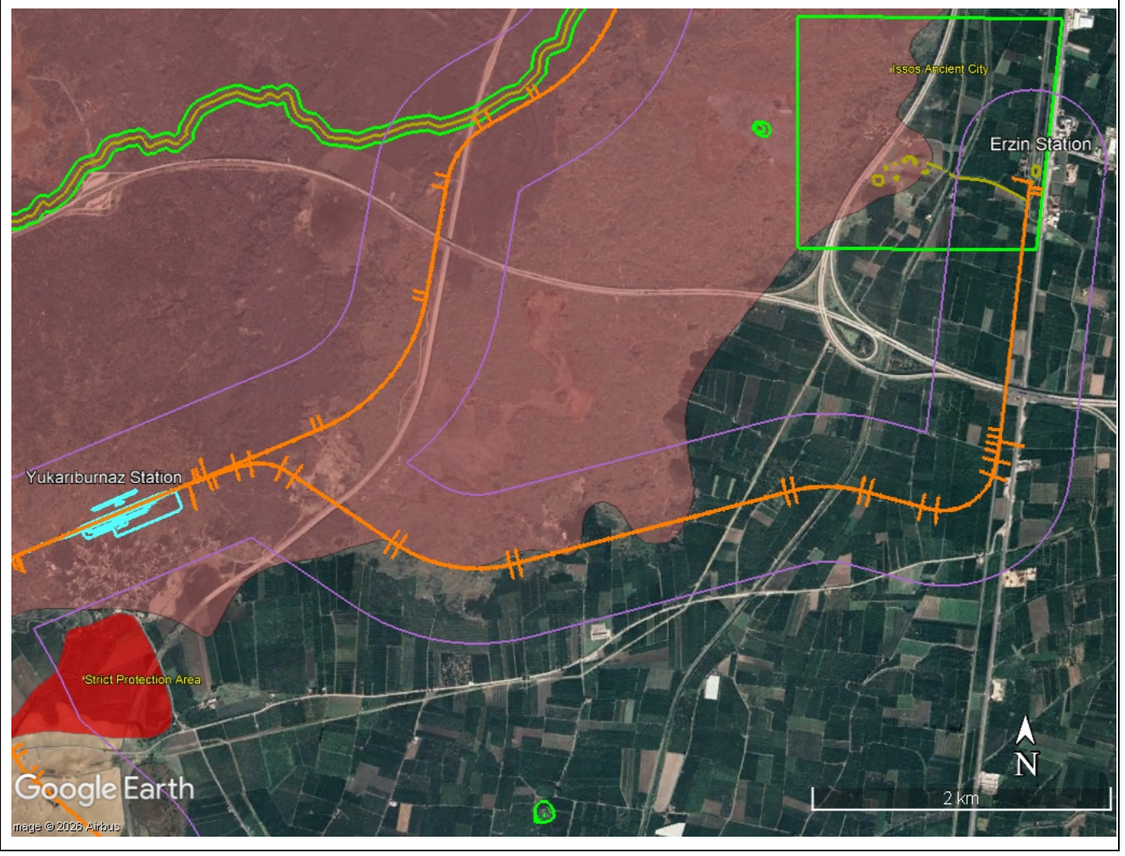
4.5 Description of the Design Change-5

Design Change Remarks: The railway section between Erzin Station and Yukarıburnaz Station has been converted into a double-track configuration, resulting in an increased construction corridor width and an increased level of work within protected areas (Issus 1st degree archaeological site and 1st degree protection area of Burnaz Groundwater Resources).

Previous Design



Revised Design



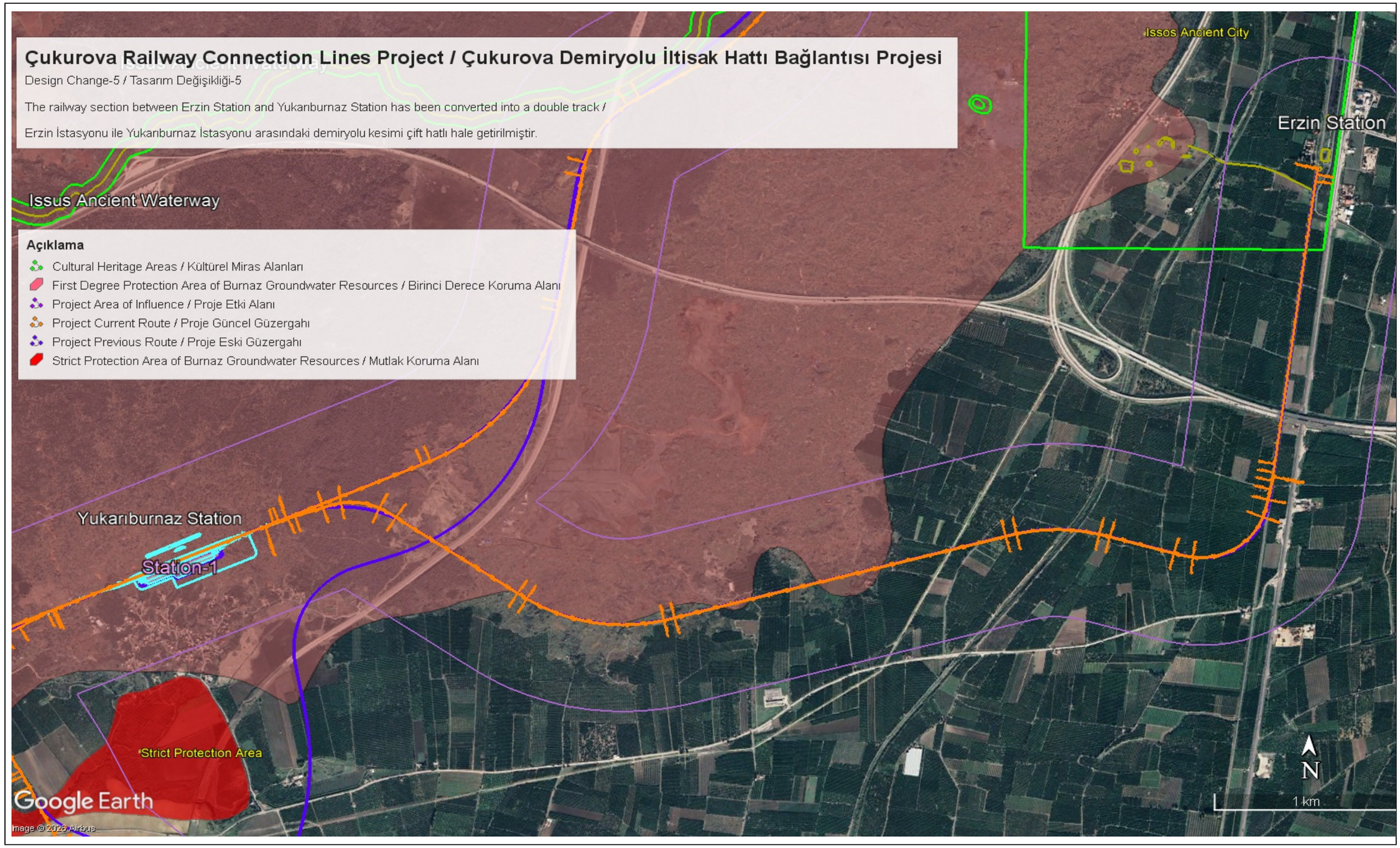


Figure 8. Previous Design vs. Revised Design for Design Change-5

Table 8. E&S Impact Management Due to Design Change-5

E&S Issue	Assessment of Impact Management Due to Design Change-5	Additional Mitigation Measures (If any)	Comparative Assessment of Impact Significance for the Current Design (High / Moderate / Low / Neutral / Positive)	Monitoring Parameter	Key Performance Indicator/Target	Monitoring Frequency	Key References (Relevant Plans/Procedures)	Responsible Party and Expert
Noise and Vibration	The transition to a double-track configuration is expected to result in only minor additional impacts arising from construction and logistics activities. As the project's area of influence remains largely unchanged, no new sensitive receptors are anticipated to be affected. With the effective implementation of the existing C-ESMP and its relevant sub-management plans, together with the active operation of the grievance mechanism, these impacts are expected to be minimized, and no additional mitigation measures are required. In accordance with C-ESMP requirements, quarterly noise measurements, including continuous monitoring over a 48-hour period, will be conducted at the N/AQ-1 (36.950290°, 36.102305°) monitoring point within the project's area of influence throughout the active construction period.	-	**Low**	▪ Noise and/or vibration level measurements at project boundaries and nearest sensitive receptors ▪ Compliance status of measured noise and vibration levels with legal limits and standards ▪ Number of noise- and vibration-related grievances received ▪ Percentage of grievances resolved within the defined timeframe ▪ Implementation status of noise and vibration mitigation measures ▪ Number and percentage of personnel trained in noise and vibration management practices ▪ Records of non-compliance and corrective actions ▪ Regular reporting of noise and vibration monitoring results	▪ Full compliance with the project standards and no exceedance of noise and/or vibration limit values ▪ Zero grievances related to noise and vibration ▪ 100% of relevant personnel trained annually	▪ Daily (on-site inspection) ▪ In case of noise/vibration related grievance ▪ Quarterly (noise and/or vibration measurements) ▪ Monthly (Review of Site Inspection Records and Periodic Environmental and Social Monitoring Reports)	▪ National Legislation ▪ WB ESS1: Assessment and Management of Environmental and Social Risks and Impacts ▪ WB ESS3: Resource Efficiency and Pollution Prevention and Management ▪ WBG EHS Guidelines ▪ C-ESMP ▪ Noise and Vibration Management Procedure ▪ Pollution Prevention Procedure ▪ Community Health, Safety and Security Management Procedure ▪ Traffic Management Plan	**Implementation:** ▪ Contractor's Project Manager ▪ Contractor's Construction Site Manager ▪ Contractor's Environmental Team **Audit:** ▪ Supervision Consultant and/or DGII PIU
Air Quality	The transition to a double-track configuration is expected to result in only minor additional impacts on air quality arising from construction and logistics activities. As the project's area of influence remains largely unchanged, no new sensitive receptors are anticipated to be affected. With the effective implementation of the existing C-ESMP and its relevant sub-management plans, including dust and emission control measures, together with the active operation of the grievance mechanism, these	-	**Low**	▪ Air quality measurement results at project boundaries and nearest sensitive receptors ▪ Compliance status of monitored air quality parameters with applicable limit values ▪ Number of air quality–related grievances received ▪ Implementation status of dust and odor control measures	▪ Full compliance with the project standards and no exceedance of air quality limit values ▪ Zero grievances related to air quality ▪ 100% of relevant personnel trained annually	▪ Daily (on-site inspection) ▪ In case of air quality related grievance ▪ Quarterly (air quality measurements) ▪ Monthly (Review of Site Inspection Records and Periodic Environmental and Social Monitoring Reports)	▪ National Legislation ▪ WB ESS1: Assessment and Management of Environmental and Social Risks and Impacts ▪ WB ESS3: Resource Efficiency and Pollution Prevention and Management ▪ WBG EHS Guidelines ▪ C-ESMP ▪ Air Quality and Dust Management Plan ▪ Pollution Prevention Procedure ▪ Community Health, Safety and Security Management Procedure	**Implementation:** ▪ Contractor's Project Manager ▪ Contractor's Construction Site Manager ▪ Contractor's Environmental Team **Audit:** ▪ Supervision Consultant and/or DGII PIU

E&S Issue	Assessment of Impact Management Due to Design Change-5	Additional Mitigation Measures (If any)	Comparative Assessment of Impact Significance for the Current Design (High / Moderate / Low / Neutral / Positive)	Monitoring Parameter	Key Performance Indicator/Target	Monitoring Frequency	Key References (Relevant Plans/Procedures)	Responsible Party and Expert
	impacts are expected to be minimized, and no additional mitigation measures are required. In accordance with C-ESMP requirements, quarterly air quality monitoring of PM_{10} and $PM_{2.5}$ will be conducted at the N/AQ-1 (36.950290°, 36.102305°) monitoring point within the project's area of influence throughout the active construction period.			▪ Number and percentage of personnel trained in air quality management practices ▪ Records of non-compliance and corrective actions ▪ Regular reporting of air quality monitoring results			▪ Traffic Management Plan	
Water Resources and Wastewater Management	The transition to a double-track configuration is expected to result in only minor additional impacts on water and wastewater management arising from construction and logistics activities. As the project's area of influence remains largely unchanged, no new sensitive receptors are anticipated to be affected. With the effective implementation of the existing C-ESMP and its relevant sub-management plans, together with the active operation of the grievance mechanism, these impacts are expected to be minimized, and no additional mitigation measures are required. Wastewater, liquid waste, and hazardous materials will continue to be managed in full compliance with the C-ESMP and relevant sub-management plans. All domestic and process wastewater will be collected in leak-proof tanks, temporarily stored, and disposed of through authorized and approved systems in accordance with applicable national regulations. Measures to prevent soil and water contamination will be consistently applied, including the use of secondary containment during short-term chemical use in open areas, the storage of hazardous materials	-	**Low**	▪ Surface water and groundwater quality monitoring results at project boundaries and relevant receptors (in case of grievances or where leakage is suspected/observed) ▪ Quantity of domestic wastewater generated ▪ Operational condition and capacity of septic tanks ▪ Presence of leaks, overflows, or seepage ▪ Septic tank emptying frequency and licensed disposal records ▪ Transport and disposal conditions of septic waste ▪ Presence of stagnant wastewater or unsanitary conditions ▪ Number of wastewater-related grievances received ▪ Percentage of grievances resolved within the defined timeframe	▪ 100% of generated wastewater collected and disposed appropriately ▪ Full compliance with national and project water quality standards ▪ Zero spill incidents ▪ Zero grievances related to water resources and wastewater management	▪ Daily (on-site inspection) ▪ Monthly (Review of Site Inspection Records and Periodic Environmental and Social Monitoring Reports)	▪ National Legislation ▪ WB ESS1: Assessment and Management of Environmental and Social Risks and Impacts ▪ WB ESS3: Resource Efficiency and Pollution Prevention and Management ▪ WBG EHS Guidelines ▪ C-ESMP ▪ Water Resources Management Procedure ▪ Pollution Prevention Procedure ▪ Community Health, Safety and Security Management Procedure ▪ Emergency Preparedness and Response Plan	**Implementation:** ▪ Contractor's Project Manager ▪ Contractor's Construction Site Manager ▪ Contractor's Environmental Team **Audit:** ▪ Supervision Consultant and/or DGII PIU

E&S Issue	Assessment of Impact Management Due to Design Change-5	Additional Mitigation Measures (If any)	Comparative Assessment of Impact Significance for the Current Design (High / Moderate / Low / Neutral / Positive)	Monitoring Parameter	Key Performance Indicator/Target	Monitoring Frequency	Key References (Relevant Plans/Procedures)	Responsible Party and Expert
	in impermeable and enclosed facilities under appropriate conditions, and the activation of the Emergency Preparedness and Response Procedure in the event of environmental incidents or accidents.			▪ Training of personnel on wastewater management ▪ Records of non-compliance and corrective actions				
Resource and Waste Management	The transition to a double-track configuration is expected to result in minor additional impacts associated with increased quantities of construction-related wastes and resource utilization, particularly excavation material, topsoil, and fuel. As the project scope and area of influence remain unchanged, no new sensitive receptors are anticipated to be affected. These increases will be effectively managed through the continued implementation of the C-ESMP and relevant sub-management plans, in line with the waste management hierarchy, resource efficiency, and zero-waste principles. Waste types are not expected to change, and all generated wastes will be recorded at the construction camp site through the National Environmental Information System. Project-compliant temporary waste storage areas and containers will be maintained to ensure health and safety requirements. Upon completion of construction activities, no visual pollution elements will remain on site, and surplus excavation material and topsoil will, to the extent possible, be reused for landscaping and site rehabilitation purposes. Accordingly, no additional mitigation measures are required.	-	**Low**	▪ Reduction rate in resource and energy use, based on the Resource Usage Monitoring Chart ▪ The ratio of reused, recycled, or recovered waste to total waste produced ▪ Waste segregation by hazardous classification and type (hazardous, non-hazardous, recyclable, organic, etc.) ▪ Transfer of all waste types to appropriate licensed recycling or disposal facilities ▪ Compliance rate with timely and comprehensive waste reporting requirements (including online reporting via the National Environmental Information System, where applicable) ▪ Number of incidents involving soil contamination due to improper waste management ▪ Total number and percentage of personnel trained in resource efficiency and waste management practices	▪ Reduction rate in resource and energy use ▪ 100% segregation at source and proper storage with labeling ▪ All waste types transferred to appropriate recycling or disposal facilities ▪ Zero contamination incidents ▪ 100% of relevant personnel trained annually ▪ Zero grievances related to resource and waste management	▪ Daily (on-site inspection) ▪ Monthly (Review of Site Inspection Records and Periodic Environmental and Social Monitoring Reports)	▪ National Legislation ▪ WB ESS1: Assessment and Management of Environmental and Social Risks and Impacts ▪ WB ESS3: Resource Efficiency and Pollution Prevention and Management ▪ WBG EHS Guidelines ▪ C-ESMP ▪ Waste Management Procedure ▪ Pollution Prevention Procedure ▪ Community Health, Safety and Security Management Procedure ▪ Supplementary ESMP for Construction Camp Site and Concrete Batching Plant ▪ Construction Rehabilitation and Landscape Management Procedure	**Implementation:** ▪ Contractor's Project Manager ▪ Contractor's Construction Site Manager ▪ Contractor's Environmental Team **Audit:** ▪ Supervision Consultant and/or DGII PIU

E&S Issue	Assessment of Impact Management Due to Design Change-5	Additional Mitigation Measures (If any)	Comparative Assessment of Impact Significance for the Current Design (High / Moderate / Low / Neutral / Positive)	Monitoring Parameter	Key Performance Indicator/Target	Monitoring Frequency	Key References (Relevant Plans/Procedures)	Responsible Party and Expert
Community Health and Safety	The conversion to a double-track configuration is not expected to result in any significant additional impacts on community health and safety, notwithstanding the increased workload and operational intensity, given that no new sensitive receptors are anticipated to be affected. With the effective implementation of the existing C-ESMP and its relevant sub-management plans, together with the active operation of the grievance mechanism, these impacts are expected to be minimized, and no additional mitigation measures are required.	-	**Low**	▪ Number and effectiveness of preventive and corrective actions implemented ▪ Number of consultations with nomads during the livestock activity season ▪ Presence and number of warning signs correctly installed at designated locations ▪ Feedback and information collected through public consultations ▪ Training activities on pollution prevention, SEA/SH, Code of Conduct and GBVH ▪ Grievance records related to land and pasture access, workers, traffic and construction activities. ▪ Vehicle maintenance records	▪ Zero incidents of animal injury or loss during the reporting period ▪ Zero recorded traffic accidents associated with livestock activities ▪ Zero grievances recorded related to community health, safety and security issues ▪ 100% of warning signs correctly installed at all designated locations, in adequate number ▪ %100 staff completion of safety training ▪ 100% vehicle safety inspection compliance ▪ 100% of grievances closed or adequately responded to within 15 days	▪ Daily observations during the construction ▪ Monthly Environmental and Social Monitoring reports	▪ C-ESMP ▪ Community Health, Safety and Security Management Procedure ▪ Traffic Management Plan ▪ ESS 4, ESS 10 ▪ SEP including GM ▪ Contractor's Traffic Management Plan ▪ Contractor's Emergency Preparedness and Response Procedure ▪ Contractor's Community Health, Safety and Security Management Procedure	**Implementation:** ▪ Project Manager ▪ Contractor's Social Team ▪ Contractor's Environmental Team **Audit:** Supervision Consultant and/or DGII PIU
Biodiversity	No critical habitats or species triggering critical habitats were found in the inventory study of the sections subject to the design change. Additional natural habitat loss will occur in a very small area after the design change. Therefore, the impact of the design change on biodiversity values is very small. Existing and current C-BMP requirements will be complied with within the scope of the design change.	▪ A minimum number of service roads will be created, unnecessary service roads will not be opened, and roads other than the designated service roads will not be used. ▪ Herbicides will not be used during vegetation clearing to reduce the risk of injury/death to fauna species. The area to be cleared will be inspected before construction. If a nest is found, it will	**Low**	▪ Service roads must be in compliance with existing plans ▪ Herbicide use control ▪ Placement of warning traffic signs and markers	▪ 100% compliance with service roads in the plans ▪ No use of herbicides ▪ Photographing and recording of locations where warning traffic signs and marker boards are placed ▪ Completion of translocation registration form	Weekly	▪ Environmental Law ▪ National Parks Law ▪ Terrestrial Hunting Law ▪ Animal Protection Law ▪ Forest Law ▪ Pasture Law ▪ Fisheries Law ▪ Wetlands Protection Regulation ▪ Regulation on the Implementation of the Convention on International Trade in Endangered Species of Wild Fauna and Flora ▪ Regulation on the Protection of Wildlife and Wildlife Development Areas ▪ Regulation on the Production, Collection	▪ ECoW ▪ Environmental Leader ▪ Project Manager **Audit:** Supervision Consultant and/or DGII PIU

E&S Issue	Assessment of Impact Management Due to Design Change-5	Additional Mitigation Measures (If any)	Comparative Assessment of Impact Significance for the Current Design (High / Moderate / Low / Neutral / Positive)	Monitoring Parameter	Key Performance Indicator/Target	Monitoring Frequency	Key References (Relevant Plans/Procedures)	Responsible Party and Expert
		be checked with endoscopic cameras, and if a live specimen is observed, it will be expected to move away on its own. ▪ Construction activities will be carried out in stages to allow fauna elements to move away from the area on their own. Individuals that do not move away on their own will be encouraged to leave the area using natural stimuli (food, pheromones, etc.), loud noises, etc. ▪ Warning traffic signs and markers will be placed on the service roads to be used, as wild animals may be encountered.					from Nature, and Export of Natural Flower Bulbs ▪ European Convention on the Conservation of European Wildlife and Natural Habitats (BERN) ▪ Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) ▪ International Union for Conservation of Nature (IUCN) ▪ Ramsar Convention ▪ EU Habitat Directives ▪ EU Birds Directives ▪ WB ESS 6	
Cultural Heritage	The implemented design modification does not result in any adverse impacts on registered cultural heritage assets located within the relevant sections of the project. The section of the Erzin–Yukarıburnaz Line between KM 0+000 and approximately KM 0+630 is located within the Issos 1st Degree Archaeological Site. Within this area, a section of the Issos Ancient Water Channel is present at KM 0+268. Prior to the commencement of any construction activities within this area, all required permits and approvals will be obtained from the relevant Regional Council for the Conservation of Cultural Heritage, and no construction works will be	-	**Low**	▪ Conducting archaeological site surveys and archaeological assessment ▪ Defining “no-trespassing’’ areas ▪ Providing training on cultural heritage and chance finds procedures ▪ Fencing and boundary demarcation	▪ 100% compliance with Chance Find Procedure and proper reporting of all chance finds ▪ Zero irreversible damage to cultural heritage assets	▪ Periodic observations during the construction ▪ Monthly Environmental and Social Monitoring reports	▪ Law No. 2863 on the Protection of Cultural and Natural Assets ▪ UNESCO World Heritage Convention ▪ European Cultural Heritage Conservation Standards ▪ World Bank Environmental and Social Standards (World Bank ESS8) ▪ Relevant provincial and municipal decisions. ▪ C-ESMP ▪ Cultural Heritage and Chance Finds Procedure	**Implementation:** ▪ Project Manager ▪ Deputy Project Manager ▪ Contractor’s Archaeological Specialist ▪ Construction Team Supervisors ▪ Construction Site Engineers **Audit:** ▪ Supervision Consultant and/or DGII PIU

E&S Issue	Assessment of Impact Management Due to Design Change-5	Additional Mitigation Measures (If any)	Comparative Assessment of Impact Significance for the Current Design (High / Moderate / Low / Neutral / Positive)	Monitoring Parameter	Key Performance Indicator/Target	Monitoring Frequency	Key References (Relevant Plans/Procedures)	Responsible Party and Expert
	carried out on site without such approvals. Considering the archaeological potential of the area and approved double track configuration, there is a possibility of encountering chance finds during the implementation phase. In such cases, the Cultural Heritage and Chance Finds Procedure will be implemented. The actions to be undertaken to address potential risks that may arise in areas affected by the design modification are outlined below: ▪ Implementation of the Cultural Heritage and Chance Finds Procedure. ▪ Ensuring that construction activities carried out in areas with high archaeological potential are conducted under the supervision of a qualified archaeologist. ▪ Provision of cultural heritage awareness training to all personnel working within the project site. The training shall cover, at a minimum, the significance of cultural heritage assets, principles of their protection, and the procedures to be followed in the event that potential cultural heritage assets are encountered, particularly in the absence of an archaeologist. The scope and content of the trainings shall be documented in detail and recorded through signed attendance and training records							
Occupational Health and Safety	As the design modification entails work scopes, construction activities, and risk profiles that are largely comparable to those of the previous design, occupational	-	**Neutral**	▪ Number and content of OHS training and educational activities conducted (induction and periodic),	▪ 100% compliance with the approved Annual Work Plan. ▪ 100% compliance with the Work Contract requirements and Project Standards.	▪ Daily (on-site inspection) ▪ Monthly (Review of Site Inspection Records and Periodic Environmental and Social Monitoring Reports)	▪ Occupational Health and Safety Law No. 6331 and related legislation ▪ ESS2 ▪ WBG EHS Guidelines ▪ C-ESMP	**Implementation:** ▪ Project Manager ▪ Contractor's OHS Team ▪ Contractor's Construction Site Manager

E&S Issue	Assessment of Impact Management Due to Design Change-5	Additional Mitigation Measures (If any)	Comparative Assessment of Impact Significance for the Current Design (High / Moderate / Low / Neutral / Positive)	Monitoring Parameter	Key Performance Indicator/Target	Monitoring Frequency	Key References (Relevant Plans/Procedures)	Responsible Party and Expert
	health and safety (OHS)–related impacts and risks are assessed to remain predominantly at the same level (provided that there is no increase in personnel working hours or workforce workload). No new high-risk activities or materially different hazard categories are anticipated as a result of the revision. Accordingly, the effective and diligent implementation of established good international industry practices (GIIP), applicable national legislation, project standards, the C-ESMP, and the relevant sub-management plans is of critical importance. Strict adherence to risk assessment procedures, permit-to-work systems, training programs, supervision mechanisms, and monitoring requirements will ensure that OHS risks continue to be systematically identified, mitigated, and controlled throughout the construction phase. Continuous oversight, regular inspections, and timely closure of corrective actions will further safeguard worker health and safety and maintain compliance with project commitments.			including participant records ▪ Implementation status and effectiveness of preventive and corrective actions taken ▪ Work accident and incident records (including near misses, lost time injuries, severity rates, and root cause analyses) ▪ Compliance of on-site OHS practices with project standards, national legislation, and C-ESMP requirements ▪ Availability and validity of work permits (e.g., hot work, confined space, excavation, lifting operations, electrical works) ▪ Implementation records of the Emergency Preparedness and Response Plan (drills conducted, response times, corrective actions identified) ▪ Internal audit and inspection records, including identified non-conformities and follow-up actions ▪ Proper use and availability of Personal Protective Equipment (PPE) in the field ▪ Housekeeping conditions and general site safety compliance ▪ Status and compliance of chemical storage	▪ 100% compliance with the approved Annual Training Plan. ▪ Full adherence to the Annual Emergency Drill Plan. ▪ Zero work-related fatalities ▪ Year-on-year reduction in recordable OHS incidents. ▪ 100% of recordable incidents formally investigated through Root Cause Analysis within the agreed timeframe. ▪ 100% of corrective and preventive actions closed within the agreed timeframe. ▪ 100% compliance with mandatory PPE usage in designated work areas. ▪ Timely notification of notifiable incidents to the Administration and relevant authorities in accordance with legal requirements. ▪ ≥95% (or 100%, if contractually required) of OHS-related findings, audit non-conformities, and worker grievances closed or adequately responded to within 15 days.		▪ Occupational Health and Safety Management Plan ▪ Accident, Incident, and Near Miss Management Procedure ▪ Emergency Preparedness and Response Plan ▪ Labor Management Plan	**Audit:** Supervision Consultant and/or DGII PIU

E&S Issue	Assessment of Impact Management Due to Design Change-5	Additional Mitigation Measures (If any)	Comparative Assessment of Impact Significance for the Current Design (High / Moderate / Low / Neutral / Positive)	Monitoring Parameter	Key Performance Indicator/Target	Monitoring Frequency	Key References (Relevant Plans/Procedures)	Responsible Party and Expert
				areas (labeling, secondary containment, MSDS availability) ▪ Records of toolbox talks and daily safety briefings conducted ▪ Monitoring of high-risk activities (working at height, lifting operations, excavation works, rail installation activities) ▪ Subcontractor OHS performance and compliance monitoring				
Socio-Economic Conditions	Due to the expansion of the railway line to a double track, livelihood impacts on informal users of these lands will increase as a result of land acquisition. The applicable mitigation and livelihood restoration measures will be implemented in accordance with the commitments set out in the Project's RP and LRP along with ESS5.	-	**Low**	▪ Number of grievances related to land acquisition ▪ Number of disclosure meetings and people contacted ▪ Site inspection reports regarding access to, pastures, and lands ▪ GM logbook entries related to public land or common property issues ▪ Incident records related to damage or obstruction of land access	▪ Full compliance with ESS 5 and RP and LRP ▪ Full compliance with National law ▪ Zero grievance	▪ Anytime upon the request of stakeholders ▪ Monthly (Review of Site Inspection Records and Periodic Environmental and Social Monitoring Reports)	▪ C-ESMP ▪ Contractor's Construction Environmental and Social Monitoring and Training Procedure ▪ ESS10, ESS 5 ▪ Stakeholder Engagement Plan ▪ Community Health, Safety and Security Management Procedure (including Community Relations Management Procedure) ▪ Construction E&S Monitoring and Training Procedure ▪ RP and LRP	**Implementation:** ▪ Project Manager ▪ Contractor's Social Team **Audit:** Supervision Consultant and/or DGII PIU
Labor and Working Conditions	No significant changes to labor and working conditions are expected as a result of the design revision. Labor and working conditions will be managed in accordance with the implementation principles defined in the Contractor's Labor Management Plan and Human Resource Management Plan prepared for the Project, as well as applicable national legislation and relevant applicable standards. The design change will not result in any changes to these arrangements or practices.	-	**Neutral**	▪ Compliance status with project standards, national legislation, and applicable labor requirements ▪ Percentage of project workers employed under written employment contracts ▪ Number of non-compliance cases related to working hours, wages, and benefits ▪ Number and percentage of	▪ 100% compliance with the project standards ▪ Written employment contracts provided to all project workers (100%) ▪ No non-compliance with legal requirements on working hours, wages, and benefits (0 violations) ▪ Induction and periodic training on OHS, workers' rights, Code of Conduct, and labor influx management provided to all workers (100%) ▪ Full implementation of labor influx mitigation measures, with no major	▪ Daily (on-site inspection) Monthly (Review of Site Inspection Records and Periodic Environmental and Social Monitoring Reports)	▪ C-ESMP ▪ ESS2 ▪ Law Number 4857, 6331 ▪ Employment and Training Management Plan ▪ Human Resources Management Procedure ▪ Labor Management Plan	**Implementation:** ▪ Project Manager ▪ Contractor's Social Team **Audit:** Supervision Consultant and/or DGII PIU

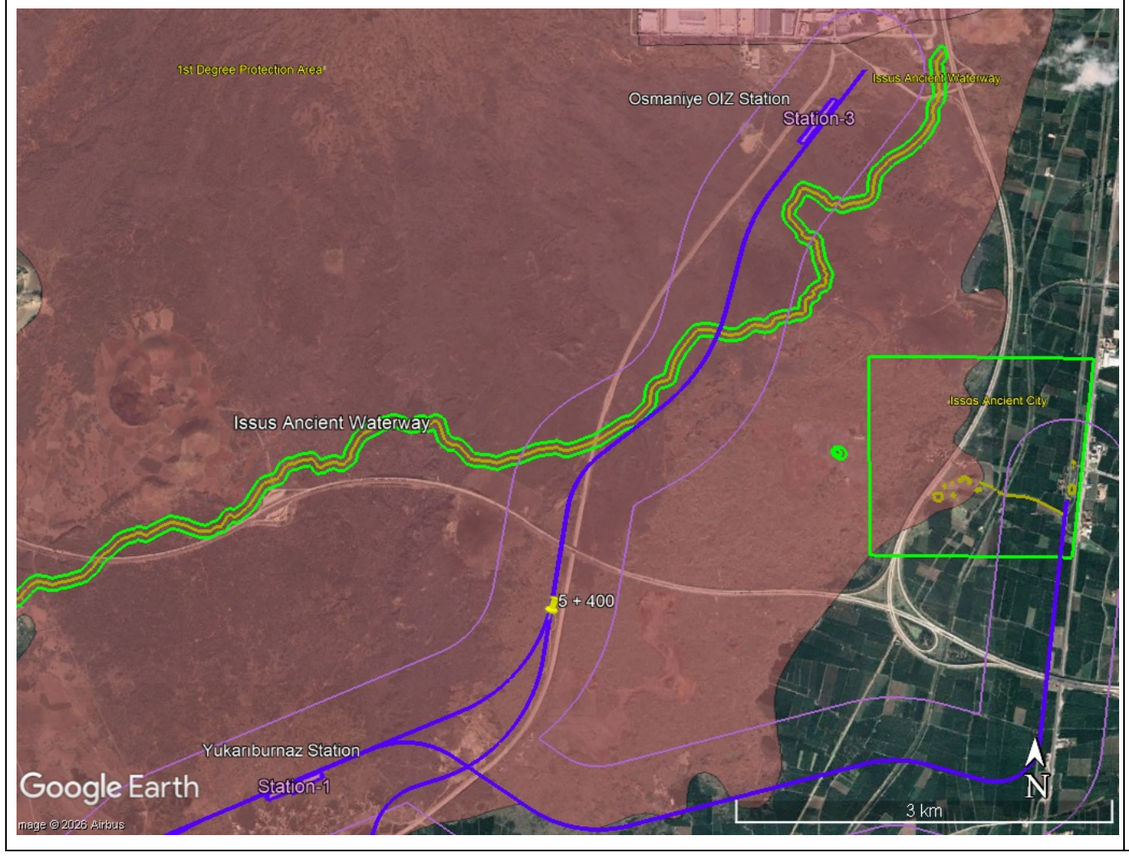
E&S Issue	Assessment of Impact Management Due to Design Change-5	Additional Mitigation Measures (If any)	Comparative Assessment of Impact Significance for the Current Design (High / Moderate / Low / Neutral / Positive)	Monitoring Parameter	Key Performance Indicator/Target	Monitoring Frequency	Key References (Relevant Plans/Procedures)	Responsible Party and Expert
				workers receiving induction and periodic training on OHS, workers' rights, Code of Conduct, and labor influx management ▪ Implementation status of labor influx mitigation measures and number of related incidents ▪ Percentage of workers who have signed and comply with the Project Code of Conduct ▪ Number of child labor and forced labor incidents identified ▪ Functionality of the worker grievance mechanism and percentage of grievances addressed within the defined timeframe ▪ Frequency and completeness of labor and working conditions monitoring and reporting ▪ Assessment of potential impacts of design changes on labor and working conditions ▪ Number of significant conflicts or substantiated complaints involving the workforce and nearby nomadic communities	incidents recorded (0 major cases) ▪ All workers to sign and comply with the Project Code of Conduct (100%) ▪ Zero tolerance and zero incidents of child labor and forced labor ▪ Effective worker grievance mechanism in place, with all grievances addressed within the defined timeframe (100%) ▪ Regular monitoring and reporting of labor and working conditions during construction (monthly) ▪ Design changes do not result in any negative impact on labor and working conditions (100% continuity) ▪ No significant conflicts or substantiated complaints between the workforce and nearby nomadic communities (0 significant cases)			

E&S Issue	Assessment of Impact Management Due to Design Change-5	Additional Mitigation Measures (If any)	Comparative Assessment of Impact Significance for the Current Design (High / Moderate / Low / Neutral / Positive)	Monitoring Parameter	Key Performance Indicator/Target	Monitoring Frequency	Key References (Relevant Plans/Procedures)	Responsible Party and Expert
Land Acquisition and Resettlement	As a result of the expansion of the railway line to a double-track configuration, the extent of land loss affecting informal users in the relevant areas will increase. As per the RP prepared in 2024, the land acquisition requirement in this area was 323,189 m²; however, preliminary assessments under the revised design studies indicate that this figure has increased to 797,183 m². Notwithstanding, these values will be clearly finalized in the RP and LRP addendum documents.	▪ The associated impacts, as identified through the updated census and asset inventory study, will be mitigated in accordance with the principles and entitlements defined in the Project's RP and LRP documents.	**Low**	▪ Number of grievances related to land acquisition ▪ Number of disclosure meetings and people contacted ▪ Site inspection reports regarding access to, pastures, and lands ▪ Incident records related to damage or obstruction of land access.	▪ Full compliance with ESS 5 and national standards ▪ Full compliance with RP and LRP ▪ Timely acknowledgment of the grievances ▪ Resolution rates	▪ Anytime upon the request of stakeholders ▪ Monthly (Review of Site Inspection Records and Periodic Environmental and Social Monitoring Reports)	▪ Expropriation Law ▪ Forest Law (No. 6831) ▪ Pasture Law (No. 4342) ▪ Cadastral Law (No. 3402) ▪ Agricultural Reform Law (No. 3083) ▪ Notification Law (No. 7201) ▪ Land Registry Code (Official Gazette No. 28738) ▪ ESS5 ▪ ESS10 ▪ RP and LRP	**Implementation:** ▪ Project Manager ▪ Contractor's Social Team **Audit:** Supervision Consultant and/or DGII PIU

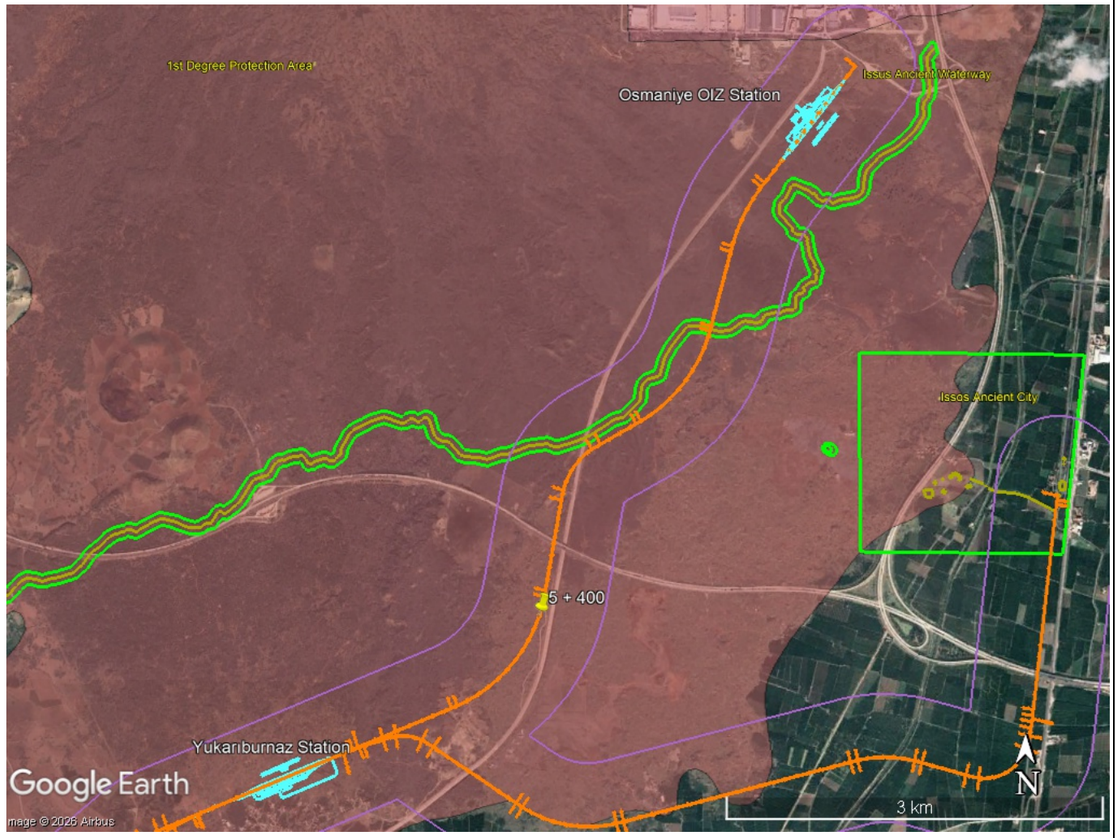
4.6 Description of the Design Change-6

Design Change Remarks: The railway section between Osmaniye OIZ Station and Yukarıburnaz Station, from km 5+400 to Yukarıburnaz Station, has also been converted into a double-track configuration, resulting in an increased construction corridor width and an increased level of work. Furthermore, the alignment has been optimized to minimize potential intersection points with the Issus Ancient Waterway.

Previous Design



Revised Design



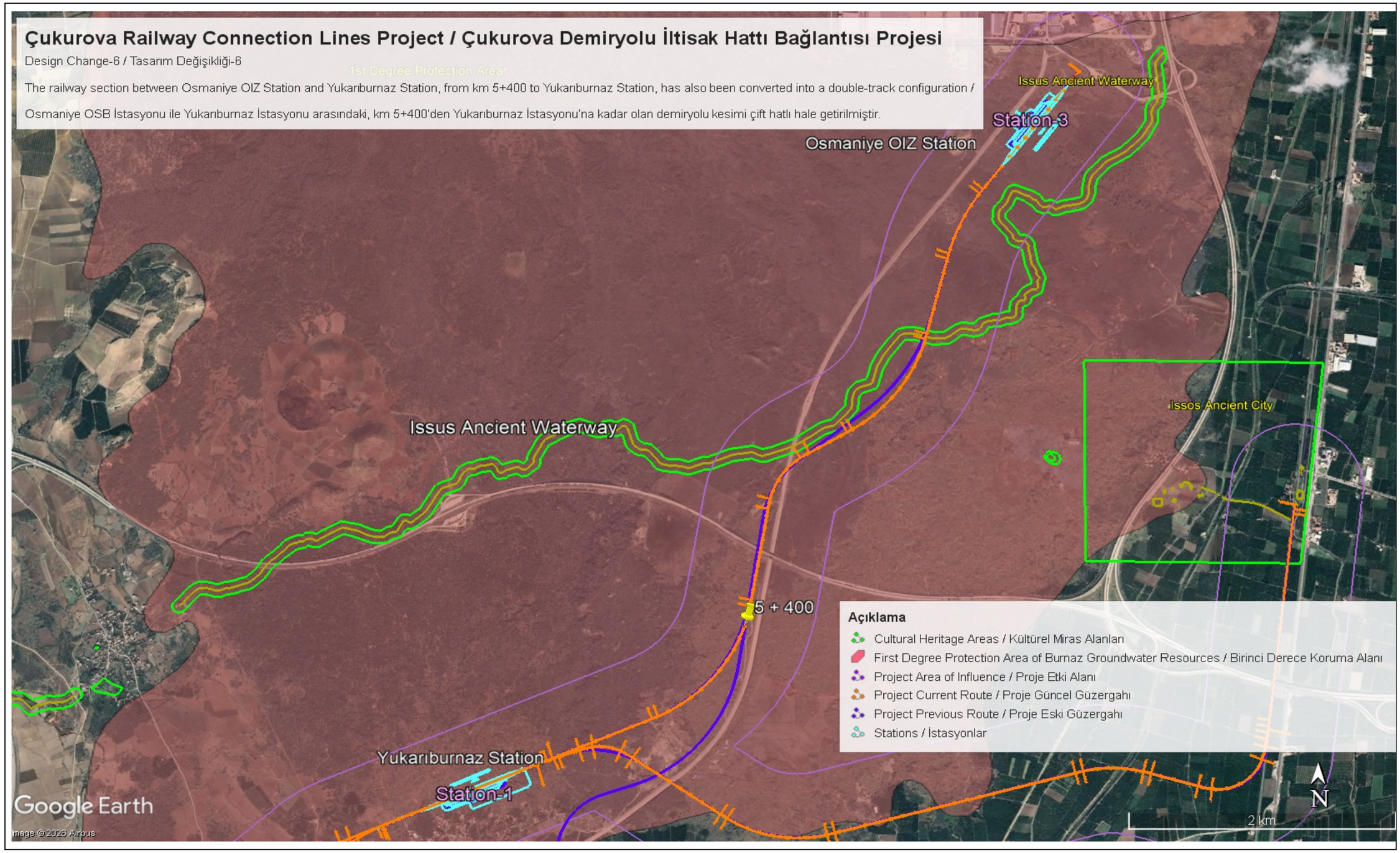


Figure 9. Previous Design vs. Revised Design for Design Change-6

Table 9. E&S Impact Management Due to Design Change-6

E&S Issue	Assessment of Impact Management Due to Design Change-6	Additional Mitigation Measures (If any)	Comparative Assessment of Impact Significance for the Current Design (High / Moderate / Low / Neutral / Positive)	Monitoring Parameter	Key Performance Indicator/Target	Monitoring Frequency	Key References (Relevant Plans/Procedures)	Responsible Party and Expert
Noise and Vibration	The transition to a double-track configuration is expected to result in only minor additional impacts arising from construction and logistics activities. As the project's area of influence remains largely unchanged, no new sensitive receptors are anticipated to be affected. With the effective implementation of the existing C-ESMP and its relevant sub-management plans, together with the active operation of the grievance mechanism, these impacts are expected to be minimized, and no additional mitigation measures are required.	-	**Low**	▪ Noise and/or vibration level measurements at project boundaries and nearest sensitive receptors (in case of any grievances) ▪ Compliance status of measured noise and vibration levels with legal limits and standards ▪ Number of noise- and vibration-related grievances received ▪ Percentage of grievances resolved within the defined timeframe ▪ Implementation status of noise and vibration mitigation measures ▪ Number and percentage of personnel trained in noise and vibration management practices ▪ Records of non-compliance and corrective actions	▪ Full compliance with the project standards and no exceedance of noise and/or vibration limit values ▪ Zero grievances related to noise and vibration ▪ 100% of relevant personnel trained annually	▪ Daily (on-site inspection) ▪ In case of noise/vibration related grievance ▪ Monthly (Review of Site Inspection Records and Periodic Environmental and Social Monitoring Reports)	▪ National Legislation ▪ WB ESS1: Assessment and Management of Environmental and Social Risks and Impacts ▪ WB ESS3: Resource Efficiency and Pollution Prevention and Management ▪ WBG EHS Guidelines ▪ C-ESMP ▪ Noise and Vibration Management Procedure ▪ Pollution Prevention Procedure ▪ Community Health, Safety and Security Management Procedure ▪ Traffic Management Plan	**Implementation:** ▪ Contractor's Project Manager ▪ Contractor's Construction Site Manager ▪ Contractor's Environmental Team **Audit:** ▪ Supervision Consultant and/or DGII PIU
Air Quality	The transition to a double-track configuration is expected to result in only minor additional impacts on air quality arising from construction and logistics activities. As the project's area of influence remains largely unchanged, no new sensitive receptors are anticipated to be affected. With the effective implementation of the existing C-ESMP and its relevant sub-management plans, including dust and emission control measures, together with the active operation of the grievance mechanism, these impacts are expected to be	-	**Low**	▪ Air quality measurement results at project boundaries and nearest sensitive receptors (in case of any grievances) ▪ Compliance status of monitored air quality parameters with applicable limit values ▪ Number of air quality–related grievances received ▪ Implementation status of dust and	▪ Full compliance with the project standards and no exceedance of air quality limit values ▪ Zero grievances related to air quality ▪ 100% of relevant personnel trained annually	▪ Daily (on-site inspection) ▪ In case of air quality related grievance ▪ Monthly (Review of Site Inspection Records and Periodic Environmental and Social Monitoring Reports)	▪ National Legislation ▪ WB ESS1: Assessment and Management of Environmental and Social Risks and Impacts ▪ WB ESS3: Resource Efficiency and Pollution Prevention and Management ▪ WBG EHS Guidelines ▪ C-ESMP ▪ Air Quality and Dust Management Plan ▪ Pollution Prevention Procedure ▪ Community Health, Safety and Security Management Procedure	**Implementation:** ▪ Contractor's Project Manager ▪ Contractor's Construction Site Manager ▪ Contractor's Environmental Team **Audit:** ▪ Supervision Consultant and/or DGII PIU

E&S Issue	Assessment of Impact Management Due to Design Change-6	Additional Mitigation Measures (If any)	Comparative Assessment of Impact Significance for the Current Design (High / Moderate / Low / Neutral / Positive)	Monitoring Parameter	Key Performance Indicator/Target	Monitoring Frequency	Key References (Relevant Plans/Procedures)	Responsible Party and Expert
	minimized, and no additional mitigation measures are required.			odor control measures ▪ Number and percentage of personnel trained in air quality management practices ▪ Records of non-compliance and corrective actions			▪ Traffic Management Plan	
Water Resources and Wastewater Management	The transition to a double-track configuration is expected to lead to only minor incremental impacts on water and wastewater management, primarily due to construction and logistics activities, including works within the First-Degree Protection Area of the Burnaz Groundwater Resources. As the project's area of influence remains largely unchanged, no new sensitive receptors are anticipated to be affected. Provided that the existing C-ESMP and its relevant sub-management plans are effectively implemented, the requirements of the State Hydraulic Works 6th Regional Directorate (Adana) are fully complied with, and the grievance mechanism remains actively operational, the identified impacts are expected to be adequately minimized, and no additional mitigation measures are considered necessary. Wastewater, liquid waste, and hazardous materials will continue to be managed in full compliance with the C-ESMP and relevant sub-management plans. All domestic and process wastewater will be collected in leak-proof tanks, temporarily stored, and disposed of through authorized and approved systems in accordance with applicable national regulations. Measures to prevent soil and	-	**Low**	▪ Surface water and groundwater quality monitoring results at project boundaries and relevant receptors (in case of grievances or where leakage is suspected/observed) ▪ Quantity of domestic wastewater generated ▪ Operational condition and capacity of septic tanks ▪ Presence of leaks, overflows, or seepage ▪ Septic tank emptying frequency and licensed disposal records ▪ Transport and disposal conditions of septic waste ▪ Presence of stagnant wastewater or unsanitary conditions ▪ Number of wastewater-related grievances received ▪ Percentage of grievances resolved within the defined timeframe ▪ Training of personnel on wastewater management	▪ 100% of generated wastewater collected and disposed appropriately ▪ Full compliance with national and project water quality standards ▪ Zero spill incidents ▪ Zero grievances related to water resources and wastewater management	▪ Daily (on-site inspection) ▪ Monthly (Review of Site Inspection Records and Periodic Environmental and Social Monitoring Reports)	▪ National Legislation ▪ WB ESS1: Assessment and Management of Environmental and Social Risks and Impacts ▪ WB ESS3: Resource Efficiency and Pollution Prevention and Management ▪ WBG EHS Guidelines ▪ C-ESMP ▪ Water Resources Management Procedure ▪ Pollution Prevention Procedure ▪ Community Health, Safety and Security Management Procedure ▪ Emergency Preparedness and Response Plan	**Implementation:** ▪ Contractor's Project Manager ▪ Contractor's Construction Site Manager ▪ Contractor's Environmental Team **Audit:** ▪ Supervision Consultant and/or DGII PIU

E&S Issue	Assessment of Impact Management Due to Design Change-6	Additional Mitigation Measures (If any)	Comparative Assessment of Impact Significance for the Current Design (High / Moderate / Low / Neutral / Positive)	Monitoring Parameter	Key Performance Indicator/Target	Monitoring Frequency	Key References (Relevant Plans/Procedures)	Responsible Party and Expert
	water contamination will be consistently applied, including the use of secondary containment during short-term chemical use in open areas, the storage of hazardous materials in impermeable and enclosed facilities under appropriate conditions, and the activation of the Emergency Preparedness and Response Procedure in the event of environmental incidents or accidents.			▪ Records of non-compliance and corrective actions				
Resource and Waste Management	The transition to a double-track configuration is expected to result in minor additional impacts associated with increased quantities of construction-related wastes and resource consumption, particularly excavation material, topsoil, and fuel. As the project scope and area of influence remain unchanged, no new sensitive receptors are anticipated to be affected. These increases will be effectively managed through the continued implementation of the C-ESMP and relevant sub-management plans, in line with the waste management hierarchy, resource efficiency, and zero-waste principles. Waste types are not expected to change, and all generated wastes will be recorded at the construction camp site through the National Environmental Information System. Project-compliant temporary waste storage areas and containers will be maintained to ensure health and safety requirements. Upon completion of construction activities, no visual pollution elements will remain on site, and surplus excavation material and topsoil will, to the extent possible, be reused for landscaping and site rehabilitation purposes.	-	**Low**	▪ Reduction rate in resource and energy use, based on the Resource Usage Monitoring Chart ▪ The ratio of reused, recycled, or recovered waste to total waste produced ▪ Waste segregation by hazardous classification and type (hazardous, non-hazardous, recyclable, organic, etc.) ▪ Transfer of all waste types to appropriate licensed recycling or disposal facilities ▪ Compliance rate with timely and comprehensive waste reporting requirements (including online reporting via the National Environmental Information System, where applicable) ▪ Number of incidents involving soil contamination due to improper waste management ▪ Total number and percentage of personnel trained in resource efficiency	▪ Reduction rate in resource and energy use ▪ 100% segregation at source and proper storage with labeling ▪ All waste types transferred to appropriate recycling or disposal facilities ▪ Zero contamination incidents ▪ 100% of relevant personnel trained annually ▪ Zero grievances related to resource and waste management	▪ Daily (on-site inspection) ▪ Monthly (Review of Site Inspection Records and Periodic Environmental and Social Monitoring Reports)	▪ National Legislation ▪ WB ESS1: Assessment and Management of Environmental and Social Risks and Impacts ▪ WB ESS3: Resource Efficiency and Pollution Prevention and Management ▪ WBG EHS Guidelines ▪ C-ESMP ▪ Waste Management Procedure ▪ Pollution Prevention Procedure ▪ Community Health, Safety and Security Management Procedure ▪ Supplementary ESMP for Construction Camp Site and Concrete Batching Plant ▪ Construction Rehabilitation and Landscape Management Procedure	**Implementation:** ▪ Contractor's Project Manager ▪ Contractor's Construction Site Manager ▪ Contractor's Environmental Team **Audit:** ▪ Supervision Consultant and/or DGII PIU

E&S Issue	Assessment of Impact Management Due to Design Change-6	Additional Mitigation Measures (If any)	Comparative Assessment of Impact Significance for the Current Design (High / Moderate / Low / Neutral / Positive)	Monitoring Parameter	Key Performance Indicator/Target	Monitoring Frequency	Key References (Relevant Plans/Procedures)	Responsible Party and Expert
	Accordingly, no additional mitigation measures are required.			and waste management practices				
Community Health and Safety	Under this design revision, the railway alignment remains unchanged; however, it has been planned as a double-track configuration. Therefore, no additional mitigation measures are considered necessary from a community health and safety perspective, despite the increase in workload and operational intensity. The measures set out in the C-ESMP and the relevant Management Plans will be implemented as defined.	-	**Low**	▪ Number and effectiveness of preventive and corrective actions implemented ▪ Number of consultations with nomads during the livestock activity season ▪ Presence and number of warning signs correctly installed at designated locations ▪ Feedback and information collected through public consultations ▪ Training activities on pollution prevention, SEA/SH, Code of Conduct and GBVH ▪ Grievance records related to land and pasture access, workers, traffic and construction activities. ▪ Vehicle maintenance records	▪ Zero incidents of animal injury or loss during the reporting period ▪ Zero recorded traffic accidents associated with livestock activities ▪ Zero grievances recorded related to community health, safety and security issues ▪ 100% of warning signs correctly installed at all designated locations, in adequate number ▪ %100 staff completion of safety training ▪ 100% vehicle safety inspection compliance ▪ 100% of grievances closed or adequately responded to within 15 days	▪ Daily observations during the construction ▪ Monthly Environmental and Social Monitoring reports	▪ C-ESMP ▪ Community Health, Safety and Security Management Procedure ▪ Traffic Management Plan ▪ ESS 4, ESS 10 ▪ SEP including GM ▪ Contractor's Traffic Management Plan ▪ Contractor's Emergency Preparedness and Response Procedure ▪ Contractor's Community Health, Safety and Security Management Procedure	**Implementation:** ▪ Project Manager ▪ Contractor's OHS Expert ▪ Contractor's Social Team ▪ Contractor's Environmental Team **Audit:** Supervision Consultant and/or DGII PIU
Biodiversity	No critical habitats or species triggering critical habitats were found in the inventory study of the sections subject to the design change. Additional natural habitat loss will occur in a very small area after the design change. Therefore, the impact of the design change on biodiversity values is very small. Existing and current C-BMP requirements will be complied with within the scope of the design change.	▪ A minimum number of service roads will be created, unnecessary service roads will not be opened, and roads other than the designated service roads will not be used. ▪ Herbicides will not be used during vegetation clearing to reduce the risk of injury/death to fauna species. The area to be cleared	**Low**	▪ Service roads must be in compliance with existing plans ▪ Herbicide use control ▪ Placement of warning traffic signs and markers	▪ 100% compliance with service roads in the plans ▪ No use of herbicides ▪ Photographing and recording of locations where warning traffic signs and marker boards are placed ▪ Completion of translocation registration form	Weekly	▪ Environmental Law ▪ National Parks Law ▪ Terrestrial Hunting Law ▪ Animal Protection Law ▪ Forest Law ▪ Pasture Law ▪ Fisheries Law ▪ Wetlands Protection Regulation ▪ Regulation on the Implementation of the Convention on International Trade in Endangered Species of Wild Fauna and Flora ▪ Regulation on the Protection of Wildlife and Wildlife Development Areas	▪ ECoW ▪ Environmental Leader ▪ Project Manager **Audit:** Supervision Consultant and/or DGII PIU

E&S Issue	Assessment of Impact Management Due to Design Change-6	Additional Mitigation Measures (If any)	Comparative Assessment of Impact Significance for the Current Design (High / Moderate / Low / Neutral / Positive)	Monitoring Parameter	Key Performance Indicator/Target	Monitoring Frequency	Key References (Relevant Plans/Procedures)	Responsible Party and Expert
		will be inspected before construction. If a nest is found, it will be checked with endoscopic cameras, and if a live specimen is observed, it will be expected to move away on its own. ▪ Construction activities will be carried out in stages to allow fauna elements to move away from the area on their own. Individuals that do not move away on their own will be encouraged to leave the area using natural stimuli (food, pheromones, etc.), loud noises, etc. ▪ Warning traffic signs and markers will be placed on the service roads to be used, as wild animals may be encountered.					▪ Regulation on the Production, Collection from Nature, and Export of Natural Flower Bulbs ▪ European Convention on the Conservation of European Wildlife and Natural Habitats (BERN) ▪ Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) ▪ International Union for Conservation of Nature (IUCN) ▪ Ramsar Convention ▪ EU Habitat Directives ▪ EU Birds Directives ▪ WB ESS 6	
Cultural Heritage	The implemented design modification does not result in any adverse impacts on registered cultural heritage assets located within the relevant sections of the project. Within the section between Osmaniye Organized Industrial Zone (OIZ) and Yukarıburnaz, an intersection with the Issos Ancient Water Channel occurs at KM 2+541.75. However, the segment of the Osmaniye OIZ–Yukarıburnaz line between KM 3+500 and KM 4+100 has been designed in a parallel alignment to the Issos Ancient Water Channel in a manner that	-	**Neutral**	▪ Conducting archaeological site surveys and archaeological assessment ▪ Defining "no-trespassing'' areas ▪ Providing training on cultural heritage and chance finds procedures ▪ Fencing and boundary demarcation	▪ 100% compliance with Chance Find Procedure and proper reporting of all chance finds ▪ Zero irreversible damage to cultural heritage assets	▪ Periodic observations during the construction ▪ Monthly Environmental and Social Monitoring reports	▪ Law No. 2863 on the Protection of Cultural and Natural Assets ▪ UNESCO World Heritage Convention ▪ European Cultural Heritage Conservation Standards ▪ World Bank Environmental and Social Standards (World Bank ESS8) ▪ Relevant provincial and municipal decisions. ▪ C-ESMP ▪ Cultural Heritage and Chance Finds Procedure	**Implementation:** ▪ Project Manager ▪ Deputy Project Manager ▪ Contractor's Archaeological Specialist ▪ Construction Team Supervisors ▪ Construction Site Engineers **Audit:** ▪ Supervision Consultant and/or DGII PIU

E&S Issue	Assessment of Impact Management Due to Design Change-6	Additional Mitigation Measures (If any)	Comparative Assessment of Impact Significance for the Current Design (High / Moderate / Low / Neutral / Positive)	Monitoring Parameter	Key Performance Indicator/Target	Monitoring Frequency	Key References (Relevant Plans/Procedures)	Responsible Party and Expert
	avoids any damage to the cultural heritage asset. Prior to the commencement of any construction activities within these areas, all required permits and approvals will be obtained from the relevant Regional Council for the Conservation of Cultural Heritage, and no construction works will be carried out on site without such approvals[3] The actions to be undertaken to address potential risks that may arise in areas affected by the design modification are outlined below: ▪ Implementation of the Cultural Heritage and Chance Finds Procedure. ▪ Ensuring that construction activities carried out in areas with high archaeological potential are conducted under the supervision of a qualified archaeologist. ▪ Provision of cultural heritage awareness training to all personnel working within the project site. The training shall cover, at a minimum, the significance of cultural heritage assets, principles of their protection, and the procedures to be followed in the event that potential cultural heritage assets are encountered, particularly in the absence of an archaeologist. The scope and content of the trainings shall be documented in detail and recorded through signed attendance and training records							

[3] Letter and annex of the General Directorate of Cultural Heritage and Museums, Ministry of Culture and Tourism, numbered E-52886439-169.99-7748070.

E&S Issue	Assessment of Impact Management Due to Design Change-6	Additional Mitigation Measures (If any)	Comparative Assessment of Impact Significance for the Current Design (High / Moderate / Low / Neutral / Positive)	Monitoring Parameter	Key Performance Indicator/Target	Monitoring Frequency	Key References (Relevant Plans/Procedures)	Responsible Party and Expert
Occupational Health and Safety	As the design modification entails work scopes, construction activities, and risk profiles that are largely comparable to those of the previous design, occupational health and safety (OHS)–related impacts and risks are assessed to remain predominantly at the same level (provided that there is no increase in personnel working hours or workforce workload). No new high-risk activities or materially different hazard categories are anticipated as a result of the revision. Accordingly, the effective and diligent implementation of established good international industry practices (GIIP), applicable national legislation, project standards, the C-ESMP, and the relevant sub-management plans as well as adherence to the criteria set or to be set by the State Hydraulic Works 6th Regional Directorate (Adana) is of critical importance. Strict adherence to risk assessment procedures, permit-to-work systems, training programs, supervision mechanisms, and monitoring requirements will ensure that OHS risks continue to be systematically identified, mitigated, and controlled throughout the construction phase. Continuous oversight, regular inspections, and timely closure of corrective actions will further safeguard worker health and safety and maintain compliance with project commitments.	-	**Neutral**	▪ Number and content of OHS training and educational activities conducted (induction and periodic), including participant records ▪ Implementation status and effectiveness of preventive and corrective actions taken ▪ Work accident and incident records (including near misses, lost time injuries, severity rates, and root cause analyses) ▪ Compliance of on-site OHS practices with project standards, national legislation, and C-ESMP requirements ▪ Availability and validity of work permits (e.g., hot work, confined space, excavation, lifting operations, electrical works) ▪ Implementation records of the Emergency Preparedness and Response Plan (drills conducted, response times, corrective actions identified) ▪ Internal audit and inspection records, including identified non-conformities and follow-up actions ▪ Proper use and availability of Personal Protective Equipment (PPE) in the field	▪ 100% compliance with the approved Annual Work Plan. ▪ 100% compliance with the Work Contract requirements and Project Standards. ▪ 100% compliance with the approved Annual Training Plan. ▪ Full adherence to the Annual Emergency Drill Plan. ▪ Zero work-related fatalities ▪ Year-on-year reduction in recordable OHS incidents. ▪ 100% of recordable incidents formally investigated through Root Cause Analysis within the agreed timeframe. ▪ 100% of corrective and preventive actions closed within the agreed timeframe. ▪ 100% compliance with mandatory PPE usage in designated work areas. ▪ Timely notification of notifiable incidents to the Administration and relevant authorities in accordance with legal requirements. ▪ ≥95% (or 100%, if contractually required) of OHS-related findings, audit non-conformities, and worker grievances closed or adequately responded to within 15 days.	▪ Daily (on-site inspection) ▪ Monthly (Review of Site Inspection Records and Periodic Environmental and Social Monitoring Reports)	▪ Occupational Health and Safety Law No. 6331 and related legislation ▪ ESS2 ▪ WBG EHS Guidelines ▪ C-ESMP ▪ Occupational Health and Safety Management Plan ▪ Accident, Incident, and Near Miss Management Procedure ▪ Emergency Preparedness and Response Plan ▪ Labor Management Plan	**Implementation:** ▪ Project Manager ▪ Contractor's OHS Team ▪ Contractor's Construction Site Manager **Audit:** Supervision Consultant and/or DGII PIU

E&S Issue	Assessment of Impact Management Due to Design Change-6	Additional Mitigation Measures (If any)	Comparative Assessment of Impact Significance for the Current Design (High / Moderate / Low / Neutral / Positive)	Monitoring Parameter	Key Performance Indicator/Target	Monitoring Frequency	Key References (Relevant Plans/Procedures)	Responsible Party and Expert
				▪ Housekeeping conditions and general site safety compliance ▪ Status and compliance of chemical storage areas (labeling, secondary containment, MSDS availability) ▪ Records of toolbox talks and daily safety briefings conducted ▪ Monitoring of high-risk activities (working at height, lifting operations, excavation works, rail installation activities) ▪ Subcontractor OHS performance and compliance monitoring				
Socio-Economic Conditions	The design revision is not expected to result in any additional land acquisition requirements and, accordingly, will not generate additional livelihood impacts. In addition, the spatial distance to nearby settlements remains largely unchanged under the revised design. As the location of the railway line has not changed with the design modification, no additional socio-economic impacts are expected. Mitigation measures for persons engaged in livestock activities will be implemented as set out in the C-ESMP and the relevant management plans.	-	**Neutral**	▪ Number of consultations with nomads (if any) and farmers during the livestock activity season ▪ Presence and number of warning signs correctly installed at designated locations ▪ Feedback and information collected through public consultations ▪ Training activities ▪ Grievance records related to land acquisition and livelihood impacts	▪ Ensure 100% daily inspection of construction site perimeter fencing to prevent animal entry Zero incidents of animal injury or loss during the reporting period ▪ 100% completion of staff training on the presence of nomadic groups and livestock activities to ensure that all necessary awareness briefings are conducted	▪ Daily observations during the construction ▪ Monthly Environmental and Social Monitoring reports	▪ C-ESMP ▪ Contractor's Labor Management Plan ▪ Contractor's Construction Environmental and Social Monitoring and Training Procedure ▪ ESS10 ▪ Stakeholder Engagement Plan ▪ Community Health, Safety and Security Management Procedure (including Community Relations Management Procedure) ▪ Labor Law and Regulation on Classification, Labelling and Packaging of Substances and Mixtures ▪ Construction E&S Monitoring and Training Procedure ▪ Employment and Training Management Procedure	**Implementation:** ▪ Project Manager ▪ Contractor's Social Team **Audit:** Supervision Consultant and/or DGII PIU
Labor and Working Conditions	No significant changes to labor and working conditions are expected as a result of the design revision. Labor and	-	**Neutral**	▪ Compliance status with project standards, national legislation, and	▪ 100% compliance with the project standards ▪ Written employment contracts provided to all project workers (100%)	▪ Daily (on-site inspection) ▪ Monthly (Review of Site Inspection Records and Periodic Environmental	▪ C-ESMP ▪ ESS2 ▪ Law Number 4857, 6331 ▪ Employment and Training Management Plan	**Implementation:** ▪ Project Manager ▪ Contractor's Social Team

E&S Issue	Assessment of Impact Management Due to Design Change-6	Additional Mitigation Measures (If any)	Comparative Assessment of Impact Significance for the Current Design (High / Moderate / Low / Neutral / Positive)	Monitoring Parameter	Key Performance Indicator/Target	Monitoring Frequency	Key References (Relevant Plans/Procedures)	Responsible Party and Expert
	working conditions will be managed in accordance with the implementation principles defined in the Contractor's Labor Management Plan and Human Resource Management Plan prepared for the Project, as well as applicable national legislation and relevant applicable standards. The design change will not result in any changes to these arrangements or practices.			applicable labor requirements ▪ Percentage of project workers employed under written employment contracts ▪ Number of non-compliance cases related to working hours, wages, and benefits ▪ Number and percentage of workers receiving induction and periodic training on OHS, workers' rights, Code of Conduct, and labor influx management ▪ Implementation status of labor influx mitigation measures and number of related incidents ▪ Percentage of workers who have signed and comply with the Project Code of Conduct ▪ Number of child labor and forced labor incidents identified ▪ Functionality of the worker grievance mechanism and percentage of grievances addressed within the defined timeframe ▪ Frequency and completeness of labor and working conditions monitoring and reporting ▪ Assessment of potential impacts of design changes on labor and working conditions	▪ No non-compliance with legal requirements on working hours, wages, and benefits (0 violations) ▪ Induction and periodic training on OHS, workers' rights, Code of Conduct, and labor influx management provided to all workers (100%) ▪ Full implementation of labor influx mitigation measures, with no major incidents recorded (0 major cases) ▪ All workers to sign and comply with the Project Code of Conduct (100%) ▪ Zero tolerance and zero incidents of child labor and forced labor ▪ Effective worker grievance mechanism in place, with all grievances addressed within the defined timeframe (100%) ▪ Regular monitoring and reporting of labor and working conditions during construction (monthly) ▪ Design changes do not result in any negative impact on labor and working conditions (100% continuity) ▪ No significant conflicts or substantiated complaints between the workforce and nearby nomadic communities (0 significant cases)	and Social Monitoring Reports)	▪ Human Resources Management Procedure ▪ Labor Management Plan	**Audit:** Supervision Consultant and/or DGII PIU

E&S Issue	Assessment of Impact Management Due to Design Change-6	Additional Mitigation Measures (If any)	Comparative Assessment of Impact Significance for the Current Design (High / Moderate / Low / Neutral / Positive)	Monitoring Parameter	Key Performance Indicator/Target	Monitoring Frequency	Key References (Relevant Plans/Procedures)	Responsible Party and Expert
				▪ Number of significant conflicts or substantiated complaints involving the workforce and nearby nomadic communities				
Land Acquisition and Resettlement	As a result of the design change, although the railway has been expanded to a double-track configuration, it passes through pastureland; therefore, no impacts related to land acquisition are determined.	-	**Neutral**	▪ Number of grievances related to land acquisition ▪ Number of disclosure meetings and people contacted ▪ Site inspection reports regarding access to, pastures, and lands ▪ Incident records related to damage or obstruction of land access.	▪ Full compliance with ESS 5 and national standards ▪ Full compliance with RP and LRP ▪ Timely acknowledgment of the grievances ▪ Resolution rates	▪ Anytime upon the request of stakeholders ▪ Monthly (Review of Site Inspection Records and Periodic Environmental and Social Monitoring Reports)	▪ Expropriation Law ▪ Forest Law (No. 6831) ▪ Pasture Law (No. 4342) ▪ Cadastral Law (No. 3402) ▪ Agricultural Reform Law (No. 3083) ▪ Notification Law (No. 7201) ▪ Land Registry Code (Official Gazette No. 28738) ▪ ESS5 ▪ ESS10 ▪ RP and LRP	**Implementation:** ▪ Project Manager ▪ Contractor's Social Team **Audit:** Supervision Consultant and/or DGII PIU

APPENDICES

Appendix-1 Environmental Monitoring Locations

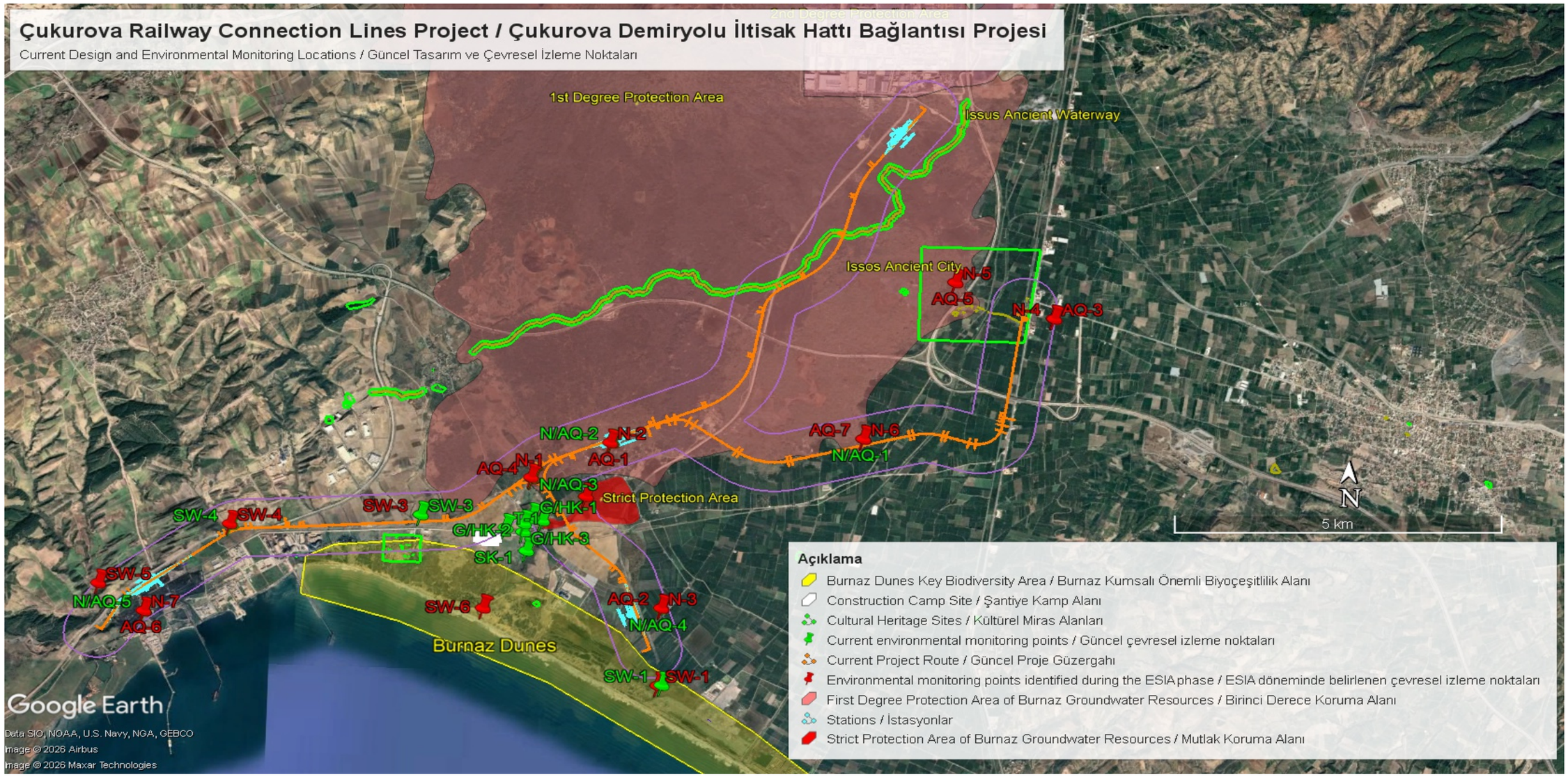


Figure 10. Current Design and Environmental Monitoring Locations (ESIA Phase vs. Current Phase)[4]

[4] SW and SK: Surface water, GW: Groundwater, N and G: Noise, AQ and HK: Air Quality, T: Soil

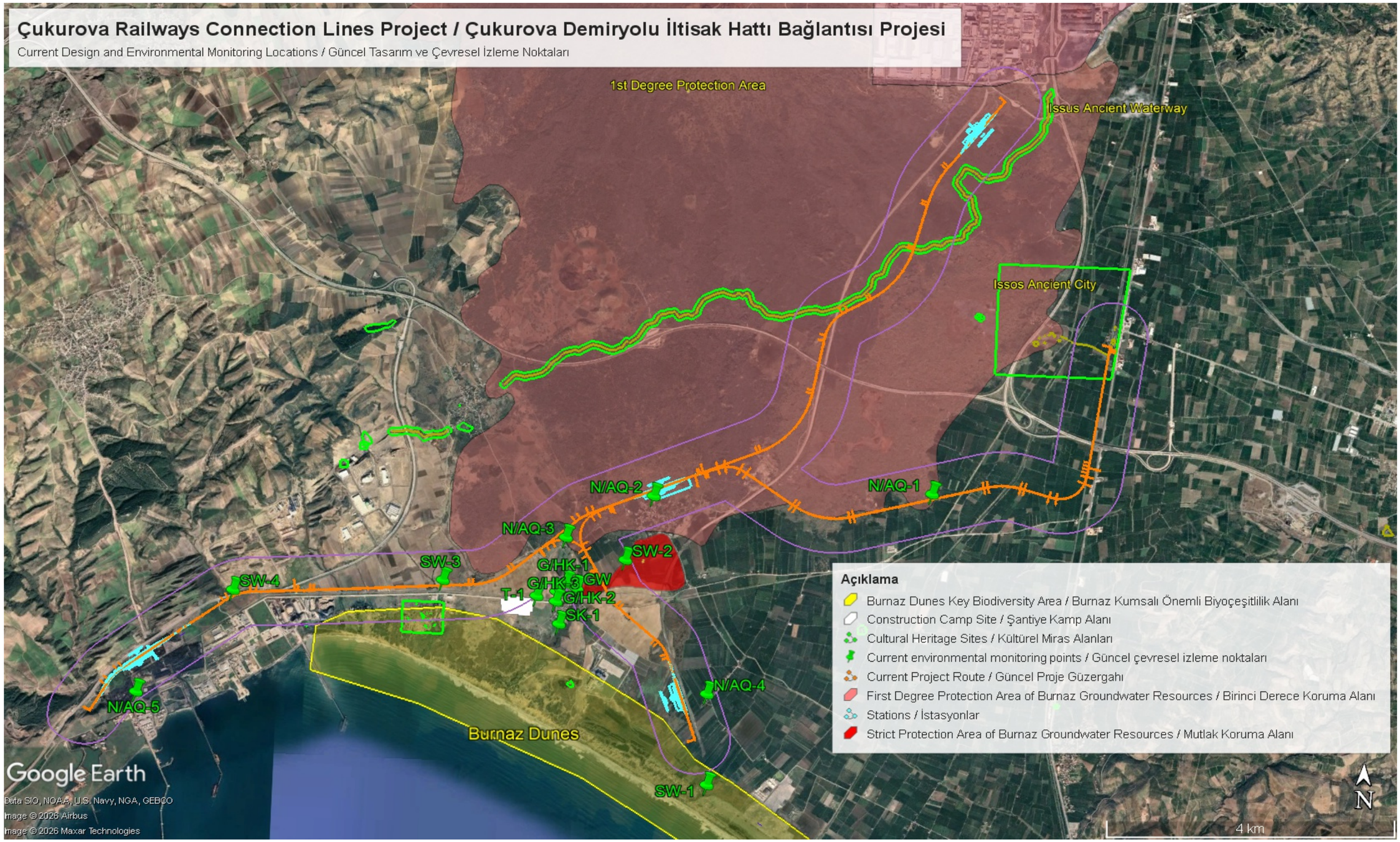


Figure 11. Current Design and Environmental Monitoring Locations (Current Phase)

Table 10. Information on Previous and Revised Environmental Monitoring Points

Monitoring Point in the ESIA	Coordinates		Monitoring Frequency	Monitoring Duration	Monitoring Parameters	Reference	Remark-1	Remark-2 for C-ESMP	Monitoring Parameters	Coordinates		Point Name in the C-ESMP
	Latitude	Longitude								Latitude	Longitude	
Noise Measurements												
N-1	36.942579°	36.045017°	Quarterly during active work periods and in case of any grievances	48 hours without interruption	Noise	ESIA and ESMP requirements	Demonstrating the impact of construction activities by comparing with the baseline measurements from the ESIA period	All ESIA requirements will be fully implemented without modification.	48 hours without interruption	36.942579°	36.045017°	N/AQ-3
N-2	36.948578°	36.058337°	Quarterly during active work periods and in case of any grievances	48 hours without interruption	Noise	ESIA and ESMP requirements	Demonstrating the impact of construction activities by comparing with the baseline measurements from the ESIA period	All ESIA requirements will be fully implemented without modification.	48 hours without interruption	36.948578°	36.058337°	N/AQ-2
N-3	36.922888°	36.068236°	Quarterly during active work periods and in case of any grievances	48 hours without interruption	Noise	ESIA and ESMP requirements	Demonstrating the impact of construction activities by comparing with the baseline measurements from the ESIA period	All ESIA requirements will be fully implemented without modification.	48 hours without interruption	36.922888°	36.068236°	N/AQ-4
N-4	36.969933°	36.134500°	Quarterly during active work periods and in case of any grievances	48 hours without interruption	Noise	ESIA and ESMP requirements	Demonstrating the impact of construction activities by comparing with the baseline measurements from the ESIA period	Monitoring at the location identified during the ESIA is not planned, as it is no longer relevant under the current project alignment design. Due to the presence of the Adana–İskenderun Road and an industrial facility located between the monitoring point and the construction area, it is anticipated that the measurements would not yield representative or reliable results.				
N-5	36.975156°	36.117254°	Quarterly during active work periods and in case of any grievances	48 hours without interruption	Noise	ESIA and ESMP requirements	Demonstrating the impact of construction activities by comparing with the baseline measurements from the ESIA period	Monitoring at the location identified during the ESIA is not planned, as it is no longer relevant under the current project alignment design. Due to the significant distance between the construction area and the monitoring point (exceeding 1 km in straight-line distance), as well as the presence of the İskenderun East–Gözeneler Connection Road in between, it is anticipated that the measurements would not yield representative or reliable results.				
N-6	36.950290°	36.102305°	Quarterly during active work periods and in case of any grievances	48 hours without interruption	Noise	ESIA and ESMP requirements	Demonstrating the impact of construction activities by comparing with the	All ESIA requirements will be fully implemented without modification.	48 hours without interruption	36.950290°	36.102305°	N/AQ-1

Monitoring Point in the ESIA	Coordinates		Monitoring Frequency	Monitoring Duration	Monitoring Parameters	Reference	Remark-1	Remark-2 for C-ESMP	Monitoring Parameters	Coordinates		Point Name in the C-ESMP
	Latitude	Longitude								Latitude	Longitude	
							baseline measurements from the ESIA period					
N-7	36.920118°	35.978256°	Quarterly during active work periods and in case of any grievances	48 hours without interruption	Noise	ESIA and ESMP requirements	Demonstrating the impact of construction activities by comparing with the baseline measurements from the ESIA period	All ESIA requirements will be fully implemented without modification.	48 hours without interruption	36.920118°	35.978256°	N/AQ-5
							A new monitoring point, not included in the ESIA, has been selected to conduct baseline measurements and assess the impacts of ongoing construction activities at the Construction Camp Site and Concrete Plant throughout the construction phase	-	48 hours without interruption	36.936664°	36.045218°	G/HK-1
							A new monitoring point, not included in the ESIA, has been selected to conduct baseline measurements and assess the impacts of ongoing construction activities at the Construction Camp Site and Concrete Plant throughout the construction phase	-	48 hours without interruption	36.935512°	36.043822°	G/HK-2
							A new monitoring point, not included in the ESIA, has been selected to conduct baseline measurements and assess the impacts of ongoing construction activities at the Construction Camp Site and Concrete Plant throughout the construction phase	-	48 hours without interruption	36.934197°	36.043773°	G/HK-3
Air Quality												
AQ-1	36.948530°	36.058608°	Quarterly during active work periods and in case of any grievances	24-hour (PM10, PM2,5) and 1-month (settled dust)	PM10, PM2,5 and settled dust	ESIA and ESMP requirements	Demonstrating the impact of construction activities by comparing with the baseline measurements from the ESIA period	All ESIA requirements will be fully implemented without modification.	PM10, PM2,5 and settled dust	36.948530°	36.058608°	N/AQ-2
AQ-2	36.922945°	36.068324°	Quarterly during active work periods and in case of any grievances	24-hour (PM10, PM2,5) and 1-month (settled dust)	PM10, PM2,5 and settled dust	ESIA and ESMP requirements	Demonstrating the impact of construction activities by comparing with the	All ESIA requirements will be fully implemented without modification.	PM10, PM2,5 and settled dust	36.922945°	36.068324°	N/AQ-4

Monitoring Point in the ESIA	Coordinates		Monitoring Frequency	Monitoring Duration	Monitoring Parameters	Reference	Remark-1	Remark-2 for C-ESMP	Monitoring Parameters	Coordinates		Point Name in the C-ESMP
	Latitude	Longitude								Latitude	Longitude	
							baseline measurements from the ESIA period					
AQ-3	36.969882°	36.134647°	Quarterly during active work periods and in case of any grievances	24-hour (PM10, PM2,5) and 1-month (settled dust)	PM10, PM2,5 and settled dust	ESIA and ESMP requirements	Demonstrating the impact of construction activities by comparing with the baseline measurements from the ESIA period	Monitoring at the location identified during the ESIA is not planned, as it is no longer relevant under the current project alignment design. Due to the presence of the Adana–İskenderun Road and an industrial facility located between the monitoring point and the construction area, it is anticipated that the measurements would not yield representative or reliable results.				
AQ-4	36.942789°	36.044784°	Quarterly during active work periods and in case of any grievances	24-hour (PM10, PM2,5) and 1-month (settled dust)	PM10, PM2,5 and settled dust	ESIA and ESMP requirements	Demonstrating the impact of construction activities by comparing with the baseline measurements from the ESIA period	Given the timeframe of the fieldwork, it is not considered feasible to perform settled dust measurements over a one-month period.	PM10 and PM2,5	36.942789°	36.044784°	N/AQ-3
AQ-5	36.975156°	36.117254°	Quarterly during active work periods and in case of any grievances	24-hour (PM10, PM2,5) and 1-month (settled dust)	PM10, PM2,5 and settled dust	ESIA and ESMP requirements	Demonstrating the impact of construction activities by comparing with the baseline measurements from the ESIA period	Monitoring at the location identified during the ESIA is not planned, as it is no longer relevant under the current project alignment design. Due to the significant distance between the construction area and the monitoring point (exceeding 1 km in straight-line distance), as well as the presence of the İskenderun East–Gözeneler Connection Road in between, it is anticipated that the measurements would not yield representative or reliable results.				
AQ-6	36.920118°	35.978256°	Quarterly during active work periods and in case of any grievances	24-hour (PM10, PM2,5) and 1-month (settled dust)	PM10, PM2,5 and settled dust	ESIA and ESMP requirements	Demonstrating the impact of construction activities by comparing with the baseline measurements from the ESIA period	All ESIA requirements will be fully implemented without modification.	PM10, PM2,5 and settled dust	36.920118°	35.978256°	N/AQ-5
AQ-7	36.950290°	36.102305°	Quarterly during active work periods and in case of any grievances	24-hour (PM10, PM2,5) and 1-month (settled dust)	PM10, PM2,5 and settled dust	ESIA and ESMP requirements	Demonstrating the impact of construction activities by comparing with the baseline measurements from the ESIA period	Given the timeframe of the fieldwork, it is not considered feasible to perform settled dust measurements over a one-month period.	PM10 and PM2,5	36.950290°	36.102305°	N/AQ-1
							A new monitoring point, not included in the ESIA, has been selected to	-	PM10, PM2,5 and settled dust	36.936664°	36.045218°	G/HK-1

Monitoring Point in the ESIA	Coordinates		Monitoring Frequency	Monitoring Duration	Monitoring Parameters	Reference	Remark-1	Remark-2 for C-ESMP	Monitoring Parameters	Coordinates		Point Name in the C-ESMP
	Latitude	Longitude								Latitude	Longitude	
							conduct baseline measurements and assess the impacts of ongoing construction activities at the Construction Camp Site and Concrete Plant throughout the construction phase					
							A new monitoring point, not included in the ESIA, has been selected to conduct baseline measurements and assess the impacts of ongoing construction activities at the Construction Camp Site and Concrete Plant throughout the construction phase	-	PM10, PM2,5 and settled dust	36.935512°	36.043822°	G/HK-2
							A new monitoring point, not included in the ESIA, has been selected to conduct baseline measurements and assess the impacts of ongoing construction activities at the Construction Camp Site and Concrete Plant throughout the construction phase	-	PM10, PM2,5 and settled dust	36.934197°	36.043773°	G/HK-3
Surface Water												
SW-1	36.910747°	36.068118°	Twice a year during active work periods and in case of any grievances	Instant measurement	Surface Water Quality Regulation Annex-5 Table 2	ESIA and ESMP requirements	Demonstrating the impact of construction activities by comparing with the baseline measurements from the ESIA period	All ESIA requirements will be fully implemented without modification.	Surface Water Quality Regulation Annex-5 Table 2	36.910747°	36.068118°	SW-1
SW-2	36.940020°	36.054456°	Twice a year during active work periods and in case of any grievances	Instant measurement	Surface Water Quality Regulation Annex-5 Table 2	ESIA and ESMP requirements	Demonstrating the impact of construction activities by comparing with the baseline measurements from the ESIA period	All ESIA requirements will be fully implemented without modification.	Surface Water Quality Regulation Annex-5 Table 2	36.940020°	36.054456°	SW-2
SW-3	36.936440°	36.025834°	Twice a year during active work periods and in case of any grievances	Instant measurement	Surface Water Quality Regulation Annex-5 Table 2	ESIA and ESMP requirements	Demonstrating the impact of construction activities by comparing with the baseline measurements from the ESIA period	All ESIA requirements will be fully implemented without modification.	Surface Water Quality Regulation Annex-5 Table 2	36.936440°	36.025834°	SW-3
SW-4	36.934162°	35.992744°	Twice a year during active work periods and in case of any grievances	Instant measurement	Surface Water Quality Regulation Annex-5 Table 2	ESIA and ESMP requirements	Demonstrating the impact of construction activities by comparing with the	All ESIA requirements will be fully implemented without modification.	Surface Water Quality Regulation Annex-5 Table 2	36.934162°	35.992744°	SW-4

Monitoring Point in the ESIA	Coordinates		Monitoring Frequency	Monitoring Duration	Monitoring Parameters	Reference	Remark-1	Remark-2 for C-ESMP	Monitoring Parameters	Coordinates		Point Name in the C-ESMP
	Latitude	Longitude								Latitude	Longitude	
							baseline measurements from the ESIA period					
SW-5	36.924292°	35.970281°	Twice a year during active work periods and in case of any grievances	Instant measurement	Surface Water Quality Regulation Annex-5 Table 2	ESIA and ESMP requirements	Demonstrating the impact of construction activities by comparing with the baseline measurements from the ESIA period	Monitoring at the location identified during the ESIA is not planned, as it is no longer relevant under the current project alignment design. As the monitoring point is located upstream of the construction area and project-related impacts are not expected to reach this location, it is anticipated that the measurements would not yield representative or reliable results.				
SW-6	36.922091°	36.037234°	Twice a year during active work periods and in case of any grievances	Instant measurement	Surface Water Quality Regulation Annex-5 Table 2	ESIA and ESMP requirements	Demonstrating the impact of construction activities by comparing with the baseline measurements from the ESIA period	Monitoring at the location identified during the ESIA is not planned, as it is no longer relevant under the current project alignment design. Considering that the monitoring point is located at a considerable distance from the construction area and taking into account the location of the construction camp site, it is anticipated that the measurements would not yield representative or reliable results. Therefore, the establishment of a new monitoring point (SK-1) closer to the project area is proposed.				
							A new monitoring point, not included in the ESIA, has been selected to conduct baseline measurements and assess the impacts of ongoing construction activities at the Construction Camp Site and Concrete Plant throughout the construction phase	-	Surface Water Quality Regulation Annex-5 Table 2	36.931249°	36.044419°	SK-1
Groundwater												

Monitoring Point in the ESIA	Coordinates		Monitoring Frequency	Monitoring Duration	Monitoring Parameters	Reference	Remark-1	Remark-2 for C-ESMP	Monitoring Parameters	Coordinates		Point Name in the C-ESMP
	Latitude	Longitude								Latitude	Longitude	
GW	36.936039°	36.046942°	Twice a year during active work periods and in case of any grievances	Instant measurement	Parameters identified in the ESIA in accordance with the Regulation on Water Intended for Human Consumption, including pH, Conductivity, Dissolved Oxygen, Oxygen Saturation, Salinity, Suspended Solids, Total Cyanide (CN^-), Sulphate (SO_4^{2-}), Chloride (Cl^-), Nitrate (NO_3^-), Arsenic (As), Boron (B), Mercury (Hg), Cadmium (Cd), Lead (Pb), Trichloroethylene, Phosphate (PO_4^{3-}), Ammonium, Total Pesticide, and Mineral Oil and Derivatives (TPH).	ESIA and ESMP requirements	Demonstrating the impact of construction activities by comparing with the baseline measurements from the ESIA period	All ESIA requirements will be fully implemented without modification.	Parameters identified in the ESIA in accordance with the Regulation on Water Intended for Human Consumption, including pH, Conductivity, Dissolved Oxygen, Oxygen Saturation, Salinity, Suspended Solids, Total Cyanide (CN^-), Sulphate (SO_4^{2-}), Chloride (Cl^-), Nitrate (NO_3^-), Arsenic (As), Boron (B), Mercury (Hg), Cadmium (Cd), Lead (Pb), Trichloroethylene, Phosphate (PO_4^{3-}), Ammonium, Total Pesticide, and Mineral Oil and Derivatives (TPH).	36.936039°	36.046942°	GW
Soil*												
							A new monitoring point, not included in the ESIA, has been selected to conduct baseline measurements and assess the impacts of ongoing construction activities at the Construction Camp Site and Concrete Plant throughout the construction phase	-	TOX, TPH, As, Be, Cd, Cr, Co, Cu, Hg, Ni, Pb, Sb, V, Zn	36.934832°	36.040701°	T-1

* Upon a complaint or identification of potential contamination, soil sampling will be carried out and assessed along the project alignment and within the areas of operation.

Table 11. Summary of Previous and Revised Environmental Monitoring Points

Monitoring Point Name in the ESIA	Current Point Name in the C-ESMP*	Status (Cancelled, remain unchanged or newly added)	Remark-1	Remark-2
			Noise Measurements	
N-1	N/AQ-3	remain unchanged	All ESIA requirements will be fully implemented without modification.	The number of monitoring points, initially 7 during the ESIA phase, has been updated to 8 in line with the recent changes.
N-2	N/AQ-2	remain unchanged	All ESIA requirements will be fully implemented without modification.	
N-3	N/AQ-4	remain unchanged	All ESIA requirements will be fully implemented without modification.	
N-4	-	cancelled	Monitoring at the ESIA-identified location is not planned, as it is no longer relevant and would likely produce unreliable results due to nearby road and industrial facility.	
N-5	-	cancelled	Monitoring at the ESIA-identified location is not planned, as it is no longer relevant and would likely give unreliable results due to distance and intervening road.	
N-6	N/AQ-1	remain unchanged	All ESIA requirements will be fully implemented without modification.	
N-7	N/AQ-5	remain unchanged	All ESIA requirements will be fully implemented without modification.	
-	G/HK-1	newly added	A new monitoring point, not included in the ESIA, has been established to assess the impacts of activities at the Construction Camp Site and Concrete Plant.	
-	G/HK-2	newly added	A new monitoring point, not included in the ESIA, has been established to assess the impacts of activities at the Construction Camp Site and Concrete Plant.	
-	G/HK-3	newly added	A new monitoring point, not included in the ESIA, has been established to assess the impacts of activities at the Construction Camp Site and Concrete Plant.	
			Air Quality	
AQ-1	N/AQ-2	remain unchanged	All ESIA requirements will be fully implemented without modification.	The number of monitoring points, initially 7 during the ESIA phase, has been updated to 8 in line with the recent changes.
AQ-2	N/AQ-4	remain unchanged	All ESIA requirements will be fully implemented without modification.	
AQ-3	-	cancelled	Monitoring at the ESIA-identified location is not planned, as it is no longer relevant and would likely produce unreliable results due to nearby road and industrial facility.	
AQ-4	N/AQ-3	remain unchanged	PM10 and PM2.5 will be measured, as settled dust measurements over a one-month period are not feasible within the fieldwork timeframe.	
AQ-5	-	cancelled	Monitoring at the ESIA-identified location is not planned, as it is no longer relevant and would likely give unreliable results due to distance and an intervening road.	
AQ-6	N/AQ-5	remain unchanged	All ESIA requirements will be fully implemented without modification.	
AQ-7	N/AQ-1	remain unchanged	PM10 and PM2.5 will be measured, as settled dust measurements over a one-month period are not feasible within the fieldwork timeframe.	
-	G/HK-1	newly added	A new monitoring point, not included in the ESIA, has been established to assess the impacts of activities at the Construction Camp Site and Concrete Plant.	
-	G/HK-2	newly added	A new monitoring point, not included in the ESIA, has been established to assess the impacts of activities at the Construction Camp Site and Concrete Plant.	
-	G/HK-3	newly added	A new monitoring point, not included in the ESIA, has been established to assess the impacts of activities at the Construction Camp Site and Concrete Plant.	
			Surface Water	
SW-1	SW-1	remain unchanged	All ESIA requirements will be fully implemented without modification.	The number of monitoring points, initially 6 during the ESIA phase, has been updated to 5 in line with the recent changes.
SW-2	SW-2	remain unchanged	All ESIA requirements will be fully implemented without modification.	
SW-3	SW-3	remain unchanged	All ESIA requirements will be fully implemented without modification.	
SW-4	SW-4	remain unchanged	All ESIA requirements will be fully implemented without modification.	
SW-5	-	cancelled	Monitoring at the ESIA-identified location is not planned, as it is upstream of the construction area and unlikely to reflect project-related impacts, making the measurements unrepresentative.	
SW-6	-	cancelled	Monitoring at the ESIA-identified location is not planned, as it is distant from the construction area and unlikely to provide reliable results; therefore, a new monitoring point (SK-1) closer to the project area is proposed.	
-	SK-1	newly added	A new monitoring point, not included in the ESIA, has been established to assess the impacts of activities at the Construction Camp Site and Concrete Plant.	
			Groundwater	
GW	GW	remain unchanged	All ESIA requirements will be fully implemented without modification.	-
			Soil	
-	T-1	newly added	A new monitoring point, not included in the ESIA, has been established to assess the impacts of activities at the Construction Camp Site and Concrete Plant.	-

* As different codes were assigned to the noise and air quality monitoring points at the same locations in the ESIA document, their names have been revised to ensure easier tracking. Newly added monitoring points, not included in the ESIA process, have been assigned different codes.

Appendix-2 Biodiversity Monitoring Points or Areas

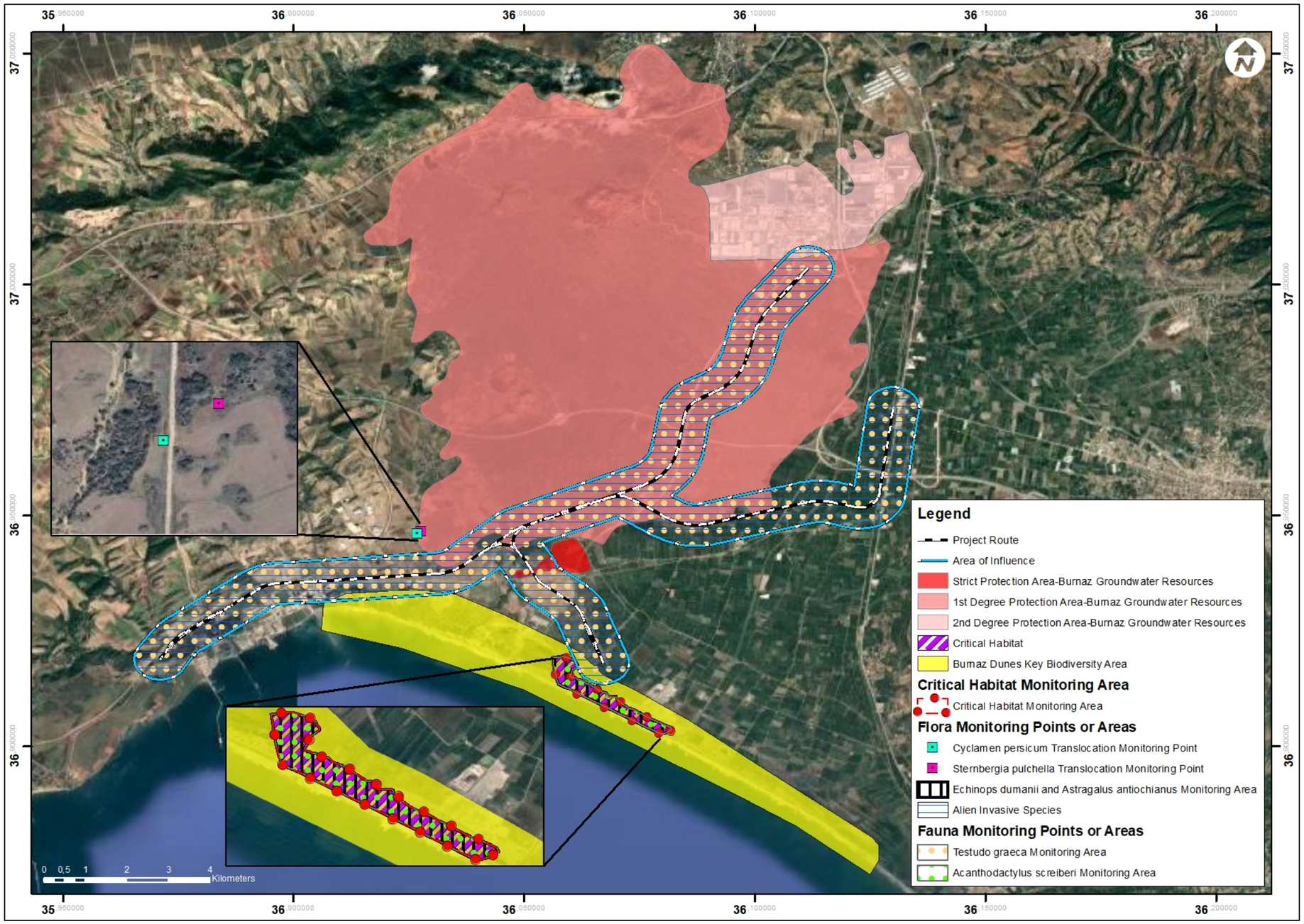


Figure 12. Biodiversity Monitoring Points/Areas (Before Design Change)

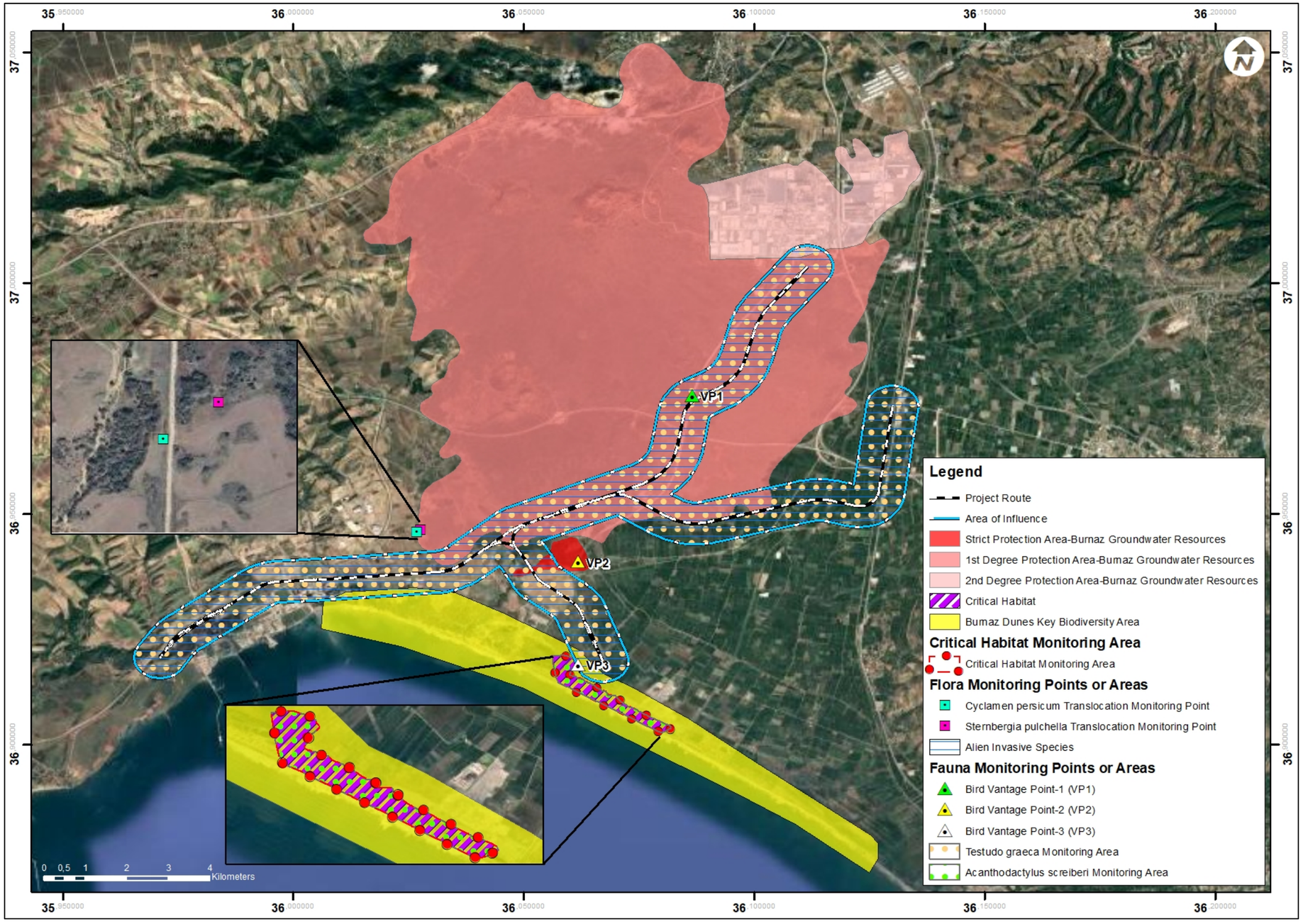


Figure 13. Biodiversity Monitoring Points/Areas (After Design Change)

Table 12. Information on Previous and Revised Biodiversity Monitoring Points or Areas

Monitoring Point in the ESIA	Coordinates		Monitoring Frequency	Monitoring Duration	Monitoring Parameters	Reference	Remark-1	Remark-2 for C-ESMP	Monitoring Frequency	Coordinates		Point Name in the C-ESMP
	Latitude	Longitude								Latitude	Longitude	
MEP-03	Burnaz dunes - Critical habitat (Grey dunes-Eunis:B1.4) (Since it is polygon data, coordinates are not given. Location is shown in the drawings.)		Twice a year (in spring and autumn)	Until construction is complete	Critical Habitat	ESIA and BMP requirements	Whether or not the habitat will be impacted by the works to be done will be determined through observation and reported once completed by a Botanist. In this context, if any habitat impact is observed as a result of construction, appropriate precautions will be taken.	Monitoring studies will be conducted by a biodiversity expert.	Twice a year (in spring and autumn)	Burnaz dunes - Critical habitat (Grey dunes-Eunis:B1.4)		BIO-1
MEP-04	Burnaz dunes - Critical habitat (Coastal dune heaths -Eunis:B1.5) (Since it is polygon data, coordinates are not given. Location is shown in the drawings.)		Twice a year (in spring and autumn)	Until construction is complete	Critical Habitat	ESIA and BMP requirements	Whether or not the habitat will be impacted by the works to be done will be determined through observation and reported once completed by a Botanist. In this context, if any habitat impact is observed as a result of construction, appropriate precautions will be taken.	Monitoring studies will be conducted by a biodiversity expert.	Twice a year (in spring and autumn)	Burnaz dunes - Critical habitat (Grey dunes-Eunis:B1.4)		BIO-2
MEP-05	Burnaz dunes - Natural habitat (Pounds - Eunis:C1.2) (Since it is polygon data, coordinates are not given. Location is shown in the drawings.)		Twice a year (in spring and autumn)	Until construction is complete	Critical Habitat	ESIA and BMP requirements	Whether or not the habitat will be impacted by the works to be done will be determined through observation and reported once completed by a Botanist. In this context, if any habitat impact is observed as a result of construction, appropriate precautions will be taken.	Monitoring studies will be conducted by a biodiversity expert.	Twice a year (in spring and autumn)	Burnaz dunes - Critical habitat (Grey dunes-Eunis:B1.4)		BIO-3
MEP-06	36,94652°-36,02756° (Area with a radius of 100 m)		Once a year (in March)	Until construction is complete	Flora (*Sternbergia pulchella*)	ESIA and BMP requirements	The area where the species is distributed and the re-located area will be monitored and reported by a Botanist. If the population in the re-located area decreases according to the monitoring results, the bulbs will be collected and the study will be repeated.	Monitoring studies will be conducted by a biodiversity expert.	Once a year (in March)	36,94652°-36,02756° (Area with a radius of 100 m)		BIO-4
MEP-07	36,94602°-36,02680° (Area with a radius of 50 m)		Once a year (in March)	Until construction is complete	Flora (*Cyclamen persicum*)	ESIA and BMP requirements	The area where the species is distributed and the re-located area will be monitored and reported by a Botanist. If the population in the re-located area decreases according to the	Monitoring studies will be conducted by a biodiversity expert.	Once a year (in March)	36,94602°-36,02680° (Area with a radius of 50 m)		BIO-5

Monitoring Point in the ESIA	Coordinates		Monitoring Frequency	Monitoring Duration	Monitoring Parameters	Reference	Remark-1	Remark-2 for C-ESMP	Monitoring Frequency	Coordinates		Point Name in the C-ESMP
	Latitude	Longitude								Latitude	Longitude	
							monitoring results, the bulbs will be collected and the study will be repeated.					
MEP-09	Burnaz dunes - Critical habitat (Since it is polygon data, coordinates are not given. Location is shown in the drawings.)		Once a year (between May-June)	Until construction is complete	Flora (*Echinops dumanii*)	ESIA and BMP requirements	The species is located within critical habitat. No work will be carried out in this area. But in case of an accident, the population of the species in the area will be counted and its seeds will be collected and delivered to the gene bank. The population status will be monitored by a Botanist.	As a result of the design change, the railway route has been moved outside the critical habitat area. However, the impact zone is still located within the critical habitat. Since the distribution area of *Echinops dumanii* does not fall within the impact zone, it will not be monitored. Only a presence/absence analysis will be conducted to check for its presence.	Once a year (between May-June)	Burnaz dunes - Critical habitat		BIO-6
MEP-10	Burnaz dunes - Critical habitat (Since it is polygon data, coordinates are not given. Location is shown in the drawings.)		Once a year (between May-June)	Until construction is complete	Flora (*Astragalus antiochianus*)	ESIA and BMP requirements	The species is located within critical habitat. No work will be carried out in this area. But in case of an accident, the population of the species in the area will be counted and its seeds will be collected and delivered to the gene bank. The population status will be monitored by a Botanist.	As a result of the design change, the railway route has been moved outside the critical habitat area. However, the impact zone is still located within the critical habitat. Since the distribution area of *Astragalus antiochianus* does not fall within the impact zone, it will not be monitored. Only a presence/absence analysis will be conducted to check for its presence.	Once a year (between May-June)	Burnaz dunes - Critical habitat		BIO-7
MEP-11	Project area and AoI (Since it is polygon data, coordinates are not given. Location is shown in the drawings.)		Once a year during the vegetation period	Until construction is complete	Invasive alien species	ESIA and BMP requirements	Monitoring studies will be conducted and reported by a botanist. If any invasive species are identified, necessary measures for eradication will be recommended and the process will be implemented.	Monitoring studies will be conducted by a biodiversity expert.	Once a year during the vegetation period	Project area and AoI		BIO-8
MEP-12	Project area and AoI (Since it is polygon data, coordinates are not given. Location is shown in the drawings.)		Once a month between April and September	Until construction is complete	Fauna (*Testudo graeca*)	ESIA and BMP requirements	Fencing and turtle stuck (suggested to be installed) will be monitored, and *Testudo graeca* specimen in the construction area will be removed and relocated outside the construction area.	Monitoring studies will be conducted by a biodiversity expert.	Once a month between April and September	Project area and AoI		BIO-9
MEP-13	Burnaz dunes - Critical habitat (Since it is polygon data, coordinates are not given.		Once a month between April and September	Until construction is complete	Fauna (*Acanthodactylus screiberi*)	ESIA and BMP requirements	Monitoring of *Acanthodactylus schreiberi* species by an Expert Herpetologist.	Monitoring studies will be conducted by a biodiversity expert.	Once a month between April and September	Burnaz dunes - Critical habitat		BIO-10

Monitoring Point in the ESIA	Coordinates		Monitoring Frequency	Monitoring Duration	Monitoring Parameters	Reference	Remark-1	Remark-2 for C-ESMP	Monitoring Frequency	Coordinates		Point Name in the C-ESMP
	Latitude	Longitude								Latitude	Longitude	
	Location is shown in the drawings.)											
MEP-14	Burnaz Spring Groundwater Protection Area (Since it is polygon data, coordinates are not given. Location is shown in the drawings.)		In spring and autumn	Until construction is complete	Fauna (Birds)	ESIA and BMP requirements	An ornithologist and their assistant will conduct and report on bird migration monitoring studies lasting at least 15 days/periods. The results will be evaluated, and any necessary further measures will be reported.	Monitoring studies will be conducted by a biodiversity expert.	In spring and autumn	VP-1 (36,975633- 36,086538) VP-2 (36,939612- 36,061809) VP-3 (36,917330- 36,061822)		BIO-11

Table 13. Summary of Previous and Revised Environmental Monitoring Points and Areas

Monitoring Point Name in the ESIA	Current Point Name in the C-ESMP*	Status (Cancelled, remain unchanged or newly added)	Remark
MEP-03	BIO-1	remain unchanged	Monitoring studies will be conducted by a biodiversity expert, instead of a botany expert, at the point specified in the ESIA phase.
MEP-04	BIO-2	remain unchanged	Monitoring studies will be conducted by a biodiversity expert, instead of a botany expert, at the point specified in the ESIA phase.
MEP-05	BIO-3	remain unchanged	Monitoring studies will be conducted by a biodiversity expert, instead of a botany expert, at the point specified in the ESIA phase.
MEP-06	BIO-4	remain unchanged	Monitoring studies will be conducted by a biodiversity expert, instead of a botany expert, at the point specified in the ESIA phase.
MEP-07	BIO-5	remain unchanged	Monitoring studies will be conducted by a biodiversity expert, instead of a botany expert, at the point specified in the ESIA phase.
MEP-09	BIO-6	cancelled	*Echinops dumanii* does not fall within the impact zone, it will not be monitored. Only a presence/absence analysis will be conducted to check for its presence.
MEP-10	BIO-7	cancelled	*Astragalus antiochianus* does not fall within the impact zone, it will not be monitored. Only a presence/absence analysis will be conducted to check for its presence.
MEP-11	BIO-8	remain unchanged	Monitoring studies will be conducted by a biodiversity expert, instead of a botany expert, at the point specified in the ESIA phase.
MEP-12	BIO-9	remain unchanged	Monitoring studies will be conducted by a biodiversity expert.
MEP-13	BIO-10	remain unchanged	Monitoring studies will be carried out by a biodiversity expert instead of a herpetologist at the point specified in the ESIA phase.
MEP-14	BIO-11	remain unchanged	Monitoring studies will be carried out by a biodiversity expert instead of a ornithologist at the point specified in the ESIA phase. The bird vantage point locations were not previously provided within the Burnaz Springs Groundwater Protection Area. Bird vantage point locations have been added.

*The codes are encoded as BIO, which is an abbreviation for Biodiversity.