Environment and Social Compliance Audit Report

Project Number: 55132-001
May 2021

Georgia: Georgian Railway Green Bond Project

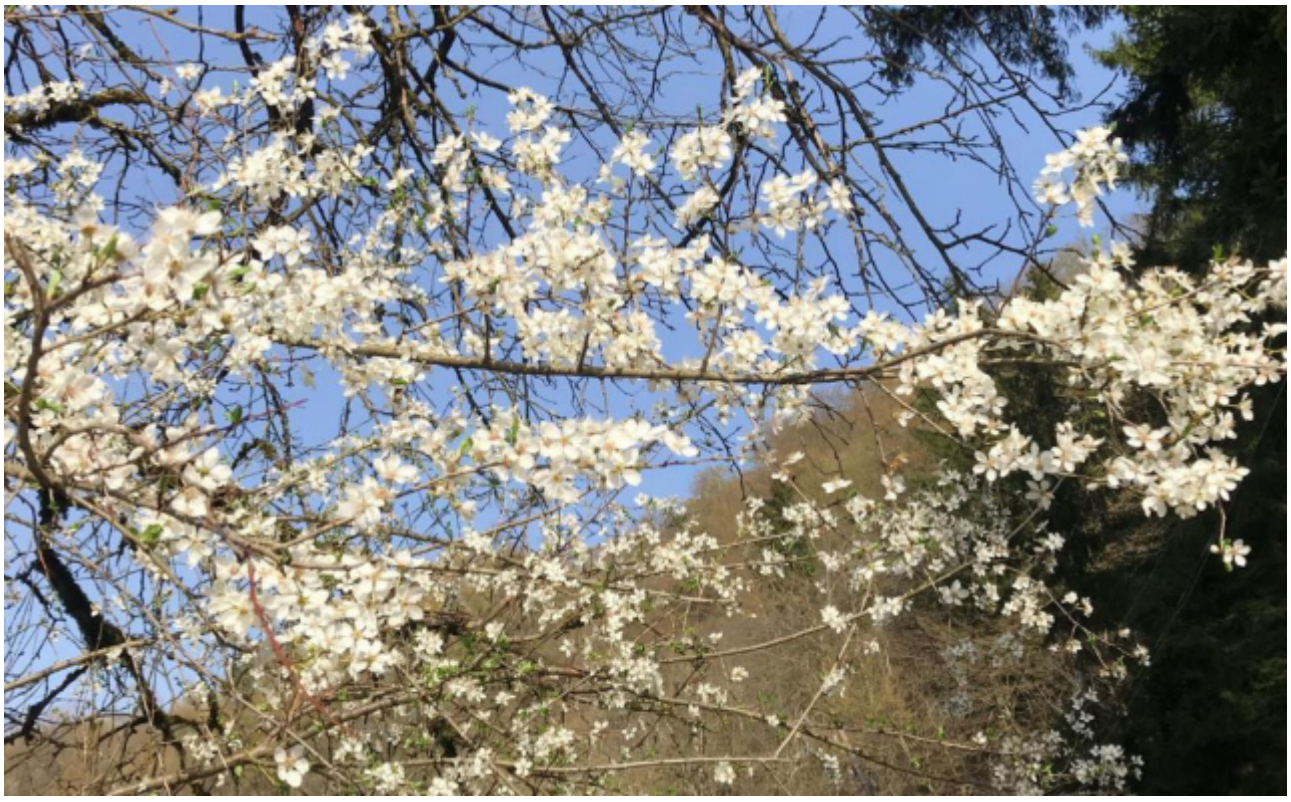
Prepared by Ramboll Group A/S.

Intended for
Georgian Railway

Date
May 2021

Project Number
321000133

Georgian Railway
Corporate ESMS and Project Audit Report



RAMBOLL Bright ideas. Sustainable change.

Corporate ESMS and Project Audit Report

Project No.	**321000133**
Issue No.	**4**
Date	**04.06.2021**
Made by	**Polina Surikova, Ilya Gulakov, Zurab Revazishvili, Irakli Kaviladze, Elena Zaika, Ivan Senchenya**
Checked by	**Ivan Senchenya**
Approved by	**Ivan Senchenya**

Version Control Log

Revision	Date	Made by	Checked by	Approved by	Description
1	19.04.2021	PS, IG, ZR, IK, EZ	IS	IS	Draft for factual accuracy review
2	04.05.2021	PS, IG, ZR, IK, EZ, IS	IS	IS	Second draft that partially addressed comments received to date
3	06.05.2021	IS, PS	IS	IS	Final draft issued to the Client and the Lenders
4	04.06.2021	PS, IG, IK, EZ, IS	EZ	IS	Final Report

CONTENTS

APPENDICES

Appendix 1. Audit visit agenda

Appendix 2. ADB and EBRD requirements compliance table

LIST OF FIGURES

LIST OF TABLES

ABBREVIATIONS

ACM	Asbestos Containing Materials
ADB	Asian Development Bank
BAT	Best Available Technique
CC	Construction Contractor
CHSEMP	Construction Health and Safety and Environmental Management Plan
CJSC	Closed Joint Stock Company
CLO	Community Liaison Officer
CMP	Construction Management Plan
CR23	China Railway 23rd Bureau Group Co.
DCO	Daily Safety Observations
EBRD	European Bank of Reconstruction and Development
EHS	Environmental, Health and Safety
EHS-MS	Environmental and Health & Safety Management System
EIA	Environmental Impact Assessment
EPC	Engineering, Procurement, and Construction
ESAP	Environmental and Social Action Plan
ESHS	Environmental, Social and Health & Safety
ESIA	Environmental and Social Impact Assessment
ESMS	Environmental and Social Management System
ESMP	Environmental and Social Management Plan
ESP	Environmental and Social Policy
H&S	Health and Safety
GoG	Government of Georgia
GR	Georgian Railway
IFC	International Finance Corporation
ILO	International Labour Organisation
IMS	Integrated Management System
LLC	Limited Liability Company
OECD	Organisation for Economic Co-operation and Development
(O)JSC	(Open) Joint Stock Company
OHS	Occupational Health and Safety
PCB	Polychlorinated Biphenyl
PPE	Personal Protective Equipment
PR	Performance Requirement
SEP	Stakeholder Engagement Plan
SMS	Social Management System
SPS	Safeguard Policy Statement
TRIR	Total recordable incident rate
WWTF	Wastewater Treatment Facility

SUMMARY OF FINDINGS AND RECOMMENDATIONS

The Asian Development Bank (ADB) and the European Bank of Reconstruction and Development (EBRD) ('the Lenders') are considering participation in Georgia's second green bond issuance of US$ 500 million which will be issued by Georgian Railway JSC (GR or 'the Company'). GR is Georgia's sole provider of rail freight and passenger services, owned 100% by the Government of Georgia (GoG).

Proceeds from this green bond will be primarily allocated to roll over existing bonds and new capex for railway infrastructure modernization including projects which are already underway but do not yet generate cash flows. ADB and EBRD are each considering subscribing to up to 20% of the bond (US$100 million) each of which will have specific use of funds applications.

The project, which may be co-financed by the EBRD and ADB, is in the construction phase and certain activities within the scope of the project have already been implemented. The activities that are already implemented are funded by JSC "Georgian Railway". In the initial phase of the project, neither financial nor technical support was provided by any international financial institution.

On November 29, 2013, the Association Agreement between Georgia and the European Union was signed, with one of the requirements to bring the present social and environmental legal framework of Georgia closer to the requirements of EU Directives. Currently, the environmental and social requirements of the EU Directives have only been partially reflected within the Georgian legal framework.

This report presents the findings of the independent corporate audit on GR's environmental and social management system (ESMS) and an environmental and social compliance audit for sub-projects assigned to international engineering consultancy Ramboll (the Consultant).

EBRD's use of proceeds will be solely dedicated to the refinancing of existing Eurobonds used to finance the modernisation project (no Capex and only completed works). ADB's use of proceeds will be dedicated to the refinancing of activities that have been completed or are in progress on GR's existing infrastructure for the modernization project, and financing for planned modernization works related to the upgrade of the existing Moliti and Zestafoni substations. This excludes any tunnel-related works and any capital expenditures, upgrades, or repairs linked to new railway lines. The combined financing objectives of the Lenders' subscription constitute the Project. The Project will increase accessibility and mobility for all user groups and improve overall quality, safety and efficiency of transportation.

The proceeds of the transaction (EBRD funds will be used for refinancing with no working capital or capex and no identified new development or expansions to existing projects) is unlikely to be associated with increase in the GR's physical footprint. However, in order to meet the requirements of the EBRD's Environmental and Social Policy and ADB's Safeguard Policy Statement requirements and to ensure that the transaction has been structured to meet the EBRD's PRs and ADB's SPS, GR will align its corporate E&S management systems with the EBRD PRs and ADB requirements and develop measures at the corporate level to manage the environmental and social risks associated with its business activity. This includes development of management systems aligned with Good International Practice, reviewing operational assets against EU BAT, and planning new projects in accordance with the EBRD's PRs and ADB's SPS.

The audit was conducted in April 2021 and relied on documents and reports made available by the GR and observation and interviews by Ramboll staff during the site visit. The report provides the description of the Company ESMS and the Project's ESHS arrangements; assessment of ESHS management capacities, the Company and contractor's ESHS performance and the observations made by the Ramboll team during the visit. The report also includes corrective actions required to be undertaken by GR to ensure compliance with the Applicable Standards and to rectify the identified non-compliances which are developed in a stand-alone Environmental and Social Action Plan (ESAP). Within the ESAP, corrective actions are differentiated according to the specific lender requirements, and as such may be related to both EBRD and ADB requirements, EBRD only or ADB only, as applicable.

Review of Environmental, Social and Health and Safety Management

ESHS management of the current operations is managed by the Company under Environmental and Health & Safety Management System (EHS-MS) described in the EHS-MS Guidelines. EHS-MS was developed in GR during the last two years in addition to Quality Management System and based on the environmental and occupational health and safety (OHS) legislation of Georgia, ISO 14001, ISO 45001 Occupational Health and Safety Management System and international standard ILO-OSH 2001. The existing EHS-MS has not been certified to the date.

The EHS Policy is a part of EHS-MS Guidelines and includes EHS principles to mitigate environmental impacts and decrease health and safety risks. The EHS Policy does not include the contractors and their operations. Labour or social issues are not covered by EHS Policy. Labour or social issues are not covered by EHS-MS Guidelines and EHS Policy and managed under separate management lines.

More specifically:

- The Occupational Health and Safety (OHS) and environmental issues are being developed well and managed in a proactive way taking into consideration the recent character of EHS-MS development;
- The EHS-MS Guidelines are developed and describes the management system approach, including area of application, responsibilities, H&S procedures and documentation management, EHS training and audits, environmental inspections;
- The EHS-MS area of application covers railway operations and management of assets and involves all GR employees. However, it has no coverage for contractors and their operations;
- The EHS training and awareness support are well established in the Company;
- The EHS reporting and performance assessment is focused on OHS measures implementation rather than performance.

The overall understanding is that the OHS management is more advanced than environmental and social management components considering international best practice, there is a lack of several procedures required by international management system standards such as environmental aspects identification and management (and there is no register of aspects developed and managed at the corporate level).

The environmental components in the EHS-MS need to be enhanced. The social management shall be integrated in the ESMS management system of the Company.

Update the existing Environmental Management System (EMS) and Occupational Health and Safety Management System (OHSMS), in particular adjust the following components:

- Introduction of ADB SPS, EBRD ESP and other relevant requirements;
- Improvement of EHS planning procedure based on actual and achievable key performance indicators;
- Develop and introduce screening, categorization and planning procedures for ADB financed activities;
- Procedure of identification and management of environmental aspects;
- Procedure of identification of OHS hazards and risks management.

EHS Policy shall be updated to:

- include the commitment to identify, assess and manage the environmental and social impacts in accordance with its significance;
- cover contractors and their operations in the framework of the Company projects.

Environmental, social and health and safety management of the current operations and stakeholder engagement are provided by the Company departments subordinated to the top management, including the HSE Service, the HR Management and other units.

Construction Project Management Department provides the overall management of construction / reconstruction services appointing managers who are the key points of contact between the Company and contractors, coordinate the works, provide the general oversight of the contractors' works and compliance with the project schedule, Company and national requirements and standards, and ensure

reporting back to the Company. GR also contracted the engineering company ILF Consulting Georgia (ILF, or the Supervisor) to perform technical and engineering oversight of the construction works, including the pertinent HSE issues supervision.

All managers of the Company interviewed during the assessment, have appropriate experience, proactive behaviour and expressed clear interest in their subjects. All interviewed employees demonstrated appropriate competences and qualifications sufficient to manage the Project. It is recommended to provide ISO 14001 and 45001 training for the key representative of the EHS personnel to strengthen the understanding of the management system requirements.

To ensure effective alignment with the Lenders' requirements for this project, GR will be required to:

- improve the restricted and hazardous materials handling and waste management via development and implementation of special management plans;
- update the existing Contractor's ESMP and the respective subject-specific management plans and monitor their implementation;
- recruit experienced environment and social expert(s) to manage the implementation of the ESAP;
- monitor labour and working conditions of contractors' workers;
- assess and monitor land acquisition and resettlement activities;
- manage/control development of the relevant management plans for the Project.

In addition, GR will be required to ensure the EPC contractor appoints a Community Liaison Officer to monitor and facilitate stakeholder engagement with community and other external stakeholders, resolution of grievances from external stakeholders at site level, and ensure regular interaction with and reporting to GR project management and the GR appointed E&S expert.

Ramboll considered the environmental and social management planning process and documentation for the Project and gaps, if any, between these and ADB/EBRD's requirements. Where necessary, corrective measures, intended to close these gaps within a reasonable period of time, are summarized in the paragraphs that follow and (if applicable) in an agreed Environmental and Social Action Plan (ESAP). Through implementation of these measures, the Project is expected to be operated in accordance with ADB/EBRD's requirements and IFC's Performance Standards objectives.

The environmental and social performance of the Project and implementation of the ESAP will be monitored through annual E&S reports and site visits when deemed necessary.

Review of Environmental Performance

In general, all high-level relevant environmental aspects of GR's Modernization Project are known and covered with management and monitoring actions though not always in a systematic way due to the lack of resources. The identified aspects include waste and wastewater management (including water quality control), biodiversity (wood cutting along railways), air emissions reporting, waste and hazardous materials management. Any potential adverse environmental and social impacts are site-specific and manageable through the implementation of good management practices.

There are several key significant issues identified in respect to environmental performance which need to be considered as a matter of priority, all connected with hazardous materials and hazardous waste handling: PCB-containing equipment and oil, asbestos-containing materials use, asbestos waste, waste sleepers with creosote and soils contaminated with oils (around and under railways).

The Modernisation Project includes the renovation of the 16.314-km Zestaphoni – Kharagauli section (i.e. existing line) and the construction of the new 25.265-km Kharagauli – Khashuri bypass (i.e. new line). The Project was assessed through 5 EIA packages and has obtained the relevant permits. The first EIA was developed in 2011 and covered all the line section to be modernised (Zestaphoni-Khagarauli-Khashuri). In 2014 and 2018 the project design underwent several alterations due to the need to change the line alignment of the new line after the landslide near Zvare Village. In 2019 the EIA for Zestaphoni – Kharagauli section was developed and, the permit was obtained in 2020.

Construction Contractor will carry out inventory of drainage water discharge points from the tunnels to control potential contamination of river water and to minimise concerns of the regulatory authorities.

GR will include periodic wastewater sampling and analysis at the discharge points from the tunnels into Environmental Monitoring Program for the construction phase. GR and Contractor will organise regular sampling and analysis of sanitary wastewater from the construction camps in accordance with the Environmental Monitoring Program and keep the monitoring records available for reporting and review by GR, while GR should maintain copies of monitoring reports. In case the quality of discharged runoff does not meet the applicable environmental standards, corrective measures to be developed and implemented.

The environmental and social compliance audit included a review of disclosures provided by GR in addition to a series of follow up interviews with the GR's corporate management team as well as selected sites visits and interviews with contractors. The ESDD indicated that E&S governance is currently decentralised to operational asset levels and that the benchmark for E&S performance is Georgian national legal requirements. As a result, an ESAP has been developed, which stipulates that the GR will develop a suitably resourced centralised management team; develop policies, procedures and management systems in line with ADB and EBRD's requirements as these apply in concert or differently; and will review the current and future business activities of the GR against the ADB and EBRD requirements. This is a significant change in management approach and will demonstrate a material positive impact of ADB and EBRD's involvement with the GR Modernization Project and by way of this transaction, not least through the GR's commitment to achieve EU Best Available Techniques ("EU BAT") of all operating assets within the GR portfolio.

HSE management plans and procedures are extensively used by the Engineering Supervisor to control on-site HSE performance.

Review of Health and Safety Performance

Major HS risks to consider include employees and public health and safety, traffic safety, hazardous materials management and supply chain.

GR develops an OHS management system which addresses key aspects, including work hazards, work with heavy machinery and accidents statistics which are recorded on a monthly basis and compiled in an annual report to management. There is an OHS department with adequate resources and staff. The team developed a robust OHS management system commensurate with the scale of GR's activities. A qualified Engineering Supervisor is supporting GR and Construction Contractor in development, implementation and supervision of H&S issues related to the Modernisation Project activities.

Specific attention will be paid COVID-related response plans.

Review of Social Performance

The GR labour practices are compliant with the national requirements. However, most labour aspects have been scored as partial compliance with IFIs' requirements and the Company has to take actions to fill the identified gaps. In particular, these include actions related to development of the HR Policy elements for the project which will also have application to contractors. Several major non-compliances were identified with regard to labour and working conditions. These relate to poor quality of accommodation services provided by the Project contractor to its workers, lack of monitoring of labour and working conditions related to contractors' workers, lack of formalised grievance mechanism for the Project workers and contractors. Relevant corrective measures have been identified to address these gaps.

Though certain management plans have been developed with respect to community health and safety, their provisions are not properly observed. This is scored as major non-compliance as certain risks to community safety were identified during Ramboll's overview of the construction sites (these relate to lack of proper fencing at construction sites, vehicle's movement on public roads). Development and implementation of the Community Health, Safety and Security Plan for both construction and operation stages is necessary to manage potential risks.

Major part of the land acquisition and resettlement activities for the Project has already conducted. These activities are considered as involuntary resettlement since the affected persons did not have the right to refuse land acquisition (expropriation process would have been initiated by GR upon the failure

of negotiation). The conducted activities are in line with the national requirements. Resettlement Action Plans were developed for the Project in line with the Georgian requirements which also included several enhancements to legal requirements, such as 'moral compensation' to physically displaced households, and assistance to land holders to formalise their assets through land titling and registration to ensure entitlement to compensation. However, the conducted land acquisition and resettlement activities are not fully compliant with the Lenders' standards: for example, an entitlement matrix has not been developed and communicated to affected persons, livelihood restoration activities were only briefly described in the RAPs and have not been implemented, regular monitoring of the resettlement process is not being conducted, assistance to vulnerable groups is limited, etc. For EBRD, any land that has been acquired related to EBRD's financing of debt roll over, GR will be required to conduct monitoring and a completion audit of the land acquisition and resettlement process to ensure that living standards of the affected persons have been restored. The socioeconomic status of the affected households should be measured against the baseline conditions of the population before displacement. Attention should be paid to vulnerable groups.

Though most of the affected people voluntarily accepted GR's offer, the Company initiated expropriation process for 11 land plots (in the same village), including three with residential houses. The expropriation process is still in ongoing. Gap analysis for the expropriation cases should be conducted against the EBRD requirements. Additional measures to ensure compliance should be developed if required for land acquisition related displacements related to previously acquired land or for ongoing and planned activities which will involve economic or physical displacement, including adoption of ADB's IR screening and categorization and IR planning procedures for activities associated with its financing. It is also recommended that GR adopt Lender standards for any land acquisition undertaken in relation to the Modernization Project including that which is not being refinanced or financed by the Lenders.

The Project is generally compliant with the requirements related to cultural heritage issues. However, development of a Chance Finds Procedure is required.

Though certain stakeholder engagement activities were conducted for the Project, no systematic approach to information disclosure and consultation is undertaken. The Stakeholder Engagement Plan for the Project is lacking. Development and implementation of a community grievance mechanism applicable to affected communities and passengers is also required.

1. INTRODUCTION

Georgian Railway JSC (GR) ('the Company' or 'the Borrower') is Georgia's sole provider of rail freight and passenger services, owned 100% by the Government of Georgia (GoG). GR is a vertically integrated transport company that owns and operates tracks, stations, other infrastructure and rolling stock comprising Georgia's entire national railway system, as well as the land adjoining the tracks. GR provides both passenger and cargo services, including freight services and trans-shipping of a variety of cargo coming from the Caspian Sea and Central Asia to the Black Sea.

The Asian Development Bank (ADB) and the European Bank of Reconstruction and Development (EBRD) ('the Lenders') are considering participation in Georgia's second green bond issuance of US$ 500 million which will be issued by GR. Proceeds from this green bond will be primarily allocated to roll over existing bonds and new capex for railway infrastructure modernization including projects which are already underway but do not yet generate cash flows. ADB and EBRD are each considering subscribing to up to 20% of the bond (US$100 million) each of which will have specific use of funds applications.

EBRD's use of proceeds will be solely dedicated to the refinancing of existing Eurobonds used to finance the modernisation project (no Capex and only completed works). ADB's use of proceeds will be dedicated to the refinancing of activities that have been completed or are in progress on GR's existing infrastructure for the modernization project, and financing for planned modernization works related to the upgrade of the existing Moliti and Zestafoni substations. This excludes any tunnel-related works and any capital expenditures, upgrades, or repairs linked to new railway lines. The combined financing objectives of the Lenders' subscription constitute the Project. The Project will increase accessibility and mobility for all user groups and improve overall quality, safety and efficiency of transportation.

Provision of an independent corporate audit on GR's environmental and social management system (ESMS) and an environmental and social compliance audit for sub-projects was assigned to international engineering consultancy Ramboll (the Consultant) which will develop the required reports for GR to submit to the Lenders.

The Project compliance is assessed against the following standards and guidelines, in addition to the applicable Georgian government legislation, regulations and standards (the Applicable Standards):

a) ADB Safeguard Policy Statement (SPS), 2009;

b) ADB Social Protection Strategy, 2001;

c) ADB Gender and Development Policy, 1998;

d) ADB Access to Information Policy, 2019;

e) EBRD Environmental and Social Policy, 2019;

f) World Bank Group/IFC EHS as well as relevant sector specific guidelines;

g) IFC and EBRD Workers' Accommodation: Processes and Standards, 2009;

g) Relevant European Union (EU) requirements (including, but not limited to, the EU EIA Directive, Industrial Emission Directive, Birds and Habitat Directives);

h) International Covenant on Economic, Cultural and Social Rights and relevant ILO Core Labour Standards Conventions; and

i) Other relevant good industry practice guidelines and related documents

This report presents the findings of the site visit conducted on April 07-09, 2021 and the review of the environmental, social and health and safety (ESHS) documentation submitted by the Company and its contractors. The report provides the description of the Company ESMS and the Project's ESHS arrangements; assessment of ESHS management capacities, the Company and contractor's ESHS performance and the observations made by the Ramboll team during the visit. The report includes corrective actions required to be undertaken by GR to ensure compliance with the Applicable Standards and to rectify the identified non-compliances which are developed in an Environmental and Social Action Plan (ESAP). The ESAP indicates which actions relate to compliance with the Lenders' requirements, and also highlights which are common to both lenders, and which are required solely by EBRD or ADB.

The audit team was presented by experts of the international engineering consultancy Ramboll CIS and its local partner Eco-Spectri and conducted the audit in the Company's head office in Tbilisi and on the Project sites. The site visit is described in Section 2 and the audit program is presented in Appendix 1. The Company ESMS and the Project compliance is summarized in Appendix 2. The timebound ESAP has been developed as a stand-alone document.

2. SITE VISIT DESCRIPTION

The visit to the Company's head office in Tbilisi and to the Project sites was undertaken by three Ramboll experts including Elena Zaika, Senior Managing Consultant, Polina Surikova, Managing Consultant and Ilya Gulakov, Senior Social Consultant and two Eco-Spectri experts: Irakli Kaviladze (EHS Expert) and Zurab Revazishvili (Resettlement Expert). The visit was undertaken on April 07-09, 2021.

In advance of the site visit, the detailed environmental and social questionnaire for the corporate and project levels was prepared by the Consultant's team and issued to the Company in order to collect the relevant information, to provide the general understanding of the issues to be discussed during the visit and documents to be presented.

The full day of April, 7th 2021 was devoted to the Corporate ESMS audit, and the rest days were spent for a site visit. The site visit included the sites and facilities along the Zestaphoni- Kharagauli and Moliti-Khashuri sections (supposed to be financed under new bond). The section between Kharagauli and Moliti was not visited due to the tight timeline of the assignment (see Section 3 for the map).

From the Company side, the work of Ramboll Environ representatives was coordinated by Nino Jorbanadze, the Head of Corporate Affairs Department and assisted by Giorgi Kavagishvili, the Project Manager.

During the first day in the Company head office, several interviews were conducted with the representatives of the following units (not limited to):

- Corporate Affairs Department;
- HSE Service;
- HR Management Service;
- Medical Service;
- PR Department;
- Construction Project Management Department;
- Legal Department;
- Procurement Department.

The objective of the assignment is to assess the project's compliance with the Applicable Standards to support the Lender's appraisal of the Project and to ensure the Company has a clear understanding of the actions required to meet the Lenders' requirements prior to financing. In order to achieve this the Consultant conducted the Corporate ESMS Audit; and the Environmental and Social Compliance Audit of completed or ongoing subprojects to be refinanced by the Lenders. Where corrective actions are required to achieve and maintain compliance with the Lenders' requirements these are documented in a time-bound Environmental and Social Action Plan (ESAP).

Key E&S risks and impacts associated the Project include pollution prevention and control, emissions to water and soil, rail and traffic safety, occupational and community health and safety, labour issues, contractor management, land acquisition, stakeholder engagement, cultural heritage and cumulative impacts.

This report is based on:

- interviews conducted in the Company's head office and on sites;
- interviews conducted with representatives of the Project contractor;
- observations made during the head office and site visit; and
- review of the Project related documentation provided by the Company prior to, during visit and before the submission of this report.

The Consultant's team reviewed all the information and the documents obtained including the Company's and Project ESHS documentation, procedures, guidelines and practices and the Project status to date, and other relevant documentation in respect to their compliance to the applicable national and international requirements and prepared this report highlighting gaps, observations and recommended actions to avoid non-compliances now and in the future.

3. THE PROJECT OVERVIEW

Georgian Railway JSC (GR) ('the Company' or 'the Borrower') is Georgia's sole provider of rail freight and passenger services, owned 100% by the Government of Georgia (GoG). GR is a vertically integrated transport company that owns and operates tracks, stations, other infrastructure and rolling stock comprising Georgia's entire national railway system, as well as the land adjoining the tracks. GR's mainline rail network is the shortest route from the Caspian Sea and Central Asia to the Black Sea and the Mediterranean basin, making GR a key link in this transport chain.

GR was established in 1872 and is the country's largest employer with over 12,000 employees. GR owns eight subsidiaries: i) GR Logistics and Terminals, ii) Georgian Railway Construction, iii) Property Management, iv) Georgian Railway Transit, v) GR Transit LLC, vi) Georgia Trans-Shipment, vii) GR Transit line LLC and (viii) Borjomi-Bakuriani Railway. It provides both passenger and cargo services, including freight services and trans-shipping of a variety of cargo including oil and oil products, ores and grains coming from the Caspian Sea and Central Asia to the Black Sea. The company's mainline rail network, together with that of CJSC Azerbaijan Railway, forms the Caucasus railway corridor, a key segment of the Transport Corridor Europe Caucasus Asia corridor. Total rail-track length is 1,140 km, with railway alleys with a total of 2,000 km.

EBRD's use of proceeds will be solely dedicated to refinancing of existing Eurobond used to finance the modernisation project (no Capex and only completed works).

ADB's use of proceeds will be dedicated to the following:

a) Refinancing of activities that have been completed or are in progress for the modernization project. This is limited to the following:

- administrative costs;
- construction costs for the completed and ongoing subgrade works on the exiting line;
- construction costs for the completed bridges, walls, culverts on the existing line;
- costs associated with the supply and installation of power and electric traction on the existing line; and
- construction costs for the modernization of the existing line.

b) Financing for planned modernization works related to the upgrade of the existing Moliti and Zestafoni substations.

ADB's use of proceeds excludes financing of any activities related to the upgrade or construction of tunnels and any capital expenditures, upgrades, or repairs linked to new railway lines

The combined financing objectives of the Lenders' subscription constitute the Project.

The purpose of the Zestafoni-Khashuri Railway Line Modernisation Project implemented by Georgian Railways since 2011 is the renovation of the Zestaponi – Kharagauli section (i.e. existing line) and construction of the new Kharagauli – Khashuri bypass (i.e. new line) to eliminate high gradients (above 18 ‰ – up to 29 ‰) and tight curves with radius under 400 m. The Project will allow passenger trains running at 120 km/h and freight trains - at 80 km/h. Freight trains would be able to cross the Gorge area with the use of only one locomotive. Consequently, the line capacity will be increased, and the travailing time between Tbilisi to Batumi will be reduced to 3:20 hours together with the improvement of railway safety.

The Project consists of 2 sections:

- Upgrade of the line from Zestaphoni station to Kharagauli station - reconstruction of tracks at the 4 parts of a 16.314-km section with construction of intermediate station of Dzirula);
- Construction of a 25.265-km bypass railway line from Kharagauli station to Khashuri station with construction of intermediate stations of Moliti and Kvishkheti.

Proceeds from the requested green bond will be primarily allocated to roll over existing bonds and new capex for railway infrastructure modernization sections including the Zestaphoni- Kharagauli and Moliti-Khashuri sections. Both sections were visited during the site visit.

Summary of artificial structures constructed or under construction in the framework of the GR Modernization Project is provided in the Table 3.1.

Table 3.1: Summary of structures

№	Objects	Quantities	Total Length, m
Zestafoni-Kharagauli section (existing line)			
1	Bridges	4	241.12
2	Pipes	35	344.38
3	Retaining walls	18	2244
4	Tunnels	3	2978.11
Section length		16.314km	
Kharagauli – Khashuri bypass (new line)			
1	Railway bridges	6	944.446
2	Pipe culvert	21	319.67
3	Retaining walls	25	2346.2
4	Tunnels	3	11.578
Section length		25.265 km	

The Modernisation Project sections and facilities are demonstrated on map below.

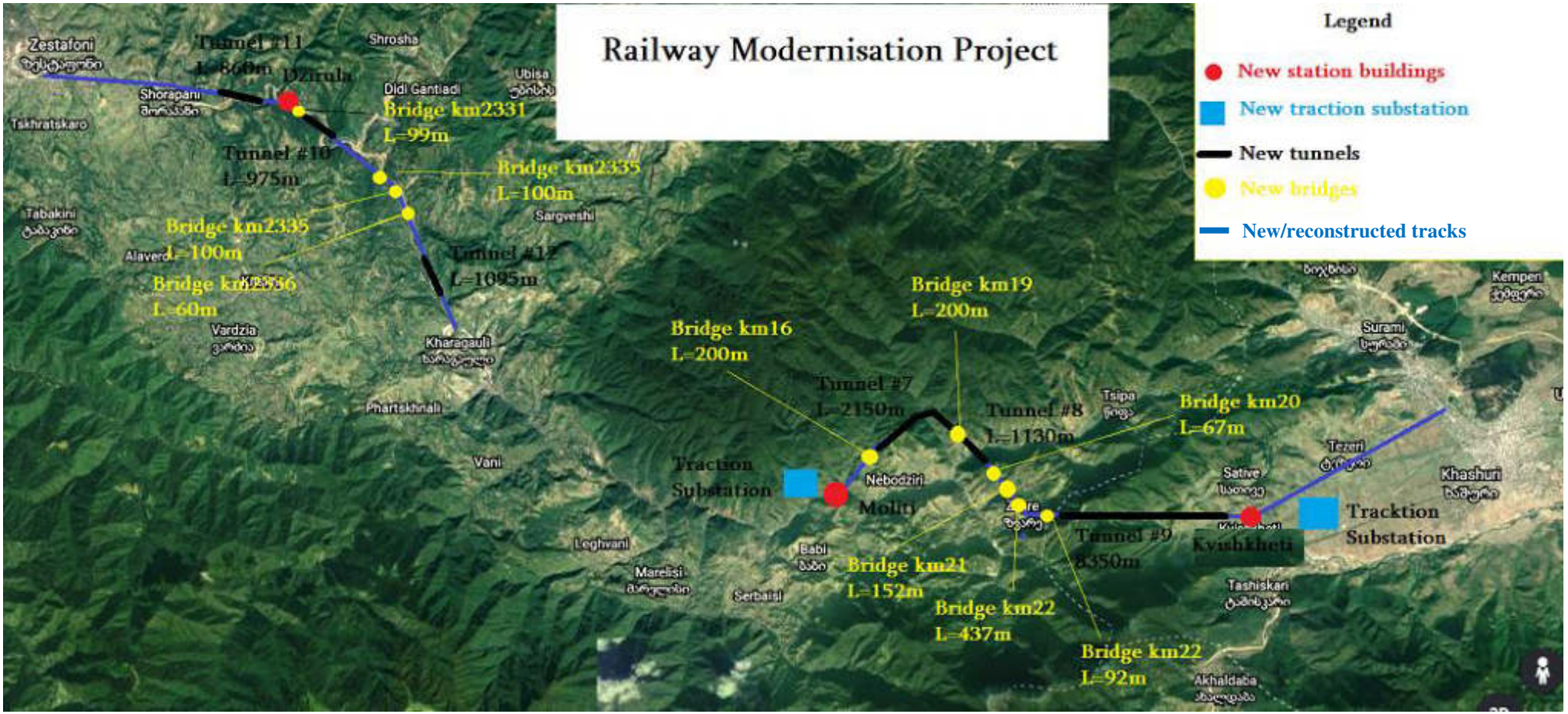


Figure 3.1: The location of the Modernization Project sections and facilities

4. CORPORATE ESMS AUDIT

4.1 Corporate Environmental and Social Management System

ESHS management of the current operations is described in the Environmental and Health & Safety Management System (EHS-MS) Guidelines. EHS-MS was developed in GR in the last two years in addition to Quality Management System and based on the environmental and occupational health and safety (OHS) legislation of Georgia, ISO 45001 Occupational Health and Safety Management System and international standard ILO-OSH 2001. The existing EHS-MS has not been certified to the date.

The EHS-MS Guidelines describes the management system approach, including area of application, responsibilities, several procedures, EHS training and audits, environmental inspections. The EHS-MS area of application covers railway operations and management of assets; it involves all GR employees.

The EHS Policy includes the following principles:

- provide safety operations in accordance with national and international legal requirements;
- investigate any accidents, provide reporting and ensure awareness;
- conduct systematic analysis of reasons and required corrective and preventive measures;
- minimize and mitigate the environmental impacts and improve the environmental performance;
- commitment to long-term environmental planning and initiatives.

The EHS Policy does not include the contractors and their operations. Labour or social issues are not covered by EHS-MS Guidelines and EHS Policy and managed under separate management lines (see Sections 4.5-4.8 below).

The overall understanding is that the OHS management is more advanced than environmental and social management components considering international best practice, there is a lack of several procedures required by international management system standards such as environmental aspects identification and management (and there is no register of aspects developed and managed at the corporate level).

The EHS reporting and performance assessment is focused on OHS indicators such as incidents, trainings, drills, inspections (75 total), exposure assessment (773 facilities), signage, unified first aid kits and just environmental inspections. The environmental components in the EHS-MS need to be enhanced.

The following elements of the social management shall be integrated in the ESMS management system of the Company:

- Conducting monitoring of labour and working conditions;
- Development of Community Health, Safety and Security Plan;
- Conducting gap assessment for land acquisition and resettlement activities and development of Corrective Action Plan (as necessary). Conducting screening and categorization using ADB involuntary resettlement screening procedures;
- Development and implementation of grievance mechanisms for workers and communities;
- Development and implementation of the Stakeholder Engagement Plan.

Corrective action: Update the existing Environmental Management System (EMS) and Occupational Health and Safety Management System (OHSMS), in particular, adjust the following components with regard to the financed Project:

- Introduction of ADB SPS, EBRD ESP and other relevant requirements;
- Improvement of EHS planning procedure based on actual and achievable key performance indicators;
- Develop and introduce screening, categorization and planning procedures for ADB financed activities;
- Procedure of identification and management of environmental aspects;
- Procedure of identification of OHS hazards and risks management.

EHS Policy shall be updated:

- to include the commitment to identify, assess and manage the environmental and social impacts in accordance with its significance;

- to cover contractors and their operations in the framework of the Company projects.

The EHS-MS needs to be integrated with the quality management systematically, not just included as a process.

4.2 ESHS Organisational Structure

Environmental, social and health and safety management of the current operations and stakeholder engagement are provided by the following departments in the Company:

- HSE Service;
- Procurement Department
- HR Management Service;
- Construction Project Management Department;
- Medical Service;
- Government Relations Department;
- PR Department.

The HSE Service is subordinated to the General Director demonstrating the current overall high status of the HSE issues in the Company. The HSE service comprises 9 employees including Head of Service, Mr. Malkhaz Gochelashvili. The environmental management is led by the Deputy Head of Service, Ms. Nutsa Kiknadze.

The HSE Service is responsible for general guidance on EHS activities associated with the Company operations and the Project; identification of applicable EHS requirements, provision and monitoring of compliance with such requirements; development and implementation of EHS MS including EHS measures planning, implementation, monitoring and control of EHS measures and requirements.

Social issues are managed by various departments/specialists within the Company depending on the task nature. The human resources management is provided by the HR Management Service including 23 staff members and being managed by the Head of Service, Ms. Marika Gabelaia. The HR Management Service is subordinated to the General Director.

The land acquisition and resettlement issues in the framework of the Modernization Project are managed by a skilled team led by Mr. Ucha Mkheidze, Projects Administrator of the Construction Project Management Department, which is a part of the Corporate Affairs Department led by Ms. Nino Jorbenadze.

Construction Project Management Department provides the overall management of construction / reconstruction services appointing managers who are the key points of contact between the Company and contractors, coordinate the works, provide the general oversight of the contractors' works and compliance with the project schedule, Company and national requirements and standards, and ensure reporting back to the Company. GR also contracted the engineering company ILF Consulting Georgia (ILF, or the Supervisor) to perform technical and engineering oversight of the construction works, including the pertinent HSE issues supervision.

All managers of the Company interviewed during the assessment, have appropriate experience, proactive behaviour and expressed clear interest in their subjects. All interviewed employees demonstrated competences and qualifications appropriate to manage the Project activities in line with national requirements. It shall be noted that the current capacity is not sufficient for timely ESAP actions implementation in line with international requirements. It is recommended to provide ISO 14001:2015 and 45001:2018 training for the key representative of the EHS personnel to strengthen the understanding of the management system requirements.

Corrective actions:

- Recruit experienced environment and social expert(s) to manage the implementation of the ESAP, work with the supervision engineer to monitor labour and working conditions of contractors' workers, manage/control development of the relevant management plans for the Project, monitor land acquisition and resettlement activities. This may be through GR recruitment of one combined E&S expert or one environmental and one social expert.

- Appoint a Community Liaison Officer to monitor and facilitate stakeholder engagement with community and other external stakeholders, and resolution of grievances from external stakeholders at the site level and ensure regular interaction with and reporting to GR project management and E&S expert.

4.3 Environmental Performance: Key Issues

As discussed in Section 4.1, the overall environmental performance can be improved via better planning procedure through establishing clear objectives with key performance indicators, quantitative and achievable, i.e. decrease of emissions by 5% or utilization of target amount of certain waste.

In general, all high-level relevant environmental aspects are known and covered with management and monitoring actions though not always in a systematic way due to the lack of resource. The environmental management in the Company started to develop 1-2 years ago and still on a way of development. The identified aspects include waste and wastewater management (including water quality control), biodiversity (wood cutting along railways), air emissions reporting, waste management. The existing practice is discussed in Section 5 below.

There are several key significant issues in respect to environmental performance which need to be considered as a matter of priority, all connected with hazardous waste handling: PCB-containing equipment and oil, asbestos-containing materials use, asbestos waste, waste sleepers with creosote and soils contaminated with oils (around and under railways).

Oil-contaminated soils are identified during investigations and planned to be gradually removed (actually, this action is included into environmental plan).

Since 2012, new sleepers started to be treated with aqua-based antiseptic solutions not-containing creosote. However, a lot of waste has accumulated throughout the years, and this is a legacy waste problem. This waste will require appropriate disposal which will need to be carefully planned. Currently, at the end of the service life, such sleepers are collected and stored in the specially designated places near almost each station. However, no specific requirements are considered for such places and the sleepers are frequently stored on ground (as briefly noticed on the way during the site visit). A specific procedure is required to be developed for appropriate storage of the sleepers with creosote. Each year some part of the sleepers with creosote are utilised by the licensed contractor as hazardous waste, and the amount depends on the available funds.

Asbestos-containing materials have been used for many years, though not purchased since 2009. These materials are present at 28 traction substations, cable canals are covered in asbestos-cement pipes, permanent current devices and other electrical equipment, slate roofs, etc. It is possible to develop an inventory of asbestos-containing materials if required (a preliminary inventory was prepared 4 years ago and the power engineers are aware of the asbestos materials location). An asbestos management plan is also required to develop appropriate procedures for the management of asbestos and asbestos-containing materials (ACM) and waste handling.

Reportedly, in the reconstruction projects, asbestos wastes are collected and stored covered (isolated) and separately from other wastes. The storage places were requested to be seen but were not available for review during the site visit. No disposal options for asbestos materials is available in Georgia. It shall be noticed that no new asbestos materials are used in the reconstruction and new construction projects.

PCB containing oils are used in existing transformers, capacitors and electrical equipment, all are in use. PCBs are banned in Georgia and therefore not used in the reconstruction or new development projects. The specific trainings have been provided regarding PCB oils handling. Currently, there are no possibilities to dispose PCB waste in Georgia, and GR does not have a phase-out plan for such disposal.

Decree of the Government of Georgia of 23.05.2018 no.247 approved the Persistent Organic Pollutants National Implementation Plan 2018-2022, creating the framework actions for PCB identification and removal, including preparation of in-depth inventories of PCBs (2018-2020), carrying out trainings and assessing destruction capacity in Georgia (2018-2020) and Development of PCBs equipment and oils elimination plans (individual) and monitoring of the phase-out (2019-2021), all to be implemented using the external funding sources.

In 2020, a survey was conducted at GR assets by external company in the framework of the UNIDO PCB programme "Sound management of PCBs in Georgia" (started in 2016 and funded by GEF) to identify the locations / equipment that still used oils containing PCBs and prepare an inventory. This survey was based on the internal inventory of the equipment potentially containing PCBs but the survey results are not have not been made available to the Company so far. After receiving the survey results, the PCB phase out plan shall be suggested in the framework of this programme and discussed with the Company. Currently only the export of PCB-containing waste is possible. If the information on types and capacity of transformers and capacitors is be available, Ramboll can provide a preliminary advice what type and amount of PCB oil is used.

There is also a plan in the Company to provide PCB-related signage on sites.

Corrective actions:

Hazardous waste management plans need to be developed to provide planning, handling, training on and gradual disposal (as far as possible) of creosote-containing sleepers, asbestos wastes, PCB oils and other wastes. In order to manage the restricted materials and hazardous waste in a proper manner across the Company assets and infrastructure, the following actions are required:

Waste creosote-treated sleepers:

- At the corporate level, develop and implement a Management Plan (MP) for waste creosote-treated sleepers, including dismantling, handling, temporary storage and disposal requirements. This MP will need to be cascaded to contractors involved into the relevant works for implementation.
- Monitor management and temporary storage of such waste.

Asbestos and ACM:

- Develop and implement an asbestos and ACM management plan intended to avoid, minimize, and mitigate the potential EHS risks associated with the disturbance, removal, or demolition of structures containing asbestos or ACM. The plan will have to be develop by a competent person with suitable qualifications and experience, must be consistent with the ADB Good Practice Guidance from the Management and Control of Asbestos (2021), and must include a location register to prevent disturbance of ACM during dismantling, construction, and maintenance of rail infrastructure.

PCBs:

- Develop the Company-wide inventory of potential PCB oil-containing equipment in use and respective PCB contaminated materials/waste stored on sites (if any). Update the inventory with the results of UNIDO programme testing when available.
- Develop and implement PCB contaminated materials management plan (consistent with the good practice guidances, including validation procedures).
- On availability of UNIDO programme testing results and phasing out options, develop Phase Out Plan for PCB oils.

4.4 Procurement Procedure

The GR's Procurement Department responsible for the tendering process adheres to a) general procurement legislation at the national level and b) regulation designated for purchasing specific goods/ objects, namely railway activities. By requirements of "Law of Georgia on public procurement, the majority of procurement is carried out through electronic bidding process.

GR does not develop standard complex EHS requirements to avoid grievances regarding unfair competition, however based on the actual works characteristics relevant tender-specific requirements for contractor are added on case by case basis. The Procurement Department send the tender documentation and contracts to the involved departments for approval and the respective changes can be introduced as required.

https://open.unido.org/projects/GE/projects/150214

The Consultant reviewed a number of tender documents in respect to the ESHS requirements included. The standard requirements tender on the Kopitnari rehabilitation works include only the requirements to comply with "labour safety in accordance with the Law of Georgia". At the same time the tender documentation of hazardous waste disposal includes the extended list of ESHS requirements including environmental and OHS compliance with the Georgian legislation, especially waste and hazardous waste management; associated permitting, compensation of damage, waste accounting, recording and reporting, as well as appropriate equipment.

As was reported by the representative of Procurement Department, GR conducts pre-qualification checks of contractors including desktop review of contractor documentation for equipment, capabilities and qualification as appropriate (including HSE considerations if deemed relevant, i.e. waste management), resulting in contractor approval for participation in tender. Tenders are to be provided between legitimate and qualified contractors considering the open national list of unreliable contractors and suppliers. Contractors are not pre-qualified against national labour standards and presence of grievance mechanism.

At the stage of contractors' service provision, EHS monitoring and control of contractors' operations are provided. However, the contractors' compliance with requirements on labour conditions are not considered as a subject for control by the Company. The tender documentation shall clearly state that potential contractors need to comply with national legislation of Georgia, including national labour standards. This issue is described separately below.

It is recommended to develop brief and clear ESHS requirements in the standard tender documentation to all contractors', including possibility for reporting, monitoring and control on environmental, occupational health and safety and social issues (such as prohibition of discrimination, forced and child labour, conclusion of labour contracts, provision of accommodation services in line with EBRD/IFC requirements, availability of grievance mechanism.

4.5 Labour and Working Conditions

Georgian Railways is one of the major companies in the country employing over 12,000 persons.

The key GR regulations regarding labour and working conditions include:

- Internal Labour Regulations;
- Provisions on Workers' Remuneration;
- Workers' Code of Ethics.

The GR workers are informed on provisions of the named above documents at the time of hiring (a worker signs an order on his/her employment confirming he/she was acknowledged).

The GR does not conclude labour agreements with its workers but issues written orders on their employment. However, the Internal Labour Regulations have provisions that the orders should be considered equal to labour contracts. Sample orders that equate to permanent and temporary labour contracts were provided to Ramboll. The orders are signed by GR employees. According to information provided by the Company, the share of GR direct workers covered by permanent contracts is almost 99%.

Information on workers accommodation issues is provided in Section 5.6.

Wages

GR is the only railway company in the country, and there are no similar employers for wages' comparison. Reportedly, the wages in GR are comparable with wages in the industrial sector of Georgia.

The lowest full-time wage paid to a full-time, permanent employee in GR is 330 GEL, whereas the official minimal wage in Georgia in 2021 is 20 GEL for private sector and 350 GEL for government sector. The average full-time wage in Georgia in 2021 is 1315 GEL. According to information provided by GR, the average salary in the Company (not considering extra payments) in 2020 was 918 GEL.

The claims of the trade unions (which resulted in a strike) related to salary payments' increase. According to agreement concluded between GR and the trade unions, the Company was to:

- Increase wages for those workers whose wages are lower than GEL 1,500;

- Pay bonuses to all workers in Q4 2019;
- Pay bonuses in Q3 2020 to workers whose wages are lower than GEL 1,250.

Additional requests from the trade unions might be anticipated after July 2021.

Reportedly, GR employs a few migrant workers. All of them hold quite high-paid positions.

Recommendation: It is recommended to GR to undertake proactive approach with regard to salary payment (and relevant indexation) to ensure these are comparable or exceed the average wages in Georgia and with regards to engagement with the trade unions to make the negotiations process manageable and to avoid potential conflicts or strikes in future.

Non-discrimination and equal opportunity

The GR Workers' Code of Ethics states that discrimination is prohibited.

The Georgian Labour Code has clear provisions with respect to prohibition of any type of discrimination. It also states parties of the labour relations should adhere to basic human rights and freedoms (art. 2).

Retrenchment

No dismissal of significant number of the GR employees is envisaged. GR does not have any policies regulating the retrenchment process in case labour restructuring or retrenchment is anticipated.

Recommendation: In case labour restructuring becomes necessary, prepare a plan for a gradual approach in consultations with staff/ trade unions. For any staff retrenchment of 10% or more at a time, develop a Retrenchment Plan.

Child and Forced Labour

In Georgia, minimum age for work is 16 and minimum age for hazardous works is 18. Most of GR's business activities require qualified employees, so GR does not have activities, where child labour could be present.

The Georgian Labour Code regulates engagement of minors (under age 16). In particular, a person under 16 years might be engaged under the consent of the authorized representative assuming that the employment relations do not contradict the interests of the underage person, do not impair his/her moral, physical and mental development and do not preclude the right and ability to get elementary and base education. Employment agreement of persons under 14 years can be concluded only in the sphere of sports, arts and culture, as well as advertisement services.

The Georgian Labour Code has provisions regarding forced labour and relevant fines imposed for its application. According to the EBRD requirements forced labour should not be employed (PR 2, i. 11). Though employment of forced labour is not considered to be a risk for GR, it is recommended to clearly outline the ban on forced labour in the Company's procedures. The ban on forced labour should be also relevant to the Company's contractors.

Recommendation: It is recommended to clearly outline the ban on forced labour in the Company's HR procedures. This requirement should also apply to the Company's contractors.

Grievance redress mechanism

The grievance mechanism for GR employees is discussed in Section 4.8.

Court cases related to labour issues

For the last three years GR had 14 court cases with its workers: 11 of them relate to workers' dismissal due to improper professional performance, 3 – to reogranisational issues within the GR (in particular, workers were reluctant to change their places of work due to the GR reorganization and relevant changes of locations). All the court cases are ongoing (reportedly, due to the overload of the judicial authorities).

According to information provided by GR to Ramboll, there was a court case related to labour and working conditions between the Project contractor and its workers. This related to unsafe working conditions and workers' injuries during blasting operations, which took place in December 2018 (see Section 5.5.2 for more detail). The court case is ongoing.

According to information available from open sources, the contactor was involved in other court case which related to the other activities of the Project contractor in Georgia. The court case was associated with workers' dismissal. No information on other court cases related to labour issues associated with contractors' operations is available.

Trade unions and strike

59% of the GR workers belong to trade unions, including Georgian Railway Trade Union and New Railway Trade Union (the GR workers are primarily part of the latter). The GR used to have a collective agreement with one of these trade unions but it has not been prolonged after being expired.

However, the Company concluded a brief agreement with the trade unions in 2019. According to that agreement, GR need to:

- Increase wages for those workers whose wages are lower than GEL 1,500;
- Pay bonuses to all workers in Q4 2019;
- Pay bonuses in Q3 2020 to workers whose wages are lower than GEL 1,250.

The brief agreement was concluded between GR and trade unions in response to the strike which took place in 2019. The New Railway Trade Union requested GR to increase salary payments to its workers. After receiving negative response from the GR side, approximately 40 workers initiated a strike at the entrance to the GR main office in Tbilisi. After the three days of strike and the negotiations process between the GR and the trade union, the described above agreement has been reached. There is no evidence with regard to any further implications for workers (like discrimination) which relate to their participation in the strike.

It is expected that no additional agreements with the trade unions will be concluded until July 2021.

Recommendation: It is recommended to the GR to undertake proactive approach with regard to engagement with the trade unions to make the negotiations process manageable and to avoid potential conflicts or strikes that might happen in future.

Labour relations' monitoring

GR does not monitor whether labour and working conditions related to contractors' workers are in line with the national requirements and international standards. It should be noted that performance of such monitoring is not required by the national legislation.

GR does not cascade its internal procedures to its contractors, does not request contractors' labour procedures and policies, and does not conduct monitoring of the labour relations between contractors and their workers.

Ramboll considers necessary to develop the corporate HR Policy that will also apply to GR contractors. GR should start regular monitoring activities with respect to such contractors' labour issues as:

- Conclusion of labour contracts between contractor and its workers;
- Salary payments and other relevant entitlements (for example, sick leave and holiday leave, etc.);
- Workers accommodation services;
- Workers health and safety;
- Grievance management, etc.

GR should check both availability of the necessary policies and procedures of its contractors, as well as the actual practice of labour issues' management. A checklist might be developed for that purpose to ensure all the key issues are covered.

This issue is particularly relevant to the Project given the legacy of the contractor's operations in Georgia and relevant grievances associated with labour issues (see Section 5.6).

Corrective action:

Enhance GR's HR Policy, as applicable to the Lender financed activities, including the following:

- Key provisions regarding labour relations as defined by the Georgian legislation and EBRD PR 2 (regarding documenting workers relationships and concluding labour contracts, having clear provisions on salary payments, etc.);
- Provisions on the use of child labour and prohibition of forced labour;
- Provisions for adherence to the key ILO standards;
- Provisions for non-discrimination and equal opportunities (including gender equality);
- Provisions to strengthen diversity inclusion (e.g. equal pay for equal work, parental leave, childcare, equal opportunities for promotion and career evaluation);
- Collective dismissal principles; and
- Availability of the grievance redress mechanism.

The HR Policy should apply to the Company and its (sub)contractors and be attached to all contracts concluded in relation to the Modernisation Project or any other activity (re)financed by ADB and EBRD. Bids to include statement of compliance with HR policy. Contracts include provisions for ad hoc reviews / audits (including site visits for construction works). HR Policy should be translated into the language(s) spoken by the workforce and shared with all employees. Recruitment agencies (if any) should also follow the HR Policy if engaged by the Company for Project required labour.

Corrective action:

Start regular monitoring labour and working conditions of Project contractors' workers. It is required to:

a) Conduct a labour audit of contractor labour and worker accommodation practices against national legislation and lenders' labour and Workers' accommodation standards; identify gaps and agree a corrective action plan with contractors and document findings and actions in an Audit report. Relevant 'Worker Accommodation' related findings and actions to contribute to development of Worker Accommodation Management Plan (Section 5.6.8) which will be developed in parallel;

b) Conduct a follow up labour audit to verify the implementation of the corrective action plan;

c) Implement monthly monitoring of labour and working conditions of the Project contractors' workers. In particular, GR should pay attention to such contractors' labour issues as:

    - Labour contracts between contractor and its workers;
    - Salary payments and other relevant entitlements (for example, sick leave and holiday leave, etc.);
    - Workers accommodation services;
    - Workers health and safety;
    - Gender disaggregated analysis (e.g. salary payments);
    - Grievance management.

Corrective action:

Develop and implement a formalised workers' grievance mechanism. Methods to lodge grievances and comments should be clearly defined. The grievance mechanism should allow for anonymous grievances. In particular, it is necessary to implement anonymous and confidential channels within this grievance mechanism for reporting Gender-Based Violence and Harassment incidents in the workplace. Grievance mechanism should allow grievances to be raised in the language(s) of the workforce; and the existence and functioning of the grievance mechanism should be communicated to employees through a variety of channels. Ensure availability of the described grievance mechanism for GR contractors (including Project contractor). Contractor should regularly report to GR on grievance management.

4.6 Gender Issues

Gender issues are managed jointly by the HR Management Service, PR Department and other GR structural departments.

The total share of women in GR is 16%, whereas the share of men is 84%. Information on gender breakdown in GR is provided in the table below:

Table 4.1: GR gender breakdown by employees' category

Category	Men	Women
Direct employees - total	10 202 / 84%	2 004 / 16%
Direct employees - full-time	10 178 / 84%	1 946 / 16%
Direct employees – permanent contract	10 097 / 80%	1 977 / 20%
Direct employees – fixed-term contract	24 / 29%	58 / 71%
Disabled employees	36 / 67%	18 / 33%

The share of women in management positions is only 12%.

Table 4.2: GR gender breakdown by employees' position

Position	Men	Women
Board Member	5 / 100%	0 /0%
Senior Management	22 / 88%	3/ 12%
Management	835 / 88%	110 / 12%
Specialists	1 950 / 79%	510 / 21%
Administrative personnel	218 / 34%	432 / 66%

It should be noted that most fixed-term contracts in GR are concluded with women. According to the Company's HR specialist, this might be explained by the specific positions and projects which are relevant to fixed-term jobs. In particular, these relate to such positions as lawyers, hotline operators (seasonal jobs), teachers for social project implemented for children of GR employees, paramedics/ nurses, SAP analytics, digital archivists, media specialists.

Women also often hold administrative positions in GR. These include such positions as accountants, economists, documentation managers, HR specialists, lawyers, PR and marketing specialists, cleaning personnel, etc.

The GR Workers' Code of Ethics clearly states that discrimination is prohibited. However, GR does not have policies explicitly focused on gender equality or gender issues. No policies related to Gender-Based Violence and Harassment are in place.

Reportedly, the salaries of men and women holding similar positions in GR are equal. The salary is calculated based on Hay job evaluation method (adopted by GR) and does not consider such factor as sex or gender.

GR makes efforts to increase the small share of women in the overall number of workers by promoting engagement of female students in a Railway Transport College. According to information provided by the HR Department of the Company, the following activities were organised in 2019-2020:

- Project "Support for Gender Equality in Technical and Professional Exchange Program" in collaboration with the US organisation "World Link" (March 5, 2019). The project included provision of financial support ($500) for promoting vocation education and awareness of women on opportunities to get such education;
- Seminar on "Gender Equality in the Workplace" (September 23, 2019) with college students. The seminar was devoted to stereotypes created by employers and relevant barriers and challenges related to employment;

- Focus group on "The role of women in vocational education" (February 7, 2020) with college students;
- Focus group on "Gender stereotypes in vocational education" (July 22, 2020) with college students and teachers. The discussion was about gender stereotypes in vocational education, their reasons, and possible ways to overcome them;
- Focus group on "Domestic Violence against Women" (February 13, 2020) with college students.

Reportedly, the college regularly takes part in educational exhibitions and other events where female college students share their personal experience of studying in the college and their views on vocational education in general.

The college also makes efforts to discuss gender equality issues online:

- On November 6, 2019, edu.aris.ge published an interview with a college female student where she talks about the reason for enrolling in the college, ways to overcome gender stereotypes in vocational education, and encourages prospective students to choose the Railway Transport College[2];
- On October 11, 2020, on the occasion of International Day of the Girl the college supported an initiative of the Ministry of Education and Science of Georgia and produced a video in which a college female student shares her experience and emphasizes equal opportunities in vocational education[3].

In addition, the college profession and career planning manager conducts the following activities:

- Holding meetings with schoolgirls where he/she provides them information on vocational education in general, opportunities and importance of working in the field of rail transport, and introduces the college;
- Providing counselling and career support to prospective students and those interested in college, introducing them labour market opportunities and providing them information on the rail transport sector;
- Providing ongoing career support to active female college students, assisting them in career development.

The planned college activities to promote gender equality include:

- Producing a short film about the college female students and alumni, the experience gained during vocational education and employment, and the importance of involvement of women in the railway sector;
- Holding periodic meetings in different regions of the country in order to raise women's awareness of their opportunities in vocational education;
- Strengthening cooperation with schools to promote the railway sector and vocational education in general;
- Conducting various activities with schoolgirls. In particular, to organise their meetings with female students and alumni to share their experience and discuss questions raised. In addition, it is planned to organise open door meetings for schoolgirls to visit the potential place of future employment and to get acquainted with the real working environment and its specifics;
- For admissions of 2021, the college plans to conduct a PR campaign, which will also stress issues regarding engaging female students and increasing their number in vocational education programs in the railway sector.

However, the current share of female students in the Railway Transport College is relatively small (10%).

It should be noted that GR collects information on its customers' age, sex and disability status (this information is provided when a person purchases certain types of tickets). However, this information is not analysed with regard to understanding customers profile and development of relevant measures to promote accessibility of services for different groups.

GR makes efforts to make its services more accessible to various groups and safer. In particular, it has programmes with regard to construction of lifts, toilets and special seats for disabled persons on key

[2] Accessed at: https://edu.aris.ge/news/aq-swavlit-mxolod-diplomi-ar-dagrchebat-aucileblad-moxdeba-tqveni-dasaqmeba-sarkinigzo-transportis-koledjis-studenti.html. Accessed on 20 April 2021.

[3] Accessed at: https://fb.watch/4_ezWANsiP/. Accessed on 20 April 2021.

railway lines of the Company. However, GR does not provide escort services to vulnerable groups during their travel. The new trains are also equipped by baby changing tables.

Security personnel accompanies passengers of long-distance trains to ensure their safety. Such trains are also equipped with video surveillance systems.

Reportedly, the GR management is quite supportive with regard to initiatives of making services more accessible and safer.

Corrective action:

Develop and implement a sexual harassment policy to prevent and address any form of violence or harassment, including any form of GBVH in the workplace. Inform employees on its provisions when hiring and during relevant training.

Corrective action:

It is required to:

- Adopt an Equal Opportunities Action Plan;
- Increase share of female employees in total workforce by 5%.

Recommendations:

Implementation of a grievance mechanism for railway passengers, including confidential channels for reporting any incidents of GBVH is recommended.

It is recommended to conduct analysis of the customers' data in order to monitor accessibility of the GR services to women and vulnerable groups (for example, such analysis could help tracking the undertaken measures to make services more accessible and the actual use of train services by vulnerable groups before and after implementation of such measures).

GR makes certain activities aimed at making train services more accessible and safer for Georgian residents, in particular to women and vulnerable groups. It is recommended to develop an umbrella programme outlining the Company's approach with regard to this issue, its goals and key programmes. This will clearly demonstrate GR's commitment to making train services more accessible and safer, and will contribute to making undertaken activities clearer and more manageable. Analysis of international experience with respect to this matter will be also beneficial.

It is advisable to run consultations with representatives of women and vulnerable groups and NGOs operating in related fields to ensure priorities and concerns of such groups are clearly articulated and understood by GR.

4.7 Stakeholder Engagement and information Disclosure

The stakeholder engagement activities for the Company are managed by the PR Department. Consultations during the EIA processes (in particular, public hearings) for different projects are managed by administrations of relevant municipalities in cooperation with the HSE Service.

GR regularly publishes information on its activities in media (TV, printed and online press). Many publications also mention the modernisation project. The Company is also active in social media (Facebook, Instagram).

There is no policy or procedure at corporate level guiding stakeholder engagement activities for the Project. Information on the Project stakeholder engagement activities is provided in Section 5.6.

4.8 Grievance Redress Mechanism

The Company's PR Department is responsible for management of the grievance redress mechanism. Other GR departments (for example, HR Management Service, Legal Department) are engaged if necessary, depending on a grievance character.

The Project stakeholders have opportunity to lodge their grievances and comments by sending letters to the GR chancellery, via the "telephone hotline" and by email (relevant contacts are provided at the GR website). Reportedly, GR received up to 50 grievances in 2020. These included grievances related

to noise from people residing nearby the railroad, employment inquiries, employees' inquiries regarding medical insurance. However, resolution of received grievances is not tracked, and there is no database log for the grievances

Reportedly, GR received a few grievances from its workers in 2020. However, no details on them or the issues raised was provided to Ramboll.

GR does not track the received grievances (i.e. there is no grievance log or database) and no reporting on the grievance management is prepared.

Corrective action:

Develop and implement a community grievance mechanism for the Project applicable to affected communities and passengers. This grievance mechanism might be utilised across the Company and other projects implemented by GR. The existence and functioning of the grievance mechanism should be communicated to affected people by a variety of channels and reinforced throughout stakeholder engagement activities. It should include channels for raising anonymous and confidential grievances (including those linked to Gender Based Violence and Harassment - GBVH).

4.9 EHS Qualification and Training

EHS-MS Guidelines includes requirements for proper EHS qualification of the EHS personnel and the management and for provision of inductions and training for the Company employees. Issues related to EHS aspects of the Company operations are included in the induction program for employees depending on their work type.

The qualification and education of applicants are reviewed before the employment on interviews and by presented certificates. After the employment the required external qualification upgrade on EHS matters and regular H&S trainings are provided according to the requirements of the labour legislation.

The EHS Service monitor the necessity for external trainings and prepare the request for training to HR Management Service, and they organize the training sessions. Approximately 80% of the training budget are allocated on the annual regular basis, and 20% is used for trainings on demand.

Internal occupational health and safety (OHS) inductions and trainings are provided using the following approach:

- First induction for newcomers,
- Transfer of employee to another working place or change of works;
- Before introduction of new technological processes or techniques, before use of new devices or equipment, changes in operations;
- Regular trainings according to the schedule and trainings on demand.

Internal OHS training and inductions are conducted to the staff by HSE Service, and by heads of units if appropriate.

EHS training procedure is considered adequate.

4.10 Company response to COVID-19 pandemic

Due to COVID-19 pandemic, the Company and contractors organized their activities in accordance with the regulations of Georgia and its authorities. In order to comply with sanitary requirements, the Company has employed the following measures:

- Temperature measurements at the entrance of building;
- Disinfection barriers;
- Disinfection of offices;
- Antiseptics at the entrance and in the sanitary facilities;
- Mask wearing is required in corridors and during the meetings (people in the offices can take off the mask if stay alone);
- Information leaflets are posted on information boards in the corridors;
- HR Management Service regularly informs employees about the respective latest news.

GR has the 24-hour hot line regarding COVID-19, for infection-positive employees and people contacted with them. The Medical Service supports the above mentioned people according to Georgian government protocol in respect to COVID-19 infection.

Besides that, no specific procedures are developed.

In total, 907 persons are recorded as COVID-19-positive (including GR workers and members of their families) since the start of the COVID-19 pandemic.

Instruction talk on anti-COVID measures was given to the Consultant before the start of interviews, after the H&S induction.

In a time period from several days to a week since the site visit, 3 employees of the Company, 2 experts from Eco-Spectri and 1 Ramboll employee developed COVID-19 symptoms and were tested positive.

The Ramboll CIS team conducted PCR test 3 times: before the flight to Georgia, on the 3rd day from arrival, and in a day after arrival to Moscow. All of them are negative.

The investigations will be conducted to understand the potential anti-COVID measures failure to develop the lessons learnt and corrective actions.

Observation:

The current GR anti-COVID procedures shall be improved to accommodate more strict rules and control as Georgia experiences the COVID-19 outburst at the moment.

4.11 Climate change

Currently the national legal framework of Georgia has not been fully aligned with the requirements of EU Directives including the climate change issues.

Since 1996, Georgia has been involved in the implementation of the United Nation Framework Convention of Climate Change (UNFCCC) processes coordinated at the national level by the Ministry of Environmental Protection and Agriculture. The latest report Georgia's Third National Communication to the UNFCCC was developed in 2012-2015 including the national inventory of Greenhouse Gases (GHGs).

The organizations in Georgia are not required to report their annual greenhouse gas emissions and consequently, and there are no requirements on greenhouse gas emissions regulation.

Therefore, Georgian Railway does not report its greenhouse gas emissions. It shall be mentioned that the most GHG emissions of the Company are from indirect sources which are counted in the national inventories through the power generation (via generation companies).

It is recommended to GR to analyse its main greenhouse gas emissions sources and estimate the direct (fuel combustion) and indirect (electricity consumption) emissions as well as consider potential emission reduction measures in the nearest several years, to be prepared for the development of the national climate change related legislation.

5. ENVIRONMENTAL AND SOCIAL COMPLIANCE AUDIT

5.1 Modernization Project Site Visit Approach

The Modernization Project is described in Section 3. The Project consists of 2 major sections:

- Replacement of track and support facilities on existing line from Zestaphoni station to Kharagauli station with construction of intermediate station of Dzirula;
- Construction of bypass railway line of the length of 25.265km from Kharagauli station to Khashuri station with construction of intermediate stations of Moliti and Kvishkheti.

The site visit included the sites and facilities along the Zestaphoni- Kharagauli and Moliti-Khashuri sections. The section between Kharagauli and Moliti was not visited due to the tight timeline of the assignment.

As of April 30, 2021, according to the last Contractor's Monthly Progress Report, the overall progress of the Zestafoni-Khashuri Railway Line Modernisation Project has reached about 93.79%, with the major earthworks, blasting, tunnel construction, pile driving for bridges construction being at the completion stage with the outstanding local works for concreting, drainage channels construction, preparation for track laying, etc. which are currently ongoing. At the stage when the tunnel works will be finalised, the bridge beams will be transported through the tunnels and laid on the bridge pillars. Further, the two power substations will be completed, including new construction of the Kvishkheti power substation and renovation of the Moliti power substation, as well as the station buildings construction at the Dzirula, Moliti and Kvishkheti villages. Track laying will also be completed after the tunnels are commissioned.

The Project was subject to the national EIA process, and the main environmental and monitoring requirements and plans are set up within the EIA packages. The EIA materials also briefly cover key social impacts.

The Construction Contractor has developed an Environmental and Social Management Plan (ESMP) and a Construction HSE Management Plan (CHSEMP) based on Georgian legal requirements, EIA and contractual provisions.

During the audit, several employees of Georgian Railway (GR, the Company), China Railway 23rd Bureau Group Co. (CR23, the Construction Contactor) and ILF Consulting Ltd. (ILF, the Supervision Engineering Contractor) were interviewed. These individuals were responsible for the issues of HSE management, risk management, construction management, human resources management, land acquisition and resettlement, construction process, PR and stakeholder engagement, accommodation camp management, etc.

Besides, a set of documents were provided to Ramboll for review in Ramboll's office and onsite during the audit, namely:

- Construction contract with CR23 and technical consultant's contract with ILF Consulting;
- GR's EIA documentation, including 5 documentation packages (four of them covering all the Project route and one - consolidating the three packages developed for the Khashuri-Moliti section) and associated environmental permits issued upon the state expertise review of the EIA documentation;
- GR construction permits
- CR23 MS documentation including HSE Management Plan, environmental aspects and OHS risks assessment procedure and registers, HSE plans and procedures;
- GR Licenses for the groundwater abstraction;
- CR23 Norms of wastewater permissible discharge for the Zvare construction camp;
- CR23 Air emission sources inventory and annual reports on emissions;
- CR23 Biodiversity/ taxation studies for wood cutting, landscape epizootic monitoring surveys;
- CR23 Emerald Site Borjomi-Kharagauli impact survey;
- CR23 Soil dumping project design documentation;
- CR23 OHS training materials and records;
- CR23 OHS Risk assessments;
- ILF HSE inspection reports;
- CR23 Safety instructions;
- CR23 Safety Talk Analysis and Risk Reduction Talk (STARRT) procedure;
- CR23 Exposure assessments to physical factors;
- CR23 COVID-19 Infection Emergency Preparedness Plan;

- GR labour regulations and sample labour contracts;
- GR Workers' Code of Ethics;
- GR agreement with trade union;
- CR23 labour regulations and sample labour contract;
- Land acquisition and resettlement documents;
- Site security documentation;
- Documents on cultural heritage protection, etc.

Based on the document reviews and interviews, a number of conclusions have been made and presented below.

5.2 Environmental Impact Assessment and Permitting Requirements

The construction/reconstruction of railway and its facilities requires Environmental Impact Permit according to the p 4.1 of the Law of Georgia on Environmental Impact Permit. The investment project considers construction of new railway line sections, tunnels, bridges and other infrastructural elements. The project is subject for Environmental Impact Permit, and a full-scale EIA should be prepared in accordance with the MoE Regulations on EIA (2009).

The Project is covered by the 5 EIA packages and relevant permits. First EIA was developed in 2011 and covered all the line section to be modernised (Zestaphoni – Kharagauli – Khashuri). In 2014 and 2018 the project design underwent several alterations due to the need to change line alignment after the landslide near Zvare Village. In 2019 the EIA for Zestaphoni – Kharagauli section was developed and, the permit was obtained in 2020.

Currently, the procedure of merging of the four permits for Kharagauli-Khashuri section into one consolidated permit is ongoing. The preliminary approval has been issued to JSC Georgian Railway on 04.02.2021 for the scoping report. An EIA document is being prepared, and after its approval and a new environmental permit issuance, the mentioned 4 permits will be revoked.

Table 5.1: List of permitting documents obtained upon approval of the EIA documentation

Date of issue	Document	EIA document / section
10.07.2011	Conclusion of environmental expertise	Khashuri-Kharagauli-Zestafoni
05.03.2014	Conclusion of environmental expertise	Km 17 + 100-km 23 + 000 (Moliti-Zvare)
29.10.2014	Conclusion of environmental expertise	Sister of the 9th tunnel. Mobile change
29.11.2018	Environmental decision	Moliti - western portal of the 8th tunnel
28.02.2020	Environmental decision	Zestaphoni - Kharagauli

The national EIA provides brief information on potential social impacts of the Project and climate change/ energy efficiency aspects. The main environmental and social impacts caused by railway construction as identified in the EIA process are as follows (some of them are also covered by the Contractor's ESAP):

- Emission of odour and hazardous pollutants into the ambient air, including inorganic dust, cement, combustion products, oil hydrocarbons;
- Noise and vibration propagation
- Surface water polluting by discharging of wastewater
- Waste generation including hazardous waste and large amounts of inert rock waste
- Soil and ground pollution due to Fuel and Oil spillage
- Impact on the biodiversity, fauna disturbance, green cover deterioration, threat to endangered species.
- Impact on protected areas: Borjomi - Kharagauli National Park
- Impacts associated with land acquisition and resettlement;
- Risks associated with employment and labour relations;
- Workers' health and safety risks;
- Traffic impacts;
- Community health and safety risks;
- Physical and economical resettlement risks
- Impacts on cultural heritage.

It should be noted that in 2018 the unauthorised waste rock dumping by the Contractor was identified by the Engineering Supervisor in several locations. These dumps did not comply with the previously approved and permitted designs. The Contractor was to elaborate the detailed designs of the new disposal sites arrangement, new riverbeds, slope protective structures, to obtain an official permission. The permission for the new design was obtained and the soil disposal/remediation works continued in strict accordance with the new permitted approved designs.

5.3 The Project's Environmental and Social Management

During the Project implementation, occupational safety, health and environmental protection will be ensured by the Occupational Safety, Health and Environmental Protection Department of the Construction Contractor. The Department employs 5 individuals and consists of the following units:

- Security (incl. Health & Safety);
- Quality;
- Environmental Protection.

The activities are managed by the Head of Department under the oversight of the Construction Contractor's General Manager.

The Contractor does not have a specific unit responsible for managing social issues for the Project. No Community Liaison Officer is in place.

The Environmental and Social Management System for the Modernization Project has been developed and implemented by the Construction Contractor in line with the Georgian national and local authority laws and requirements, Contract document, FIDIC Conditions of Contract for Plant and Design-Build, EIA of the Georgian Railway Modernization Project and the following codes and standards:

- IFC General EHS Guidelines, April 2007;
- ILO-OSH 2001: Guidelines on occupational safety and health management systems;
- ISO 14001: Environmental management systems-Requirements with guidance for use;
- Applicable GOST and SNIP Standards, and EU Directives.

The Management System does not fully comply with the international standards ISO 14001 and ISO 45001 requirements and is not certified. The Contractor does not have a formal HSE Policy.

However, the key elements of the management system were implemented by the Contractor for the construction period, namely:

- Environmental and Social Management Plan (ESMP);
- Project HSE Management System – Safety Assurance System (Guidebook), including
- Construction Health and Safety and Environmental Management Plan (CHSEMP);
- Environmental and Social Monitoring Plan;
- Main EHS procedures and plans, including:
    - Project Security Plan;
    - Health and Safety Principles for Workers and Population;
    - Major Principles for Labour Recruitment;
    - Construction Transport Management Plan;
    - Organization of Construction Camps;
    - Preventing Measures for Noise and Vibration Propagation (Construction Phase);
    - Preventing Measures for Noise and Vibration Propagation (Operation Phase);
    - Soil Removal, Disposal and Storage Plan;
    - Soil Restoration and Erosion Prevention Plan;
    - Flora and Fauna Restoration and Conservation Plan;
    - Oil Spill and Emergency Response Plan;
    - Tunnel Safe Work Procedure;
    - Waste Management Plan;
    - Reimbursement Procedure for Unintended Ecological and Social Damage;
    - Response Scheme on Statements and Complaints of Company;
    - Risk Management Procedure;
    - Job Hazard Analysis Procedure;

- Internal orders and regulations;
- Training plans and programs;
- Safety instructions and procedures in line with the Georgian legislation;
- Job hazard and risk assessments /registers;
- Environmental and Exposure Monitoring reporting;
- Resettlement Action Plans.

The ESMP and incorporated management plans and procedures for the construction phase have been developed and implemented by the Construction Contractor in 2011-2012. The ESMP is quite generic, it had been likely developed for another railway construction project and was not fully adjusted to the current project conditions. At the same time, a comprehensive Construction HSE Management Plan is in place with a set of plans and procedures covering main HSSE aspects which are generally aligned with the lenders' requirements.

The management plans have not been reviewed and/or updated since development in 2011-2012. The plans do not consider any changes in the project setup, unforeseen circumstances, incidents, legal framework in the past years and project risks re-assessment.

The implementation of management plans by the Construction Contractor in practice and the review by GR are lacking. No self-monitoring and reporting to GR of the management plans implementation is carried out. Although the Construction HSE MP contains all necessary procedures, inspection checklists, monitoring plans, the Contractor fails to maintain the documentation.

HSE management plans and procedures are extensively used by the Engineering Supervisor to control on-site HSE performance.

Some of the key documents provided for review were available only in Georgian, some only in English or Chinese, which may represent a language barrier for the communication between Chinese and Georgian personnel. According to the CC representatives, the procedures are translated to the Chinese employees verbally upon request.

It is recommended that all main procedures are available in all languages used at the Project (Georgian, Chinese and English) to overcome language barrier.

Corrective actions:

- Update and improve the Contractor's ESMP and sub-plans to be responsive to changes in project setup, unforeseen events, regulatory changes and the results of monitoring.
- Conduct monthly control of the implementation of the Contractor' ESMP, including provisions of environmental and social monitoring programme

5.4 Key Contractors

GR has implemented a procedure for inclusion of EHS requirements into contracts with CCs. The Employer Requirements Annex is an integral part of the construction contract.

The construction works are performed by the Construction Contractor - Chinese Railways 23rd Burau Group Ltd. (CR23) in accordance with the Terms and Conditions of Tbilisi-Makhinjauri Main Railway Magisterial Modernization Agreement which was prepared in accordance with the Georgian legislation and FIDIC Conditions of Contract for Plant and Design Build (Yellow Book).

The Contractor's general obligations are to comply with applicable safety regulations, ensure safety of all persons entitled to be on the Project site, use reasonable efforts to maintain the Site and Works in a manner to avoid risks and hazards to these persons, including provision of fencing, lighting, security and oversight of the Works until completion and acceptance of the works. It is specified that the liability for violation of legal requirements lies on the Contractor.

In addition to the general responsibility to meet the national legal requirements, specific requirements for Safety and Security management are set up in the Employer Requirements Annex to the Contract. It contains an outline for the Construction Health and Safety and Environmental Management Plan (CHSEMP) which should be submitted by the Contractor and followed through the construction phase of the Project.

It should be mentioned that the Companies CRCC and CR23 in 2019 were subject to the World Bank Group sanctions for actions that were considered fraudulent practices as defined by World Bank Procurement Guidelines during the prequalification and bidding process for a highway construction contract[*]. The 9-month debarment was part of a settlement agreement with CRCC, CR23, and CRCC International related to this misconduct. Currently the companies have been removed from the WBG blacklist as the 9-months debarment ended, and are subject to the 24 month conditional non-debarment period when they will again be eligible to participate in World Bank-financed projects as long as they comply with their obligations under the settlement agreement. If they do not, the conditional non-debarment will convert to debarment with conditional release. Currently the companies are not on the WBG blacklist.

GR also contracted the engineering company ILF Consulting Georgia (ILF, or the Engineering Supervisor) to perform technical and engineering oversight of the construction works, including the pertinent HSE issues supervision. The Engineering Supervisor employed the Resident OHSE Engineer, Mr. Gary Astvatsaturian, who is responsible for the site inspections, reporting to GR and training support to CR23. Both contractors' (CR23 and ILF) Project teams are based in the town of Khashuri and occupy a 4-story stand-alone office building at the south-western outskirt of the town with a fenced territory and security surveillance. Good level of communication between the Construction Contactor and the Engineering Supervisor Contractor was admitted during the site visit.

5.5 Contractor's Environmental and Social Oversight

5.5.1 Inspections

During the Project construction, a multi-level system of inspections to check compliance of CC's activities with the EHS requirements have been implemented.

The Construction Contractor reportedly carries out routine HSE supervision of construction works using the checklists outlined in the CHSEMP, however these checks are not documented/reported to GR.

CR23 has contracted an external consultant to support development and implementation of HSE documentation to comply with the Georgian legal requirements. The consultant also performs job hazard and occupational risk assessments for the Project sites, ensures timely update of the risk assessments and provides HSE trainings to the CC's personnel. The trainings are delivered in accordance with the approved annual training plan. The training materials are available in Georgian and are translated to Chinese language when required.

The Engineering Supervisor ILF conducts weekly and monthly HSE inspections of the Construction Contractor operations on behalf of GR revealing and documenting inconsistencies with the applicable designs, procedures, plans and regulations, and provides reports to GR. ILF reporting is comprehensive and illustrative, it covers all HSE aspects of construction to ensure compliance with the HSE management plans and procedures and discusses the progress on corrective actions implementation. When the Construction Contractor fails to meet acceptable standards of environmental, health and safety and labour, the Supervisor issues "stop order" document to terminate the particular construction work until the non-compliance is addressed. However, the Contractor's corrective actions are not always timely implemented and tracked. In some cases, the Contractor continued using inappropriate unsafe equipment and tools (e.g. household-type electric equipment, damaged cables, hand-made tools, ladders, equipment with faulty or missing safety devices) after identification of issue by the Supervisor inspections. Special focus of GR as an employer is required to manage and control the implementation of corrective actions, especially for the "stop order" situations. As no consolidated corrective action plan is developed and maintained arising from the Engineering Supervisor observations, incidents reports, risk assessments and other inputs, the trackability of HSE findings and corrective actions is low.

[*] https://www.worldbank.org/en/news/press-release/2019/06/05/world-bank-group-debars-china-railway-construction-corporation-ltd-and-two-subsidiaries

GR HSE management reviews the ILF weekly/monthly reports, holds and attends Project Progress Meetings, provides feedback on priority issues and monitors corrective actions undertaken by the Contractor. GR Team also conducts unplanned inspections of the construction site from time to time.

Corrective action:

- Corrective action register to be developed by the Construction Contractor with support of the Technical Supervisor to consolidate and address the HSE inspections and other findings including incident reports, employee observation reports, risk assessments. The corrective action plans should include assignment of responsible employees, timeframe and tracking of corrective actions implementation. GR to review the corrective actions implementation.
- All-Project safety inspection to be carried out by the Construction Contractor with support of Technical Supervisor to identify and inventory inappropriate unsafe equipment, make-up a replacement plan and replace it with safe certified tools and equipment. GR to review the results of work equipment replacement.

5.5.2 Incident Reporting

According to the HSE Management Plan, the Construction Contractor is obliged to immediately notify GR and the Ministry of Environmental Protection and Agriculture of Georgia on any accident (fire, oil products spill, etc.) which have already caused or may potentially have significant impact on environmental or human health and safety, and on measures that are planned or already carried out in response to those accidents.

Besides, notification has to be made immediately to GR in regard to all listed accidents which could have significant impact on environment, human health and safety and the Company's reputation:

- The incident caused significant pollution;
- The incident has fatal outcomes or caused serious injuries requiring hospitalization;
- The incident was disclosed to public by media or other information sources.

Since 2019, major OHS incidents which caused serious injuries or fatalities should be reported to the Ministry of Internally Displaced Persons from the Occupied Territories, Health, Labour and Social Affairs of Georgia.

According to the GR and Construction Contractor representatives, there have been no environmental incidents recorded since the beginning of the Project construction activities.

The Contractor provided the Incident/Accident register containing brief descriptions of a total of 11 occupational incidents occurred with the Project since 2015 to 2021. Of them, 2 fatal incidents, 1 severe injury, 1 mass injury, 3 minor injuries, 2 first aid cases and 2 near misses were reported (see Table 5.2 for details on fatalities and major incidents).

Table 5.2: Fatal and major incidents during Project life

Type of incident	Date	Description and cause	Consequences
Fatal incident	2018 October 28	During slope cutting works near Zvare Village, a loaded truck was moving on a steep access road to the excavation site. The driver lost control due to a sudden fault of crankshaft and moved very fast downhill. The truck collided with one of the trucks parked at the slope bottom.	The driver of the truck died immediately in the collision. The two trucks damaged beyond repair (material loss).
Fatal incident	2019 October 6	When unloading concrete slabs in the Tunnel #9, the truck driver got into the cabin and started the engine. By accident, the gearbox was left by in reverse gear and the truck immediately started to move backwards. One of the workers standing behind the truck	Rib fractures, respiratory distress, cardiac arrest. The worker was hospitalised and died in clinic.

Type of incident	Date	Description and cause	Consequences
		managed to escape while the other stuck between the truck and the pile of concrete slabs	
Severe injury	2019 February 10	One of the workers of the Tunnel#9 decided to drive the truck loaded with water from the batching plant to the T9-E side. The worked did not have license for heavy truck driving. He lost control over the vehicle, the fast-moving truck accidentally broke the protective barrier and fell from height of approx. 5 m.	Multiple rib, skull and spinal fractures. The injured person was hospitalized and survived. After 3 months he went on disability.
Mass injury	2018 June 5	As a result of blasting of the last 3 m thick section in the Tunnel #7 (Aneula Village). Five workers of the "western" tunnel team were injured by flyrock. The incident happened due to miscommunication between the T7 teams and lack of precise information on blasting time.	Nervous shock, mild concussions. Three workers had large contusions and hematomas; one worker had his arm broken. All injured workers hospitalized with minor and major injuries.

However, not all incidents have been included in the register maintained by the Construction Contractor. Ramboll considers that it may potentially indicate that the incident reporting by the Construction Contractor disclosed to the Consultant is not fully reliable.

A fatal accident with the waste truck collision into one of cars parked for maintenance near the batching plant of the Zvare construction camp occurred on October 23rd, 2018. As a result of the collision, the truck driver was stuck in the truck cabin and died before the emergency medical staff arrival. By unknown reason, the accident was not included in the general register; the report was provided additionally by the Lenders.

According to the information published in media[5], a blasting incident occurred in the tunnel T7 on 22nd December 2018 causing injuries of the three workers. Two of the workers injured in the blasting incident suffered spinal and back injuries and had not recovered fully enough to be able to work. The information on disability of these individuals was not reflected in the Construction Contractor register.

The compensations for the fatal cases and disabilities have been a matter of dispute between the Construction Contractor and the employees or their families. According to information from GR on the truck incident, the dispute on compensation from CR23 was discussed with the family in a friendly approach, and the compensation of GEL 60,000 was offered. The family agreed with the compensation, and the dispute was solved.

For the blasting incident, the compensation offered by CR23 was decreased to GEL 7,000 ($US 2,330) and did not satisfy the injured. As of January 2019, the dispute had to be resolved by the court. Based on the information provided by GR, at the moment of the audit the case was in the first stage of the Tbilisi City Court. In line with the suggestion of the court, CRCC lawyer and the responsible person have contacted the injured individuals for friendly negotiation on compensation. The dispute is ongoing.

The status of compensations to families and disabled workers in regard to incidents listed in the Table 5.2 was not clarified.

Reportedly, the investigations are conducted for each incident in line with the CR23 Incident Investigation Procedure to analyse what caused the incident, and the corrective actions are developed.

[5] https://ifact.ge/en/georgian-workers-seek-justice-from-chinese-employers/

However not all incident report files contain full description of incidents and investigations carried out in accordance with the Procedure. Some reports contain only sketches and photos, other – more detailed descriptions and some analysis, however, all reports available for review do not contain root cause analysis. The proposed corrective actions do not take into consideration the reasons that caused the incident. The corrective actions are not consolidated in the incident register/ corrective action plan, annual action plans or any other documents where their implementation could be tracked.

Corrective actions:

- Develop a formal incident reporting procedure and incident register. This should include reporting requirements of GR, regulatory authorities, and Lenders. Official correspondence in regard to major incidents should be filed. GR to monitor the incident reports, investigations and action plans and ensure that corrective actions are implemented, and appropriate financial compensation is provided for any persons suffering injury or illness caused by Project activities.
- Corrective action register to be developed by the Construction Contractor with support of the Technical Supervisor to consolidate and address the HSE inspections and other findings including incident reports, employee observation reports, risk assessments. The corrective action plans should include assignment of responsible employees, timeframe and tracking of corrective actions implementation. GR to review the corrective actions implementation.

5.6 Project's Environmental and Social Performance

5.6.1 Site safety and environmental issues

During the site tour, the Consultant visited the construction camps in Kvishkheti, Zvare, Bazaleti and Bezhetubani and several work sites where works were either ongoing or temporarily ceased due to the national holiday.

The largest camps where the operations are ongoing are the Kvishkheti and Zvare camps (Figures 5.1, 5.2). These camps include industrial operations, such as concrete batching and manufacturing of concrete slabs and other construction materials, metal works, welding, machinery repair, warehousing operations and waste handling.

1) General view

2) Batching plant

3) Concrete shop

4) Bridge beams prepared for transportation

Figure 5.1: Kvishkheti construction camp

1) Batching plant

2) Tunnel #9 western portal

3) Machinery repair box

4) Hazardous materials storage in the warehouse

5) Construction machinery parking

6) Metal works area

Figure 5.2: Zvare construction camp

Other camps currently have only limited operations. The workers based in Bazeleti camp perform minor excavation and concreting works, some minor machinery repair.

1) Warehouse/ metal workshop

2) Vehicle parking

Figure 5.3: Bazeleti construction camp

In Bezhetubani camp all works are ceased and only three workers stay there to maintain the camp site. The batching plant is dismantled. In is anticipated that the camp will be used again during the bridge construction works nearby.

1) Dismantled batching plant area

2) Machinery parking in front of dorms

Figure 5.4: Bezhetubani construction camp

In general, the camps areas were cleaned up, waste accumulation areas allocated, household and food wastes regularly removed by the specialized municipal operator vehicles. No significant spillages of oil products were observed in the camps. No heavy dusting, smoke, odours, excessive noise were noted.

Issues in regard to housekeeping were observed, e.g. obsolete materials storage in Kvishkheti, maintenance of warehouses and metal workshop in Bazeleti, old machinery in Bezhetubani, etc. Condition of production facilities, buildings and structures is mainly poor, they appeared to be unsafe in many cases.

In addition to camps, several work sites were visited, namely in the Tunnel #9 where works were ongoing for cabling culverts and escape routes finishing, bridge construction in the Zvare Village, water diversion channel concreting near Dzirula Village, culvert construction in Lashe, excavation works in Aneula Village (see Figure 5.54), waste rock dumping near Zvare Village, wood cutting for the new road alignment near Zvare Village.

Figure 5.5: Bridge construction in Zvare camp

Figure 5.6: Piling works in Zvare Village.

Figure 5.7: Water diversion channel near Dzirula

Figure 5.8: Culvert construction in Lashe Village

Figure 5.9: Waste rock dump near Zvare

Figure 5.10: Wood cutting near Zvare

The Consultant also visited the areas for construction of the new power substation and train station in Kvishkheti, the future train station locations in Moliti and Dzirula and the old power substation in Moliti which is subject to reconstruction within the Project.

Figure 5.11: New Moliti train station location

Figure 5.12: Old Moliti power substation

Figure 5.13: New Kvishkheti train station location

Figure 5.14: New Kvishkheti substation location

Figure 5.15: New Dzirula train station location

Numerous non-compliance issues and observations were identified in regard to HSE performance of the Construction Contractor in the camps.

- Several old, partly demolished buildings are present at the construction camp in Kvishkheti. Although the buildings are marked with the signal tape, the access inside them is possible. Also, the safety of employees cannot be fully ensured in case of the accidental structures damage (Figures 5.16, 5.17)
- Fencing / guardrails at the Kvishkheti and Zvare camps are poor and missing in many hazardous areas where the height difference is over 1.5 m (Figures 5.18, 5.19)
- Use of hand-made stairs and tools was noted in Kvishkheti and Bazaleti camps (Figures 5.20, 5.21)
- Electrical safety was found to be in bad state. Hand-made switchboards with household circuit breakers, household extension cords, damaged wires, improper temporary cabling were observed in Kvishkheti and Zvare camps (Figures 5.22, 5.23). The power substation in the Kvishkheti camp is in poor condition (Figure 5.28)
- Use of hand-made lifting device for car maintenance in Zvare camp (Figure 5.24)

- Warehouse and metal workshop in Bazaleti camp are poorly maintained. The shelves are not safe, workplaces are not properly organized (Figure 5.25, 5.26)
- Welding in sunglasses at the metal works in Zvare camp (Figure 5.27)
- Piling in the middle of the Zvare Village with inadequate fencing (discussed under the Community Health and Safety section). The worker not wearing helmet (see Figures 5.52, 5.53 in the Community Health and Safety section). No safety supervisor for the workers performing work in the excavation
- No fencing provided for the excavation works in Aneula Village (see Figure 5.54 and discussion in the Community Health and Safety section)

Figure 5.16: Unsafe old buildings in Kvishkheti camp

Figure 5.17: Condition of the batching plant structures in Kvishkheti

Figure 5.18: Damaged / improper fencing in Kvishkheti camp

Figure 5.19: Missing fencing in Zvare camp

Figure 5.20: Hand-made ladders in Kvishkheti camp

Figure 5.21: Hand-made tools in Bazaleti camp

Figure 5.22: Damaged household-type extension cords

Figure 5.23: Welding post in Zvare camp

Figure 5.24: Wooden hand-made switch board

Figure 5.25: Metal workshop in the Bazaleti camp

Figure 5.26: Warehouse in the Bazaleti camp

Figure 5.27: Welding in sunglasses/ face shield off

Figure 5.28: Power substation in Kvishkheti camp

- Littering of the area behind the camp's fencing at the Zvarula riverbank was observed in Zvare camp.
- Arrangements for hazardous waste storage in Kvishkheti camp are not sufficient. Waste containers not protected from weather/ wind (Figure 5.29). Waste accumulation ground is not paved and filled with unsorted obsolete materials and wastes (Figures 5.30). Spent oil storage in the separate shed was not made accessible, but it could be observed that oil drums are stored on the unpaved ground without spill retention.
- Spent oil used for technical purposes in the metalworking shop in Kvishkheti is spilled on the unpaved ground.
- Obsolete machinery, parts and some industrial waste observed in different locations in Zvare, Bazeleti and Kvishkheti camps.
- Asbestos and PCB oil are present in the old Moliti power substation which is subject to renovation. The issue of the planned equipment dismantling and removal of these restricted substances is discussed under Hazardous Materials Handling section.

Figure 5.29: Waste collection area in Kvishkheti camp

Figure 5.30: Hazardous waste storage area in Kvishkheti camp

Figure 5.31: Asbestos slabs covering the cable channels at the old Moliti substation

Figure 5.32: PCB-containing oil in high-voltage switches of the old Moliti power substation

5.6.2 *Water supply and wastewater management*

Water Supply

Water consumption in the camps is limited to the drinking, sanitary purposes and cleaning, and for concrete batching. According to the GR, drinking water is supplied to the camps in bottles.

Groundwater/mountain mineral water is used for supply of the Zvare camp with drinking and sanitary water and for technical purposes in other camps. The Construction Contractor holds a license for groundwater abstraction and regularly monitors that the water meets the applicable standard for drinking water.

Surface water is abstracted from the river and is used for technical purposes (concrete batching) solely. The permit for surface water intake is included in the EIP.

Wastewater Discharge

No wastewater treatment facilities are installed at the construction camps except for the oil interceptors for the discharge from canteens

Liquid waste from the toilets is collected in septic tanks, regularly pumped out and removed by the municipal services provider and discharged to the municipal wastewater treatment facilities (specific locations not detailed).

Sanitary wastewater (grey water) and stormwater from the construction camps and drainage water runoff from the tunnels is discharged to the surface waterbodies. The construction corridor crosses 7 rivers and 15-20 naturally formed ravines which may be affected in process of construction and should be monitored during the project implementation.

According to the Environmental Monitoring Plan, a total of 11 monitoring points is established at the surface water bodies at the Modernization Project area. In order to assess construction works impact on surface water quality the following parameters should be measured: pH, suspended solids, COD, BOD and oil hydrocarbons (TPH).

Sanitary and storm water effluent shall be monitored at each of the construction camps. Storm water generated on construction camps areas may be polluted with suspended particles and oil hydrocarbons. Quality monitoring of sanitary wastewater includes COD, BOD, total Nitrogen, total Phosphorus and coli bacillus group microbe. The Construction Contractor did not provide the monitoring results.

Figure 5.33: Settlement reservoir for drainage water from the Tunnel#9

In 2020 the regulatory authorities identified that the drainage water discharged from Tunnel#9 and Zvare construction camp did not comply with the applicable MPCs (maximum permissible concentrations) established for the River Zvarula. The Construction Contactor had to pay the fine of GEL 15,000 (approx. USD 4,300). In order to ensure compliance, a sedimentation reservoir was constructed at the outfall from the tunnel and the permissible limits for discharge for the Zvare camp were developed in 2021. However, no monitoring results confirming that the quality of effluent from the Tunnel#9 meets the applicable standards were provided. Same issue with contaminated drainage water discharge may arise at the other tunnels and construction camps of the Project. The discharge points from the tunnels are not included in the Environmental Monitoring Program, and the drainage water is not analysed.

Corrective action:

- Identify drainage water discharge points from the tunnels to control contamination of river water during construction and include periodic wastewater sampling and analysis at these points into Environmental Monitoring Program for construction phase. Keep the monitoring records available for reporting and review by GR, while GR should maintain copies of monitoring reports. In case the quality of discharged runoff does not meet the applicable environmental standards, corrective measures to be developed and implemented.

5.6.3 Waste management

Waste management is organised by the CC in accordance with the internal Waste Management Plan (WMP) for 2020-2021 approved by GR, and the Waste Management Plan in the framework of ESMP.

The CC is responsible for managing appropriate waste collection and removal from work sites, construction camps and paying for the waste removal services. According to the WMP, construction activities generate mainly non-hazardous domestic and construction waste, which is transported offsite and disposed of by the licensed waste contractor (municipal operator) at the local landfills under service contract with the CC. Scrap metal is collected separately, purchased and recycled by third party companies. It is planned that a large amount of obsolete machinery will be generated during 2020-2021 which will be also utilised as scrap metal.

Hazardous waste currently generated at the Project is limited to spent oils, oily rags, filters, waste tires, obsolete machinery parts, empty oil drums which are removed and utilised by the licensed waste contractor (New Life Ltd).

Based on the WMP for 2020-2021, the Project will generate a limited amount of asbestos containing construction waste (total 70 kg in 2020-2021) which should be removed and further managed by the hazardous waste operator which is currently not selected as no waste contractors are available in Georgia to ensure the waste is handled appropriately. In addition, it is anticipated that asbestos and PCB containing hazardous wastes will be generated during reconstruction of the existing Moliti power substation. No program for PBC and asbestos containing materials phase-out using the safe handling techniques and waste disposal in an environmentally sound manner has been developed by GR at a corporate level, and at the Project level as well. Project-related ACM and PCB waste management issues should be managed through the relevant GR corporate procedures (discussed in Section 4.3).

During the site visit, no areas dedicated for current asbestos waste storage were observed. No comments were provided by the Project team on the current asbestos waste handling. The overall problem with asbestos waste management of Georgia Railways at the corporate level is discussed under Section 4.1.

The Contractor has allocated the areas for temporary accumulation of non-hazardous waste prior to transfer to waste contractors for disposal or recycling. The waste containers are placed on hard-paved ground; but not equipped with covers to protect from wind/precipitation.

Hazardous oily wastes are collected at the Kvisheti camp inside the storage premise. The premise is locked but it does not have hard pavement and secondary spill containment. Spent tires and obsolete machinery and parts are collected at the construction camps at the dedicated area; the storage is not well-organized, and the waste is not appropriately segregated. In Kvishkheti camp the area has hard pavement, while in Zvare and Baseleti camps these wastes are accumulated on unpaved ground. It should be noted that a progress has been achieved comparing with the situation in 2019-2020 earlier reflected in the Engineering Supervisor inspection reports

Littering with domestic and packaging waste was observed around the construction camps, especially at the Zvare camp where wastes were noted behind the facility's fence at the banks of the river.

In the future, significant amount of waste will be generated at the phase of construction camps demobilization. These wastes will include large amount of obsolete machinery, parts of demolished temporary constructions, cables, tires, debris, etc. At the moment, certain amounts of such materials are accumulated at the construction camp sites, however, they are not considered as waste. According to the CR23 and GR personnel, removal of this waste and further utilisation/disposal will be organized as part of the territory clean-up with the use of the licensed waste contactors. However, GR and the Construction Contractor do not have a clean-up strategy that would specify the types and amount of waste to be generated, measures for hazardous waste removal and disposal and the appropriate potential waste contractors selected.

<u>Corrective actions:</u>

- Improve waste management and hazardous waste management practices at the Project sites in accordance with international requirements, including the following:
  a. Hazardous waste accumulation areas at all camps should be brought in compliance with WMP and Lenders' requirements;
  b. Secondary containment should be constructed at the spent oils storage areas wherever liquid wastes are stored in volumes greater than 220 liters. The available volume of secondary containment should be at least 110 percent of the largest storage container, or 25 percent of the total storage capacity (whichever is greater);
  c. Hazardous waste storages at the construction sites should be clearly identified (labelled) and demarcated;
  d. No waste should be present outside the designated waste storage areas. Littering at the construction camp areas and surroundings with hazardous and household wastes should be strictly prohibited. Clean-up of the construction camps areas and their surroundings to be carried out;
  e. Conducting and documenting periodic inspections of waste storage areas, construction camps areas and surroundings to identify waste mismanagement findings should be undertaken by the Contractor and the Technical Supervisor.
- Update the Waste Management Plan with a waste clean-up plan for the end of construction phase to assess the amount and types of waste expected to be generated during dismantling of construction sites and define appropriate final disposal methods. Validate that the WMP is implemented during the decommissioning phase.

5.6.4 Geology and soils

During the Project significant impact has been made on the Project area soils and geological conditions with the massive intrusive techniques – blasting, drilling, piling and excavation. Large amounts of waste rocks were displaced and formed the waste rock dumps (so called "spoil grounds") occupying significant territories in the Project area.

Potential geohazards and impacts to soils were assessed in the EIA process and the appropriate designs and protective measures were selected to control and minimise the risks and impacts on geology in the ESMP framework. Expected natural and man-caused geohazards during construction works included landslides, rock falls, mudflows, riverbanks washing, groundwater infiltration, etc. and were assessed for each specific sub-section of the construction corridor. Mitigation measures were included in the design documentation.

Figure 5.34: View to the landslide area near Zvare Village

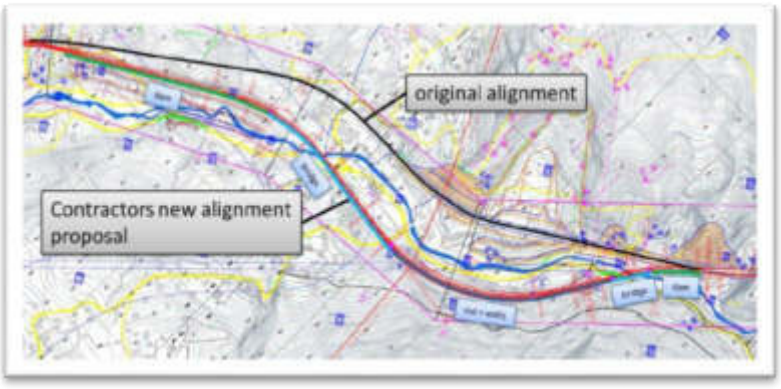


Figure 5.35: New railway route proposed after the landslide

On May 13, 2017, during construction works for the new line near Zvare Village a large-scale landslide occurred on the northern slope of the Zvarula Valley in 2 km from the village.

In 2012, after the signing of the FIDIC Yellow Book Contract (Design & Build) the Contractor carried out extensive ground investigations works including both the detailed engineering geological mapping at a scale of 1:1,000, and the execution of many exploratory boreholes. In the area of the Zvare landslide

several (no.2) exploratory boreholes were carried out. The evaluation of the detailed engineering geological mapping and the two boreholes in the area of the Zvare Landslide did not recognize the potential slope instability problem. In fact, in one borehole it was reported that the thickness of the surface loose overburden formation was of the order of only 1.4m and in the second only 5m, while the actual depth of the landslide was later determined to be a much greater order. However, the Contractor's design submittal approved was conditional indicating that should the actual geology differ from the Contractor's assumption the relative modification should have been proposed during the construction phase. Furthermore, the need for thorough detailed study to provide an adequate design and temporary works methodology to mitigate any slope instability risks is also stated in the Environmental Impact Assessment (EIA) prepared by the Contractor as part of the Large Variation Order.

Prior to the starting up of the construction works in the area of the Zvare landslide, the Engineer prepared documents pointing out the potential slope instabilities in the area. Furthermore, during the excavation stage, the Engineer has addressed to the Contractor the need for the ensure of the stabilization of the slopes located at T9W considering the conditions of the existing geology. The sliding of the materials from the slopes and the unfavorable ground conditions indicated the urgent necessity from the Contractor's side to take slope protection measures immediately modify and submit the subgrade design to the Engineer for further review.

No direct or indirect damage to community was caused.

The alignment of the new railway track was changed to the southern slope of the valley to address the new geological conditions and hazards arising from the landslide incident (see Figure 5.35). The supplementary EIA was conducted for the project change and the permit was obtained for the altered route.

Impacts on soils were defined as slope erosion, loss of topsoil and loss of topsoil properties (fertility, structure and chemical composition). Topsoil removal and conservation works were designed in compliance with the current Georgian environmental legislation and regulations to avoid these impacts and ensure topsoil restoration for the planned land remediation activities. The total of four so-called "spoil grounds" (waste rock dumps) were initially designed within the Project area, and several land plots were additionally leased from the private owners. The initial permits and lease agreements were made available.

Significant impact arises from soil displacement and landfilling in the Project area. During massive tunnelling works for the new line in 2016-2018, the Contractor did not follow the approved design of the waste rock dumps and significantly increased the dump areas in several locations without permit/authorization. The unauthorised soil dumping was identified by the Engineering Supervisor in May 2017, and an instruction to stop illegal disposal was issued by the Engineering Supervisor, however the disposal continued until the end of main tunnelling works in 2018.

The Contractor was to elaborate the detailed designs of the new disposal sites arrangement, new riverbeds and slope protective structures to obtain an official permission. The permission for the new design was obtained and the soil disposal/remediation works continued in strict accordance with the new permitted approved designs.

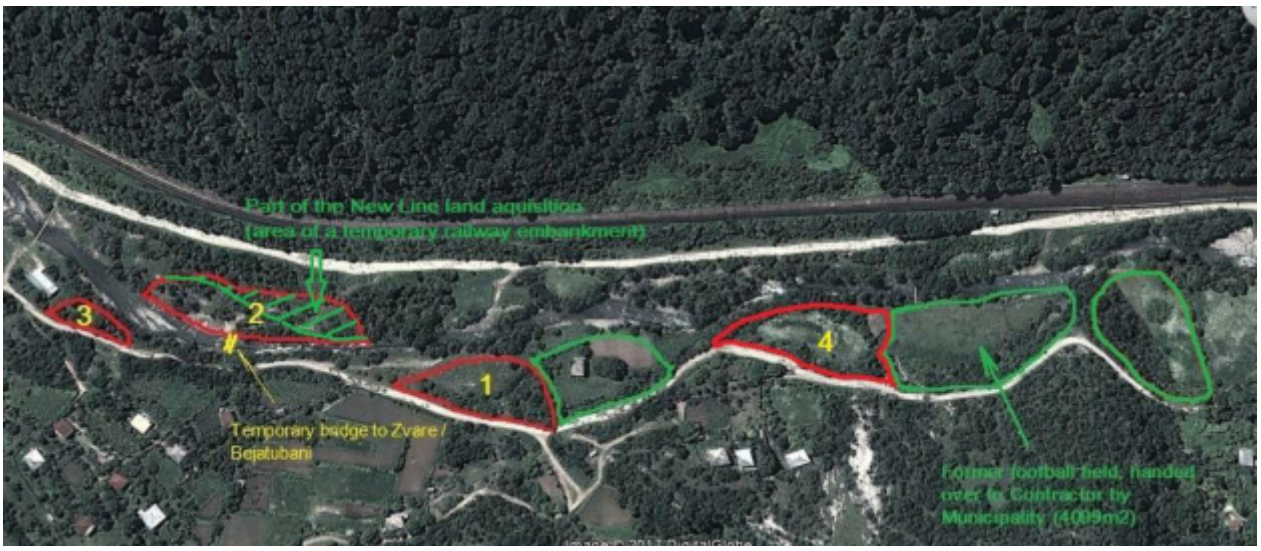


Figure 5.36: Legal and illegal spoil grounds near Aneula Village in March 2019 (Source – ILF Consulting, March 12, 2019)

Figure 5.37: Illegal soil dump sites in Bejatubani (Source – ILF Consulting, March 12, 2019)

The additional "design documentation was developed for the two legal "Spoil ground" (waste rock) dump sites:

- N1 located near the T9 area, 24 km east of the town of Kharagauli Village in the gorge of Pirnatli River, a left tributary of the Nunisi River.
- №16 located in Zestaponi, to the west from the Dzirula railway station, on the left bank of Dzirula River, on the terrace between the bottom of the left slope of the valley and the river.

The design documentation provides for impact assessment, technical solutions of dumps and topsoil storages, drawings, layouts, land reclamation plans (including technical and biological reclamation) and measures to ensure environmental, occupational and community safety during the operation of dumps sites until their reclamation.

The Land Remediation Plan was developed for the whole construction route identifying all areas where the earthworks and construction activities impacted the topsoil, i.e. construction camps, slope cuttings, temporary access roads, tunnel portals, waste rock dumps, culverts and other features construction areas. The Plan contain main actions to be implemented for each particular area, the completion deadlines and the current status. The Plan is regularly updated.

Technical and environmental oversight of instructive works, soil dumps, potential and developing geological impacts and geohazards, and is performed by the Engineering Supervisor. The team is highly qualified to identify all present inconsistencies of the Contractor's activities with the design and procedures and associated risks and hazards, to prioritise and to develop recommendations on how to address identified issues. It can be concluded that the geological risks and impacts on soils are generally controlled with a direction that more focus is required from GR to speed up corrective actions implementation (see Section 5.5.1).

5.6.5 *Hazardous materials management*

The Project does not utilise large quantities of hazardous chemical, these are limited to maintenance oils and lubricants, solvents, paints, fuels and compressed gases (welding gases and propane). Explosive materials were used during blasting operations.

No aboveground or underground storage tanks are present at the Project sites. In Kvishkheti camp some 1 m^3 IBCs were observed with the plasticizer agent for concrete batching which is an inert material. According to the ILF inspection reports, in 2020 the Contractor had stored a stock of diesel fuel onsite in several 20 m^3 cistern tanks without spill containment arrangements as required by the Oil Spill Response Procedure. However, this issue was resolved as the Contractor decided to remove fuel ASTs and implement the mobile fuel tanker which is loaded at the external third-party petrol storage base and further used for fuelling vehicles in field and in the camps. The mobile fuelling tanker is based in Bazaleti Camp (Figure 5.38). The tanker is not equipped with a portable retention tray and a spill kit for collection of accidental spills during machinery fuelling.

Figure 5.38: Mobile fuelling tank in the Bazaleti camp

Hazardous materials are stored in the camps in several specially designated locations. No incompatible chemicals storage was observed. The oil storage at the Zvare camp is a locked ventilated outdoor shed with concrete floor where oil is kept in 200 l drums (8 drums and several smaller canisters). No secondary containment arrangements (trays or sumps) and spill collection kits were provided in the storage. Minor oil staining was noticed on the floor.

Storage of paints and propane cylinders is equipped inside the materials warehouse in the Zvare camp. No spill retention was provided for paints. A caged area is intended for propane storage. It is locked, protected from sunlight and well ventilated. Oxygen cylinders were observed in a storage shed near the welding post. The cylinders were not properly attached, protective caps were missing. In Bazaleti camp the storage of propane cylinders was organizes outdoors under a shed with some equipment. The cylinders were not attached, and the area is easily accessible by workers.

Legacy asbestos and PCB oil issues related to the old Moliti power substation reconstruction are described in the Waste Management Section. At the moment, asbestos materials at the substation include asbestos-concrete slabs covering cable channels and thermal insulation inside some electrical equipment. PCB transformer oil is contained in high voltage switches and transformers; the equipment is operated and well-maintained. No signs of transformer oil leakage or potential for asbestos dusting were observed during the Moliti substation inspection. However, no procedures are currently present in the Project's CEMP for handling and storage of ACM and PCB contaminated materials during the refurbishment works.

Explosives are currently not used anymore as blasting works are completed. There are no blasting works expected at the present time. The explosives storage warehouse is located near Bezhatubani Village (Figure 5.39) and, according to GR, is fully secured. The explosives storage warehouse is still in use. There is a stock of explosives kept in temporary storage which is permitted by the governmental authority.

Figure 5.39: Location of the Project's explosives storage

It is recommended that the Contractor identifies the improper hazardous materials handling and storage practices and brings them in compliance with the Project HSE procedures and standards. Oil storage and onsite vehicle fuelling should comply with the Project's Oil Spill Response Plan requirements. Secondary containment and spill collection equipment should be provided for the liquid chemicals stored and used at the construction camps and sites. Gas cylinder handling should meet the safety instructions for welders.

Corrective action:

- Incorporate best practice ACM and PCB contaminated materials handling and storage procedures into the CEMP prior to the commencement of refurbishment works at the existing Moliti and Zestafoni substations.

5.6.6 Biodiversity

A Detailed Biological Environment Study of the Territories within the Project Influence was conducted in 2012. The report includes the results of a desktop review and botanical field surveys, with an objective to study the vegetation and fauna inhabiting the 29-km long and 200-m wide corridor of the Modernization Project, and specifically the identification of the sensitive habitats and communities within the corridor. The study was completed for a 29-km section of the railway from the eastern portal of Tunnel #9 (Kvishkheti Village in the Khashuri Municipality) to the western portal of the Tunnel #1

(Khemagali Village in the Khagarauli Municipality) covering both the existing and the new line sections in the area where the most expressed impact from the project activities had been anticipated. The study did not include the existing railway corridor from Khemagali to Zestaponi due to the limited project activities there, and the area east of Kvishkheti where the new line is constructed in a transformed agricultural landscape. According to the report, the background man-caused impact in the Project area is quite intense. A total of 8 endemic and protected flora species were identified for the territory, and a total of 10 Red List wildlife species were identified for the Project area of influence. The study was performed in accordance with the nationally recognised methodology and did not include critical habitats assessment. Based on the survey, potential risks to biodiversity were identified and mitigation measures were developed.

A part of the area excluded from the forestry territories for the Project purposes (25 458 m^2) coincides with the internationally recognised and approved Borjomi-Kharagauli 2 Emerald Network site (GE0000056) which status is equivalent to a Natura 2000 site regulated by Council of Europe Directive 43 / EC (92). The potentially affected area is located above Tunnel #9 (along the new line) and was recognised as part of the Emerald Network after the completion of the tunnelling works.

In 2017, at the initiative of the Government of Georgia, three areas of the country distinguished by biodiversity were officially announced as Emerald Network sites, with the Borjomi-Kharagauli-2 site among them. The initiative is a part of the Association Agreement between Georgia and the European Union, according to which the country is obliged to ensure the establishment and operation of the Emerald Network by 2020. Borjomi-Kharagauli-2 appeared as an officially recognized Emerald Network site in November 2018.

Following the governmental instruction, in 2019 GR prepared an evaluation document of the Emerald Network to assess impacts which might be caused by the construction of the new line to the protected area. The Impact Assessment's conclusion was that the Project impact to the protected site was negligible. However, the assessment was based only on desktop studies and a reconnaissance site visit by the biodiversity experts. A monitoring survey was not performed to confirm the assessment findings. The Impact Assessment Report was approved by the Biodiversity Department of the Ministry of Environmental Protection and Agriculture (MEPA) of Georgia. The findings of this Impact Assessment were not discussed with the National Park / Emerald Network's Site management.

The fact that a portion of the Modernisation Project is located in the vicinity of the Emerald Network candidate site Surami 3 (GE0000050) was referenced in the national Environmental Impact Assessment Report prepared by Gamma Consulting Ltd on behalf of the JSC Georgian Railway for the Changes in the Zestafoni – Kharagauli Section of the Tbilisi-Makhinjauri Railway Modernization Project dated 2019. According to the EIA report, with a minimum distance of 2.6 km from the Modernisation Project corridor to the Emerald Network candidate site (on the land surface) there is no risk of impact on the biological environment of the protected area.

No additional assessments or monitoring have been executed in regard to the impact on the protected areas in the EIA process. No special mitigation measures were proposed in the EIA in regard to the protected areas other than to follow the Construction Management Plans developed at the earlier stages of the project implementation.

According to the GR representatives, the administration of the protected areas which is the part of the MEPA of Georgia has reviewed the scoping document for the EIA and provided remarks regarding to protected area and its mitigation actions. The document was also reviewed by the interested departments of the MEPA in line with their internal procedure: forestry departments, natural resources department, geological department, protected areas department.

In accordance with the MEPA Scoping Conclusion #7 dated 10/02/2021, the findings of the EIA undergone the public hearings on July 31, 2020 in Zvare Village with the participation of the Minister of Environmental Protection and Agriculture of Georgia, representatives of GR, representatives of the municipal administration and the local community of Kharagauli. The Emerald Network site management did not take part in the hearings. The munities of meetings of public hearings, including participants list and outcomes were not provided to the Consultant.

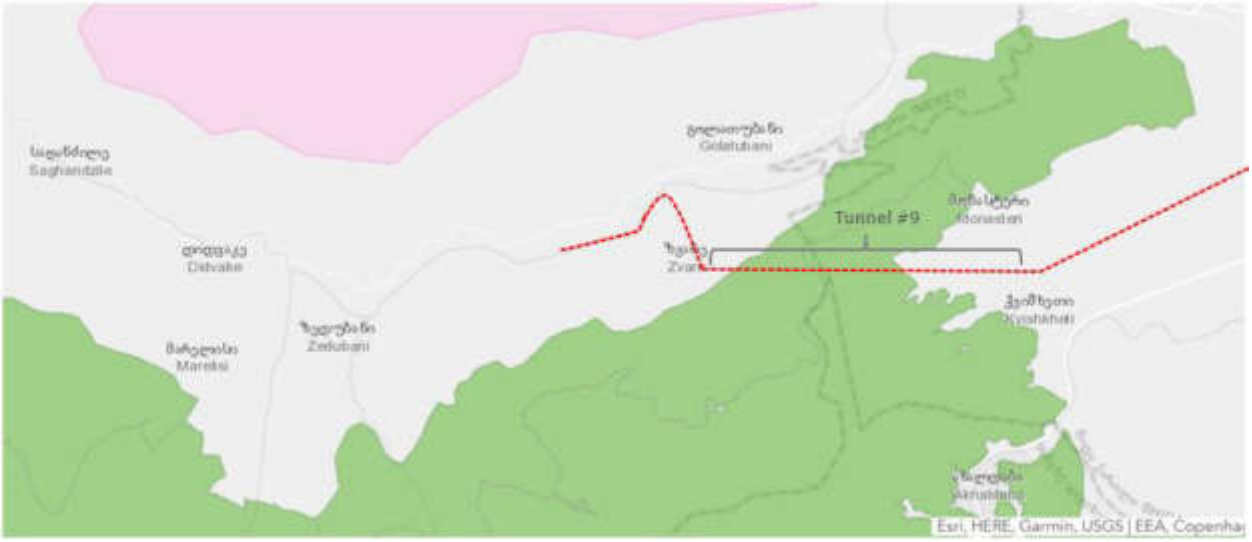


Figure 5.40: Scheme of the Borjomi-Kharagauli-2 Emerald Network site

According to Georgian Forest Code (2000), "usable State Forestry resort and green areas, floodplain forests and subalpine forest belts are granted special protection regime". Each forestry territory in the Project corridor belongs to this category and, following regulatory requirements, negative impact on biodiversity and forests must be minimised. In cases when it not feasible to avoid environmental losses, the damage compensation must be carried out in accordance with the Eco-Compensation Program. In particular, the assessment of impact on forest ecosystems must be conducted and damage compensation should be calculated to ensure adequate mitigation and eco-compensation measures aimed on restoration of forest habitats equivalent to the loses.

In accordance with legal requirements, before the planned wood cutting activities the Contractor carries out inventories of Red List species at the cutting area and taxation surveys intended for identification of particular trees to be cut. Approval from the State Forestry service should be obtained prior to cutting. Damage compensation is calculated and paid accordingly. Wood cuttings should be accounted, properly stored and handed over to the Forestry. Currently wood cutting is carried out near the Dzirula station and along the new route alignment near Zvare Village. The Contractor generally meets the legal procedure, and the compliance is regularly checked by the Engineering Supervisor. However, the Project cannot confirm that the paid damage compensations are used for equivalent trees plantation, thus "no net loss" principle cannot be fully ensured.

The gradual biological remediation of the soil dump sites, backfilled areas, banks, former construction camps is planned after the technical remediation completion for these artificial features created by the Project (discussed under Section 5.6.4. Geology and soils). The remediation should not affect the species structure and ecosystem characteristics by the introduction of alien species, especially invasive ones. During the Project operation phase the spreading of invasive alien species also may be possible with the increased trains and passenger traffic.

Corrective actions.

- Organize monitoring of potential impacts (biodiversity, noise, vibration, background lights, etc.) on the Borjomi-Kharagauli-2 Emerald Network site area and surroundings for 3-years period to confirm that the impact is negligible (as considered in the Impact Assessment for the Borjomi-Kharagauli-2 Emerald Network site conducted in 2019). In case the monitoring identifies negligible impact of project activities on the protected area characteristics, the monitoring program can be closed. Such monitoring shall allow identifying any Critical Habitats (CH) and Priority Biodiversity Features (PBF) within the Project area of influence.
- In case the monitoring at the protected area and surroundings during 1 to 3-years period identifies that the Project activities affect CH/PBF (impact on the Emerald site is not expected since there is no direct footprint with the protected area), this finding should trigger development and implementation of the Biodiversity Conservation Plan to mitigate impacts on CH/PBF. The Biodiversity Conservation Plan can be based on recommendations developed within the Impact Assessment for the Borjomi-Kharagauli-2 Emerald Network site in 2019, if relevant.

- Identify appropriate mitigation measures in addition to monetary compensations to ensure "no net loss" of priority biodiversity features during tree cutting activities in the natural habitats along the construction corridor that affect the number of Red List tree species in the Project area. Assess the need for compensatory forest plantations to balance loss of Red List species in the Project area. Include sufficient appropriate plantation amount in the Land Remediation Plan where possible.
- Use of native species only for biological land remediation and landscaping after construction completion. Update the Land Remediation Plan with the requirement to use native species. Confirm that the biological remediation was completed using native species.
- Organize periodic monitoring of the invasive alien species spreading along the new line railroad corridor in the framework of the Modernization Project (re)financed by EBRD, during the operation phase. Monitoring to be performed annually in May-June. A procedure for removing/cutting and removal of invasive alien species identified by monitoring should be developed and implemented (the use of chemicals shall be avoided).
- Organise consultation with the protected area (Emerald Network site) management to discuss the assessment of impacts on the protected area and how these impacts are mitigated.

5.6.7 Environmental and social monitoring

The Construction Contractor performs self-monitoring of its current operation according to the Environment and Social Monitoring Plan. The environmental monitoring scheme is prepared in accordance with requirements of Georgian environmental legal framework requirements.

According to the scheme environmental monitoring is performed via systematic observations on ambient air, soil, noise and vibration propagation, surface and ground waters' conditions at the railway route as well as at the area of its influence. Main objectives of the monitoring are to:

- Reduce hazardous pollutants' emission into ambient air and surface waters;
- Enhance technical safety and reduce accident risk;
- Ensure proper environmental and working conditions at working area;
- Improve background environmental conditions of the railway route neighbouring areas.

Considering all the above-mentioned, main tasks of the environmental monitoring are to:

- Ensure that Railway by-pass construction process is in full compliance with environmental requirements;
- Control and assess environmental risks and possible adverse environmental impacts;
- Assess effectiveness of the environmental measures planned and performed and identify corrections as needed;
- Establish permanent environmental control system and generalize collected environmental data;
- Collaborate with regional environmental monitoring system;
- Ensure credibility and accessibility of the information concerning environmental conditions of the constructing railway by-pass line;

Laboratory analysis considered by monitoring and instrumental measurements have to be undertaken by the licensed entity on the contractual basis. The following impacts be monitored:

- Impacts to be mitigated;
- Impacts causing temporary or constant social problems;

During construction, the continuous monitoring should be organized for:

- Ambient Air Quality (combustion products, dust, oil products)
- Discharging water quality of the construction camps and units;
- Surface and ground water quality;
- Noise and Vibration Propagation;
- Used materials and chemical substances management;
- Waste management;
- Technical security and occupational conditions;
- Inhabitants Safety Conditions;
- Personnel Health.

The Program specifies the list of monitoring parameters, schedule of sampling, sampling points and applicable standards. The Program is based on the national environmental standards and does not consider international standards /threshold values (i.e. IFC, EU requirements or good industry practice).

Air emissions sources were subject to inventory completed by the Construction Contractor in 2020. All emissions from the stationary sources are regularly monitored and reported to authorities annually, as well submitted to the Supervisor Engineer and GR.

The noise and vibration impacts are currently not so pronounced due to the major completion of the blasting and drilling works. Although outlined in the Environmental Monitoring Program, the noise and vibration levels monitoring in the camps and residential areas is not performed.

Groundwater/ mountain mineral water quality is monitored in order to comply with the license requirements, and drinking water standards, as it is used for the potable water supply of the Zvare camp.

River water monitoring and sampling and analysis of the effluent at the discharge points is included in the Program with identification of the monitoring points. Wastewater sampling is specifically required for the control of the water runoff from the Tunnel #9 and Zvare construction camp in accordance with the regulatory notification for uncontrolled wastewater discharge to the Zvarula River. The measurements for Zvare camp were provided for review, while the other reports were not made available.

Geological impacts and processes are continuously monitored by the Construction Contractor and especially supervised by the Engineering Supervisor in order to minimise activation of adverse geological processes which may be potentially triggered by the construction works and other operations of the Construction Contractor (e.g. soil dumping) and may in turn affect the Project implementation.

Soil displacement works, including waste rock dumps ("spoil grounds"), topsoil storage areas and land remediation areas are regularly controlled by the Engineering Supervisor in order to comply with the Soil Displacement and Land Remediation Plans and designs.

Biodiversity monitoring includes regular landscape epizootic surveys. No monitoring is organized to assess and control impacts of the Project activities to the protected area Emerald Site of the Borjomi-Khagarauli-2 National Park (discussed under the Biodiversity Section).

Land acquisition, physical and economic displacement activities are managed by GR only (the Project contractor is not involved). No formal monitoring of these activities is conducted – see Section 5.6.10 for more detail.

The document Health and Safety Principles for Workers and Population has been developed for the Project. In particular, it has a section on "Measures to Reduce Health and Safety Risk for Population", which outlines certain measures with regard to reduction of safety risks. However, there is no evidence that provisions of this document are observed, and no monitoring according to this document's provisions is being made – see Section 5.6.9 for more detail.

Corrective actions:

- Identify environmental standards applicable to the Project activities, in addition to Georgian law and update the Project's Environmental Monitoring Plan. Note that in case of different standards, the most stringent criteria should apply.
- Conduct monthly control of the implementation of the Contractor' ESMP, including provisions of environmental and social monitoring programme.

5.6.8 Labour and working conditions

During the peak of the Project construction the number of contractor's workers was approximately 700 persons. However, by the moment of the site visit it employed approximately 200 persons.

Contractor has the following key documents regulating labour relations with its workers:

- Labour contract;
- Human Resources Management Provisions for Georgian Projects;
- Management Regulations (which mostly describe employees' obligations).

Contractors' workers are informed on provisions of these documents during hiring process (both Labour contract and Management Regulations are signed by a worker). The Labour contract mostly provides

information on workers' obligations (in particular, it is stated that in case of need a worker may be temporarily assigned to undertake other works, not defined by the job description/contract), as well as remuneration. In addition, the document Major Principles for Labour Recruitment is developed for the Project, covering relevant issues (including details of a labour contracts). However, the contractors' personnel was not informed on this document during interview, and it's Ramboll's understanding that the contractor does not apply to this document during the recruitment process.

Though contractor has certain procedures on labour and working conditions of its workers and labour contracts are in place, relevant information regarding hours of work and rest, overtime arrangements and overtime compensation, benefits (such as leave for illness, maternity/paternity or holiday), etc. is not clearly provided to workers. Relevant improvements are required.

Grievance redress mechanism for workers

According to information provided during interview with representatives of the Project contractor, contractors' workers might lodge grievances directly to their manager and via a comment box located on site. However, Ramboll considers that there is lack of grievance boxes on site and in the accommodation camps. The received grievances are not tracked, and no information on them was provided to Ramboll.

It should be noted that according to information provided in open sources, there were grievances of contractors' workers related to the contractor's performance in Georgia (including contractors' works on other projects). The workers complained that the contractor does not observe the schedule of work and rest hours, does not provide sick leave or extra days off, does not provide proper clothing and PPE.

Corrective action:

It is required to develop and implement a workers' grievance mechanism. The grievance mechanism should allow for anonymous grievances. In particular, it is necessary to implement anonymous and confidential channels within this grievance mechanism for reporting Gender-Based Violence and Harassment incidents in the workplace. Opportunity to raise grievances in the language(s) of the workforce should be provided. The existence and functioning of the grievance mechanism should be communicated to employees through a variety of channels. It is required to ensure availability of the described grievance mechanism for GR contractors (including Project contractor). Contractor should regularly report to GR on grievance management.

Labour relations' monitoring

GR does not monitor whether labour and working conditions related to the Project contractor's workers are in line with the national requirements and international standards. Information on labour relations' monitoring is provided in Section 4.5.

Workers' accommodation

Though GR has relevant provisions with respect to workers accommodation during business trips, there are no policies or procedures covering workers accommodation in camps. GR does not monitor accommodation services provided by the Project contractor to its workers.

The contractor has developed the plan regulating workers accommodation issues – "Organisation of Construction Camps". However, this plan was provided to Ramboll after the site visit - the contractors' personnel interviewed by Ramboll during the site visit was not informed on this plan or its provisions. The plan covers issues regarding the selection of locations for construction camps, key environmental requirements for organisation of camps, maintenance of accommodation facilities, monitoring, etc. Some provisions of the plan are clearly not observed – for example, those related to connection of toilets to sewerage system or arrangement of bio-toilets, or availability of a nurses at medical stations. The plan does not provide a checklist for monitoring of the accommodation services' provision. No evidence of contractors' monitoring activities with regard to actual provision of the accommodation services has been provided to Ramboll.

It should be noted that to a certain extent monitoring of the accommodation services provided in camps is conducted by the ILF – covering, for example, fire safety issues, conditions of sanitary facilities (no specific list of issues covered by the ILF with regard to provision of accommodation services is in place).

There are four accommodation camps for the Project (named by location):

- Kvishkheti;
- Zvare;
- Bazaleti;
- Bezhatubani.

All the camps are operated by the Project contractor and were observed by Ramboll.

The camp in Bezhatubani was not used by the moment of the site visit. Only one security worker was residing in the camp to prevent accommodation facilities against theft.

Figure 5.41: Accommodation camps in Zvare (left) and Bazaleti (right)

All the observed camps were in very poor condition. The facilities were not kept clean and the good standards of hygiene were not maintained. Reportedly, not more than three persons reside in the same room. This was confirmed during the visual observation of the accommodation camps.

Figure 5.42: Rooms in accommodation camps in Zvare (left) and Kvishkheti (right)

Sanitary facilities (toilets and shower rooms) are separate for men and women, though these are not located within the same buildings. The toilet facilities are not heated. The doors to the shower rooms might not have doorhandles – in some camps nails are hammered in instead of the doorhandles or hangers.

Figure 5.43: Toilet and the way to the toilet with a pit (not barriered) in Zvare camp

The laundry facilities (washing machines) might be provided right in the shower room. Neither the separate drying/airing areas nor the separate storage for boots or personal protection equipment are provided.

Figure 5.44: Cooking facilities in Zvare (left) and canteen/ cooking area in Bazaleti (right)

Good standards of hygiene in canteen/dining halls and cooking facilities are not maintained. The canteens are not kept in a clean and sanitary condition.

There are no leisure or sport facilities in the accommodation camp. Only one camp provided a room for leisure purposes, though Ramboll considers the conditions of the leisure room inadequate.

Each camp has a first aid room. No medical personnel are available. Contractor uses local health service provider ambulance services if a worker needs medical assistance. Reportedly, it takes 30-40 minutes for an ambulance to arrive to any Project site or accommodation camp.

Figure 5.45: First Aid Rooms in accommodation camps in Zvare (left) and Bazaleti (right)

The conditions of accommodation services provided to workers in certain cases were not safe. For example, stairs could not have the necessary handrails, unsafe steps were organised for workers, pits might be present on the way to sanitary facilities (Figures 5.46).

Figure 5.46: Unsafe stairs with no handrail in Zvare accommodation camp

The issue of fire safety is also relevant to the camps. In particular, the gas cylinders should not be placed inside the cooking premise, electrical appliances (for ex., washing machines) should not be placed in shower rooms, electrical wire was located next to the stove pipe, etc.

Many stray dogs were observed in the camps.

No evidence of functioning of the grievance mechanism for workers was available during observation of the camps.

Generally, Ramboll considers that the accommodation facilities do not allow workers to reside and rest properly. The accommodation services provided are not in line with the EBRD and IFC requirements and in certain cases are unsafe for the workers.

Corrective action:

Develop and implement a Worker Accommodation Management Plan that will include, at a minimum: the need for worker accommodation; types; standards; impacts on local communities; management and monitoring arrangements. The plan should be consistent with the EBRD and IFC Guidance Note "Workers Accommodation: Processes and Standards".

It is required to conduct an audit of contractor labour and worker accommodation practices, as well as follow up audit (Section 4.5). The results of the audits will be reflected in the Worker Accommodation Management Plan.

Relevant improvements of the living conditions should be made.

5.6.9 Community health, safety and security

The Project EIA materials provide brief and high-level indication of community health and safety risks, stating that warning signs should be established near construction sites, access of unauthorised persons to construction areas must be prohibited, safety rules during transport operations should be observed, etc.

The document Health and Safety Principles for Workers and Population has been developed for the Project. In particular, it has a section on "Measures to Reduce Health and Safety Risk for Population", which outlines certain measures with regard to reduction of safety risks. For example, these include installation of warning signs around the perimeter of construction areas, regulation of traffic by trained regulators at the crossing points, measures of spreading contagious diseases, elaboration of code of conduct for workers. However, there is no evidence that provisions of this document are observed (for example, contractors' personnel did not name this document describing procedures regulating the community health and safety issues, no code of conduct is developed, and no monitoring and reporting according to this document's provisions is made).

Community safety during construction works

Major part of the construction works has been already completed. As part of the site visit Ramboll observed several construction sites located close to residential areas – in particular, construction sites in Zvare and in Aneula. In addition, sites of further construction works have been also observed – in Kvishkheti and Moliti.

Figure 5.47: Construction site and school in Zvare

Figure 5.48: Construction site (not properly fenced), school and residential houses in Zvare

Figure 5.49: Construction site in Aneula

According to the Project contractor representative, a worker responsible for safety issues is always present on site during the construction works. In addition, a watchman is present on site at night (primarily to prevent theft). According to contractor's Security Regulations, non-construction personnel, children and other people are not allowed to access construction sites.

No cases when local residents were injured were reported. CC stated that no grievance with regard to this issue have been raised. However, Ramboll had no opportunity to discuss these issues with the local residents during the site visit to confirm this.

Though access to some of the observed construction sites was prevented by warning tapes, these were not installed at every site and, where installed, did not cover the whole site perimeter. The construction site in Zvare located nearby the local school and residential areas was not properly fenced to prevent access and potential injury of local residents (including children). It is required to use more comprehensive measures to prevent unauthorised access to construction sites in the communities (especially, in close proximity to such facilities as schools, etc.): properly established warning tapes/ protection fence around the perimeter of the construction site, barriers or fences at the key entrances, signs warning communities on the construction works, etc.

It should be noted that the issue of community safety will be also relevant to the planned construction works for Kvishkheti substation as it is located in proximity to the cultivated agricultural lands and relevant structures. No land acquisition is anticipated, as well as no restrictions to land use. However, this should be confirmed during the monitoring process described in the Community Health, Safety and Security Plan (see below).

Community health and safety during the Project operation

At certain sections of the Project its linear facilities will cross the communities and/or will be located nearby residential houses. The presence of the linear facilities and relevant train movements might pose certain danger to local residents and cattle in case these are not properly fenced. In addition, impacts on local residents associated with noise and lighting might be anticipated during the Project operation.

Figure 5.50: The entrance to Tunnel #9 in Kvishkheti, nearby residential houses and cattle

Figure 5.51: The area of the future bridge in Zvare and nearby residential houses

The Project EIA materials describe the following measures to mitigate potential noise impacts and the relevant disturbance of the local residents: installation of noise barriers, planting of soundproofing barriers (trees) and, if necessary, arrangement of noise protection windows. These measures are elaborated as part of the EIA materials. According to the EIA materials, at the initial stage of operation of the new railway, it will be necessary to carry out actual measurements of noise levels and to take appropriate preventive measures according to the results of such measurements. These measurements shall be included into Environmental and Social Monitoring Programme for the operation phase based on the EIA monitoring provisions. Sampling and measurements will be provided by external certified laboratory.

It should be also noted that installation of noise barriers might be also used for preventing access of local residents and cattle to the railroad.

Traffic

The Project traffic impacts are briefly covered by the Project EIA materials (for the construction stage only). The materials state that traffic movements on public roads should be avoided as much as possible, damaged roads should be restored, communities should be informed on the schedule of construction works, movement of certain vehicles should be accompanied by flagman, grievance mechanism should be provided.

The brief Construction Transport Management Plan has been developed for the Project, which has certain provisions on methods for avoiding traffic accidents, general provisions on organisation of transportation, etc. However, there is no evidence that provisions of this document are observed (for example, contractors' personnel did not name this document describing procedures regulating traffic issues, no monitoring and reporting according to this document's provisions is made).

By the moment of the site visit the Project traffic was not intense as major part of the construction works has been already completed and major part of the construction materials has been delivered.

Relevant training materials for drivers engaged by the Project contractor are developed and were provided to Ramboll. Reportedly, the following traffic safety measures are implemented for the Project:

- A flagman is put on site if excavation works are conducted near the railway line or when the Project equipment is crossing main public roads;
- Local residents are informed when public roads are temporarily closed due to the Project traffic movements;
- Traffic signs are installed at the points when the Project traffic accesses public roads.

However, during the site visit it was observed that the contractors' equipment was moving along the public road in Zvare with no flagman or accompanying personnel. This road is also used by local residents and is located nearby the school in the named community.

Reportedly, there were no car accidents involving other road users during the last two years.

Security personnel

The Project contractor engages the following types of security personnel:

- State security police – for guarding the main office premise in Khashuri. The state security personnel are armed;
- Contractor's security personnel – for guarding Project accommodation camps and construction sites. The contractor's security personnel are not armed.

The contractor has developed the Project Security Plan and Security Regulations. The latter specify requirements to the security workers: consumption of alcohol is prohibited, security personnel should be well dressed and polite, etc. Only authorized personnel and transport vehicles are allowed to access the Project sites. In case of incident, security personnel should immediately inform its manager and if necessary, call the police. The Security Regulations also specify penalties for security personnel in case of improper behaviour. Reportedly, there were several cases of theft during contractor's work on the Project. According to CC no grievances with respect to behaviour of security personnel have been reported.

Corrective action: Development of Community Health, Safety and Security Plan for both construction and operation stages is necessary to ensure that relevant risks are properly defined and managed. The plan might build on the existing plan Health and Safety Principles for Workers and Population, which is not considered effective or actively applied for the Project. At the construction stage the plan should cover issues related to conducting construction works in vicinity of residential areas (including delineation of work area boundaries, security issues and interactions), movements of Project equipment and traffic on public roads, communication practices between communities and workers (and availability of workers' code of conduct), behaviour of security personnel and grievance management. At the operation stage the plan should cover issues related to communities' health and safety (related to noise impacts, risks related to access of local residents and cattle to the railroad, railway crossings), grievance management, etc. Relevant monitoring should be conducted and reporting should be prepared.

In particular, it is required to use more comprehensive measures to prevent unauthorised access to construction sites in the communities: properly established warning tapes/ protection fences around the perimeter of the construction site, barriers or fences at the key entrances, signs warning communities on the construction works, etc.

When the Project equipment uses public roads, flagman or accompanying personnel should be present.

Corrective action: In line with EBRD's requirements, GR is required to develop and implement a code of conduct for Project workers to regulate workers behaviour. This should also include the prohibition of GBVH in local communities. Provide induction training on the code of conduct for all employees and contractors. Require all employees and contractors to sign the code of conduct.

5.6.10 Land acquisition and resettlement

Georgian Railways acquired 238 private land plots for the Project. Since the affected persons did not have the right to refuse land acquisition (GR had opportunity to resort to expropriation process), the Project land acquisition activities are considered as involuntary resettlement. Most of the acquired private land plots were owned by individuals and only one by an organisation. These included 86 agricultural land plots. The resettlement (physical displacement) activities of the Company affected residents of 28 houses. Reportedly, the resettlement process was initiated by GR only for the Project – no other resettlement activities were conducted by the Company.

GR initiated the expropriation process for 11 land plots, including three with residential houses (in total the expropriation process affected eight land owners). Negotiated settlements were used for the other 227 land plots (however, expropriation process would have been initiated by GR upon the failure of negotiation).

Four Resettlement Action Plans were developed by independent consultant for different sections of the Project to manage the resettlement process. The RAPs were developed according to the Georgian requirements (no requirements of the international financial institutions were referenced). The documents cover description of relevant impacts and legal framework, baseline socio-economic characteristics of affected households, consultations, implementation schedule, provisions on monitoring and reporting.

There is no Resettlement Policy or any other document specifying the land acquisition and resettlement process. However, the Company uses the same standard procedure for land acquisition and resettlement processes. It includes:

- Identification of land plots to be acquired;
- Evaluation of land plots and structures (conducted by the national certified bureau – LEPL Levan Samkharauli National Forensics Bureau; GR has no opportunity to choose the organisation for the evaluation activities). The compensation was calculated as the market value of assets (see below);
- Sending offer to land owner (the letter is brought by GR representative; consultations with affected land owners are conducted).
  When the Project affected informal land users, GR assisted them with official registration of land plots and then conducted land acquisition process according to the described procedure;
- If land owner agrees with the proposed compensation (most frequent case), he/she concludes agreement with GR;
- If land owner disagrees with the Company's offer, GR sends additional offer warning on potential expropriation (the amount of compensation is the same as defined in the first offer);
- If land owner still disagrees with the offer, GR initiates expropriation process by sending request to the Ministry of Economics and Sustainable Development of Georgia, which in its turn issues an order on granting the right of expropriation for public needs to GR;
- GR initiates a court process, and based on the court judgement transfers money to the land owners' account and officially registers the land plot as owned by the Company.

Reportedly, the expropriation process can take up to two years.

Although the RAPs were developed, no entitlement matrix was developed and provided to the affected people. GR did not propose any other options to compensate the acquired land plots and houses but the cash payment (for example, no land-for-land or other type of compensation was offered). The basis for calculating the compensation was the market value. The compensation included compensation for land,

structures, vegetation and compensation for vulnerability status (see below). The compensation included the depreciation factor. The registration costs were covered by GR.

The RAPs state that those affected persons that were officially registered as having vulnerability status were provided with assistance of 315 GEL for 3 months. These groups include people having income below the national poverty line, women, disabled and elderly persons that have no family support. No other measures with respect to vulnerable groups were provided.

In case of physical displacement, GR provided additional 'moral compensation' which accounted for 30% of the amount defined by the certified bureau. It should be noted that 'moral compensation' was provided only to persons who accepted GR's offers.

The compensation provided is considered adequate and sufficient enough for purchasing alternative land plot and/or house. This was confirmed by three resettled persons in Zvare, Aneula and Dzirula during interviews conducted with them by Ramboll. The interviewees said that they are satisfied with the compensation paid and showed Ramboll representatives the new house or the design documentation of the house to be constructed.

Figure 5.52: The new house of a resettled family in Dzirula (construction works are in process)

Though the RAPs state that livelihood restoration should be part of the resettlement process, these activities are not detailed. The Company also did not assist resettled persons with choosing a place for relocation, choosing design project of a new house, etc. However, GR allowed the owners of resettled houses to take anything they consider necessary from their old houses (for example, windows, construction materials, etc.). As noted above, when the Project affected informal land users, GR assisted them with official registration of land plots.

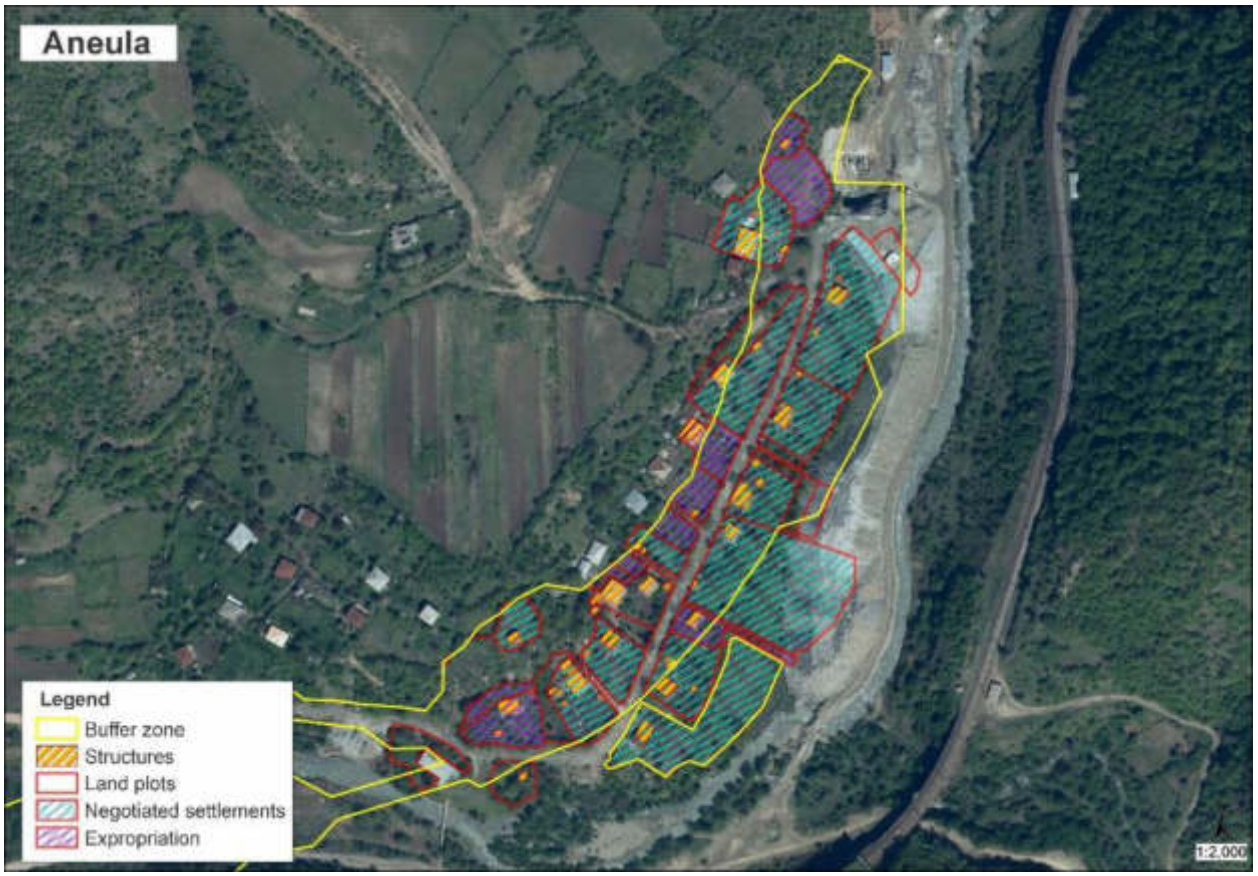


Figure 5.53: Land acquisition and resettlement in Aneula

All the owners of all the land plots that rejected the GR offers reside in Aneula community. As noted above, the expropriation process was initiated for 11 land plots, including three with residential houses (affecting eight land owners). During the site visit Ramboll conducted interviews with four land owners which refused the GR offer. The reasons for the refusal were as follows:

- Owner 1 (of a land plot with a house to be acquired for the Project) requested the Company to acquire another land plot behind his house, which does not fall within the buffer zone;
- Owners 2 and 3 requested GR to acquire their houses even they do not fall within the buffer zone and the Company intends to acquire only part of their land plots;
- Owner 4 (of a land plot with a house to be entirely acquired for the Project) is not satisfied with the amount of the proposed compensation.

The expropriation process is still in ongoing. The owners of the houses to be expropriated still reside in Aneula. If a person rejects to leave the property after decision of the court is issued, GR will resort to police to assist in addressing this however, no forced evictions have taken place to date.

As noted above, consultations with affected land owners (sometimes involving their neighbours) were conducted by GR. The Company's representative delivered the compensation offers in person, running consultations with the affected communities. Reportedly, the affected persons were in touch with GR's representative during the resettlement process and adequate communication was maintained.

No targeted consultations with vulnerable groups were performed.

In addition, according to the RAPs, consultations were to be held with affected persons during the RAPs' implementation process. RAPs were to be available in the relevant offices of the district councils and at the community level.

The following steps were to be provided to ensure ongoing consultation:

- The final RAPs were to be available to the public;
- GR was to hold public meetings and provide information to the communities on the progress of the resettlement process and relevant activities;
- GR was to hold public meetings to provide information to the public on compensation issues.

It is Ramboll's understanding that these consultations were not conducted – except of interactions between GR representative and affected communities described above. The RAPs were primarily used by the Company internally to manage the process.

Apart from land acquisition and resettlement/expropriation process described above, the remaining land acquisition activities include acquisition of 20 land plots, including one house in Zvare. The acquisition process is already ongoing. Reportedly, no cases of expropriation are envisaged as all the land owners accepted the Company's offer.

Generally, Ramboll considers the land acquisition and resettlement activities were transparent and conducted in line with the national legislative requirements. The compensation provided was adequate and sufficient for purchasing replacement land plots and houses. The expropriation activities are also conducted in a transparent manner in line with the national requirements. However, the conducted land acquisition and resettlement activities are not fully compliant with the Lenders' standards: entitlement matrix was not developed and communicated to affected persons, livelihood restoration activities were not described in RAPs and were limited, regular monitoring of the resettlement process was also not conducted, the assistance to vulnerable groups was limited, etc.

Corrective actions:

In line with EBRD's financing requirements, GR is required to conduct a gap assessment of resettlement activities for elements of the modernisation project being financed by EBRD, and develop a Corrective Action Plan (CAP) if necessary.

The gap assessment and CAP (if required) will focus on resettlement activities and expropriation cases. It will also cover land acquisition and livelihood restoration activities (relevant sampling will be made to ensure these activities are analysed in sufficient manner).

The CAP will describe all activities to reach compliance with PR 5 in the form of a time-bound plan, including a budget, implementation arrangements, allocation of roles and responsibilities, and implementation schedule. The gap assessment will put a particular focus on an evaluation of compensation rates, complaints and outstanding court cases.

Conducting a completion audit of the expropriation process is necessary to ensure that all actions in the Corrective Action Plan have been properly implemented.

In line with ADB's requirements regarding involuntary resettlement, while it is understood that ADB's financing is for activities that have not involved land acquisition or involuntary displacement, GR is required to incorporate into its project EHS&S systems screening and categorization procedures for ongoing and pending project activities to ensure any unintended or unanticipated involuntary resettlement are identified and, if identified, appropriately managed in line with ADB SPS SR2:

- Results of involuntary resettlement screening and categorization are to be submitted to ADB for review prior to management plan (resettlement plan (RP) or livelihoods restoration plan (LRP)) development;
- If screening results in Category B, Resettlement Plan / Livelihoods Restoration Plan to be developed by GR and submitted to ADB for review prior to implementation.

Upon the resolution of outstanding court cases, communicate to lenders the protocol for resettling any households who refuse the court settlements.

Lenders should be timely informed on all cases of forced evictions (if any).

5.6.11 Cultural heritage

The Project potential impacts on cultural heritage are assessed as part of the national EIA process. Thus, the EIA materials identify one cultural heritage object in vicinity of the Project facilities – Moliti Train Station (1890). The status of the cultural heritage object was given to the Moliti Train Station in 2017. In order to avoid potential impact on the object, GR changed the Project design to relocate the new line and bypass the Moliti Train Station (the GR order on relocation was provided to Ramboll).

Since construction of Moliti station for the Project will be conducted in relative proximity to the cultural heritage object (no construction activities have been conducted to date), the EIA materials determine that applicable safety measures will be undertaken during the construction works. In particular, construction area will be fenced and vibration works will be limited. The EIA materials also state that if any cultural heritage object is found, the construction works should be stopped. Relevant experts (archaeologists) will be invited to examine the find and, upon their recommendation, the Company will assist in either conservation of the site or its relocation. The works might be resumed after obtaining the relevant permit.

Figure 5.54: Moliti Train Station (cultural heritage object)

Corrective action: Though most part of the construction works has been already completed it is required to develop a Chance Finds Procedure to ensure safety of potential chance finds. Workers conducting earthworks should be informed on the Chance Finds Procedure during the EHS induction training. Relevant brochures with clear workers actions in case of a chance find and contact details of a manager to be informed should be provided to excavator drivers. The brochure might also include photographs of examples of cultural heritage objects that can be potentially found in the area (good practice).

5.6.12 Stakeholder engagement

No Stakeholder Engagement Plan has been developed for the Project.

Certain stakeholder engagement activities with respect to the Project were conducted by the municipalities as part of the national EIA process:

Table 5.3: Stakeholder engagement activities as part of the EIA process

EIA – Document Name	Date of Public Hearings	Location	Number of Participants	Summary of Issues Raised
Railway Modernization Project (Khashuri-Kharagauli) (Permission №08 – 10.06.2011)	14.04.2011	Office of Zestafoni Municipality	11	Issues related to protected areas, impacts on mineral water well, noise during construction phase
Variation of T9 West (Permission №54 – 29.10.2014)	29.11.2013	Office of Kharagauli Municipality	No data	Mineral water issues, issues related to tree cut works, information regarding red book species
Variation of Zvare km20+760-km23+060 (Decision №7 – 04.02.2021)	31.07.2020	Zvare community, the yard of a kindergarten	28-35	Impact on Zvare's mineral waters, changes in buffer zone, provision of information on blasting works

In addition, consultations with affected land owners (sometimes involving their neighbours) were conducted by GR during the resettlement process. Reportedly, local residents were primarily interested whether their houses will fall within the buffer zone and therefore whether they will be resettled or not.

Reportedly, the Project contractor generally maintains good relationships with local communities. According to contractor's representative, this was achieved by:

- Hiring local staff;
- Engaging local residents as security personnel (to communicate with communities);
- Providing support to local municipalities (clothes and food for poor people);
- Improving local roads under communities' request (contractor is also constructing a bridge for Zvare community);
- Holding events with local residents (celebrations, etc.).

Corrective action: Development and implementation of the Stakeholder Engagement Plan (SEP) is required for the Project. The document should identify affected communities and other stakeholders, contain information on completed stakeholder engagement and provide a plan for further information disclosure and consultation activities (focusing on the affected communities). At a minimum, the SEP should be disclosed in the affected communities and on the GR website. The SEP should be updated on annual basis.

Contractors to be made aware of provisions and requirements of the SEP.

Community Grievance Mechanism

According to information provided by representative of the Project contractor, the most frequently used method for lodging a grievance or comment by residents of affected communities is the verbal communication with one of the local workers employed for the Project. The received grievances related to cracks in houses due to blasting operations (reportedly, the contractor paid relevant compensation or provided assistance with repair works), proposals of local residents to sell their land plots, etc. The received grievances are not tracked, and there are no formal communication channels to lodge a grievance or comment for local residents.

Corrective action:

It is required to develop and implement a community grievance mechanism applicable to affected communities and passengers. The existence and functioning of the grievance mechanism should be

communicated to affected people by a variety of channels and reinforced throughout stakeholder engagement activities. The community grievance mechanism will include channels for raising anonymous and confidential grievances (including those linked to Gender Based Violence and Harassment - GBVH).

5.6.13 Anti-COVID measures on site

The Project contractor has developed the Emergency COVID-19 Infection Preparedness Plan of Actions on Site. The plan covers such the following issues:

- Transportation of employees.
  Transport vehicles should be disinfected on daily basis, the number of passengers travelling in one vehicle should be limited, etc.;
- Preventive measures prior to work.
  A person having such symptoms as cough, fever, etc. is not allowed to work. In this case, the safety officer asks such person several question according to the questionnaire (the questionnaire is annexed to the preparedness plan and includes standard questions on symptoms, if a person contacted COVID-19-positive people, etc.). The employee should visit a doctor and is not allowed to work until relevant confirmation is provided by a doctor.

  A person should undergo self-isolation period of 14 days if he/she contacted an infected person.
- Preventive measures at the working area.
  If employee has COVID-19 symptoms, he/she should inform a manager immediately. Disinfection should be carried out every 10 days in public areas such as canteens, etc. Antiseptics should be provided. Ventilation of working areas is required. Information on COVID-19 preventive measures should be posted at observable locations. Pre-work inductions should be conducted.
- Employee equipment.
  Every employee should wear a mask/respirator, gloves and googles.
- Work process.
  2-meter distance should be observed. Workers should wear protective equipment, wash hands, etc.
- Control measures.
  A questionnaire should be completed by all employees at the beginning of each week. Temperature should be checked before starting work, health and safety officer should control observance of this preparedness plan.
- Actions in case of detection of COVID-19 infection.
  If infection is detected, relevant information should be immediately provided to all parties. Infected person should be isolated. Relevant governmental agencies should be informed accordingly. Persons contacting the infected employee should undergo self-isolation period. The work area should be disinfected.

The plan is followed and considered adequate.

6. ENVIRONMENTAL AND SOCIAL ACTION PLAN

An Environmental and Social Action Plan (ESAP) is prepared to address the identified gaps between GR's existing ESMS and the Lenders requirements.

The ESAP specifies time-bound measures, responsibilities and resources to achieve and maintain compliance with the Lenders' requirements within a reasonable time frame.

The ESAP is prepared as a separate document for the convenience of discussion and approval.

APPENDIX 1
AUDIT VISIT AGENDA

Georgian Railways: ESMS and EHS Project audit programme, 07-09.04.2021 (as planed before travelling)

Time (Tbilisi)	Activity				Participants / Comments
07.04.2021 (Wednesday) – head office					
8.45-9.10	*Hotel Mariott Cortyard – Georgian Railways head office*				*Please provide transport*
9.10-9.30	HSE introduction (if any) Anti-COVID-19 approach and measures employed in the Company and on site				*As required*
9.30-10.45	Introductory meeting: Ramboll's introduction and the audit objectives; Acquaintance with the Georgian Railways' key staff introduction (relevant for the project management, construction and contractors' management, environmental, occupational health and safety, risk management, community health and safety, HR/labour conditions and workers accommodation management, trade union, stakeholder engagement, land acquisition and resettlement); The Project current status and works on sites, involvement of contractors; The audit 3-day programme confirmation or changes as appropriate (including site visits on days 2 and 3); Questionnaire and information submission (status).				Georgian Railways Ramboll Eco-Spectri
10.45-11.15	Construction project management: key procedures, contractor control, permitting approach				Construction unit / Project office Ramboll & Eco-Spectri
Environmental team			**Social team**		
11.30-12.15	Tender procedure, selection criteria and contracting Environmental and social, health and safety requirements to contractors and suppliers.	Tender committee / Contract unit EZ, PS Eco-Spectri	11.15-12.30	Land acquisition approach, procedure, status. Project-related information on land acquisition, livelihood restoration and resettlement. Compensations provided Cultural heritage Indigenous peoples (if applicable)	IG, EZ (first part) Eco-Spectri
12.15-12.30	Organisational structure (chart) and responsibilities (as listed above)	HR EZ, PS Eco-Spectri			
12.30-13.30	Lunch				Subject to GR's working schedule

Time (Tbilisi)	Activity				Participants / Comments
13.30-15.00	Environmental permitting Key procedures, aspects identification and assessment; instructions Environmental and health and safety (EHS) planning, performance analysis, reporting. EHS training EHS monitoring and control External inspections	Environmental protection unit Elena Zaika (EZ) Polina Surikova (PS) Eco-Spectri	13.30-14.30	HR management, labour and working conditions, contracts with employees; collective agreement: wages and benefits Gender issues Grievance mechanism Medical insurance and facilities use Training procedure Local recruitment Social development programme	HR department Ilya Gulakov (IG)
			14.30-15.00	Workers accommodation (employees and contractors)	IG Eco-Spectri
15.00-16.30	Occupational health and safety management: Key procedures, risks and hazards identification and assessment Planning, monitoring and control, performance analysis, reporting Tool-box talks; training PPE use External inspections	H&S department EZ, PS Eco-Spectri	15.00-16.00	Public relations, consultations, information disclosure, stakeholder engagement External grievance management (local communities, NGOs, etc.) Interactions with customers	PR department IG Eco-Spectri
			16.00-16.30	Trade union Internal grievance mechanism (related t Company's and contractors' workers) Gender issues	Trade union representative IG Eco-Spectri
16.30-17.00	PCB and asbestos material current use	Energy department PS, EZ Eco-Spectri	16.30-17.00	Security arrangements and procedures on facilities	Security department IG Eco-Spectri
17.00-17.30	Emergency response, community safety				Safety department Ramboll Eco-Spectri
17.30-18.00	Summary on preliminary corporate ESMS audit findings				GR management Ramboll Eco-Spectri

Time (Tbilisi)	Activity	Participants/ comments
08.04.2021 (Thursday) – site visit, day 1		
7.00	*Departure from Hotel Marriott Cortyard*	*Please provide transport*
7.00-9.00	*Transfer to Khashuri (~ 2h)*	*Please provide transport*
9.00-11.00	Interviews with the local GR and construction contractor management: OHS practices: accident reporting, trainings, procedures and instructions, hazardous works, facility maintenance, working conditions, personal protective equipment, etc. Environmental performance: water supply, wastewater discharge, hazardous materials and waste management, PCB management, monitoring	Local GR management - Engineer, HSE Manager CC management PS, Eco-Spectri
	Labour relations, workers accommodation Resettlement issues Community health, safety and security Grievance management	Local GR – HR, security CC management IG, Eco-Spectri
11.00-11.30	*Transfer to Kvishketi*	*Please provide transport*
11.30–13.00	Kvishketi: substation, station building, railway section and tunnel entry, CC accommodation camp, resettlement. Observation and interviews with the local GR and CC personnel. HSE operational and construction practices.	Local GR management CC management PS, Eco-Spectri
	Observation and interviews with the local CC personnel and community representatives. Kvishkheti accommodation camp management, labour relations Kvishkheti resettlement site: resettled and new households. Community health, safety and security Grievance management	CC accommodation manager Community representatives IG, Eco-Spectri
13.00-14.00	*Lunch*	*in Kvishketi*
14.00–15.00	*Transfer to Bezhatubani*	*Please provide transport*
15.00-15.30	Bezhatubani accommodation camp	CC accommodation manager IG, PS, Eco-Spectri
15.30–16.00	*Transfer to Zvare*	*Please provide transport*
16.00-16.30	Zvare: Zvare resettlement site: ongoing resettlement/ Zvare accommodation camp *(if possible)*	Community representatives IG, PS, Eco-Spectri
16.30-16.45	*Transfer to Moliti*	*Please provide transport*

Time (Tbilisi)	Activity	Participants/ comments
16.45–18.15	Moliti: substation, station building, railway section and bridge, resettlement. Observation and interviews with the local GR and CC personnel. HSE operational and construction practices.	Local GR management (HR, Engineer, HSE) CC management IG, PS, Eco-Spectri
	Observation and interviews with the local CC personnel and community representatives. Moliti resettlement site: resettled and new households. Community health, safety and security.	Community representatives IG, Eco-Spectri
18.15–19.45	*Transfer to hotel in Borjomi, ~1.5 h)*	*Please provide transport*
-	*PCR test*	-
09.04.2021 (Friday) – site visit, day 2		
8.30-10.30	*Transfer from Borjomi to Zestafoni (~2 h)*	*Please provide transport*
10.30–12.30	Railway section construction from Zestafoni to Dzirula. Progress overview. Observation of the construction areas (station infrastructure, railway line, bridge), accommodation camp and surrounding areas near Dzirula station. OHS practices: preparatory works, earthworks, foundation and building construction, machinery use and service, hazardous works, working conditions, personal protective equipment, etc. Environmental performance: water and wastewater, hazardous materials and waste management, soil disposal and handling, biodiversity, etc. Labour relations and workers accommodation. Dzirula resettlement site: resettled and new households.	*Please provide transport* CC management Community representatives IG, PS, Eco-Spectri
12.30-13.30	Lunch	Dzirula / Zestafoni,
13.30–15.30	Railway section construction from Dzirula to Kharagauli. Progress overview. HSE performance Labour relations and workers accommodation. Lashe resettlement site: resettled and new households. Bazaleti accommodation camp	*Please provide transport* CC Management IG, PS, Eco-Spectri
15.30-16.30	Railway section not funded by lenders (high level overview of construction works) – if possible to reach in reasonable time	*Please provide transport* IG, PS
16.30–20.00	*Transfer from Kharagauli to Tbilisi (~3.5 h)*	*Please provide transport*

APPENDIX 2
ADB AND EBRD REQUIREMENTS COMPLIANCE TABLE

This section provides a description of the general approach and methodology of the Gap Analysis conducted to determine the Project's compliance with Applicable Requirements.

A2.1 DESCRIPTION OF THE GENERAL APPROACH

To determine the Project's compliance with Applicable Requirements, the Consultant has performed the following:

- Analysed available Project design documentation and other information about the Project;
- Reviewed the adequacy of the Project embedded measures to prevent and/or reduce potential environmental and social impacts of the Project (.
- Significance of the identified Project gaps has been assessed in the range of "high — medium — low".
- For each risk identified recommendations have been made on further assessment, additional mitigation measures, and their monitoring.
- The results of the evaluation and recommendations are presented in this Report in the form of the Compliance Summary Table, which indicates the degree of the Project's conformity to the relevant EBRD Performance Requirements, ADB policies/requirements and, if necessary, actions required to achieve compliance.
- The Consultant has also identified the need for further research and development of additional documentation to achieve compliance with Applicable Requirements.

In addition, the Consultant has reviewed the Project's documentation compliance with the Directive 2011/92/EU of the European Parliament and of the Council on the assessment of the effects of certain public and private projects on the environment.

A2.2 COMPLIANCE SUMMARY TABLE

The Compliance Summary provides a systematic review of project compliance with the EBRD Environmental and Social Policy ADB policies as defined through the applicable Performance Requirements (PRs).

Between 2 and 10 indicators are identified for each of the applicable PRs.

For all PRs (Indicators with whole number references) provide a summary of overall compliance with the PR. Justification for any derogation from a PR is summarised and supported by documents referenced.

For each indicator within a PR was carried out in several stages:

1. **Decide whether the indicator is applicable.** For Category A projects the starting point is that all indicators are applicable unless the project has no significant aspects relevant to the indicator (i.e. no risks), in which case the indicator should be scored "NA".
2. **Decide whether an opinion is possible.** If not (for example if the indicator will apply, but it is too early in the project) score as "NOP". Where lack of opinion represents a material omission to the review refer to where this is addressed in the report and summarise any recommendations.
3. **Score the indicator as follows and provide brief justification**.

EC	**Exceeding Compliance:** The project has gone beyond the expectations of EBRD's PR requirements and ADB policies . EBRD should be able to use projects rated EC as a role model for positive Environmental and Social effects.
FC	**Fully Compliant:** The project is fully in compliance with EBRD and ADB requirements, and EU and local environmental, health and safety policies and guidelines.
PC	**Partial Compliance:** The project is not in full compliance with EBRD's requirements, but has systems, processes or mitigation measure in place which are working towards addressing the deficiencies.
MN	**Material Non-compliance:** The project is not in material compliance with EBRD's requirements, and the systems, processes and mitigation measures in place are not working towards addressing the deficiencies.

4. **Comments/Issues:** Provide a brief commentary on the relevance of this requirement for the project and an explanation of the chosen score.
5. **Actions Required:** Where applicable, briefly describe any actions required by the client to achieve full compliance with each requirement. Where a relevant action is included in the ESAP for this project, please provide a reference to the ESAP.
6. **PR Summary:** Provide an overall summary against the PR.

A2.3 RISK SIGNIFICANCE DETERMINATION

The table below illustrates the approach to be taken for risk significance determination (Table A2.1).

In risk significance determination ERM considers both the level of residual (post-approval) *risk* and whether the measures sufficiently address deficiencies (i.e. the level of *confidence* that the Project can successfully bring the issue into compliance with the requirements.

Table A2.1: Risk significance determination

Risk \ Confidence	High	Medium	Low
High	PC	MN	MN
Medium	PC	PC	MN
Low	FC	PC	PC

A2.4 IDENTIFIED GAPS

This Section contains the results of the Gap Analysis which was undertaken to evaluate compliance of the Project with the Applicable Requirements.

Gaps and noncompliance identified during this analysis are reported below in the Compliance Summary Table.

KPI Ref.	Performance Requirement	Score	Comments/ Issues	Actions Required	ESAP Ref.
1	**Assessment and Management of Environmental and Social Impacts and Issues**				
	Summary: The Company developed Environmental and Health & Safety Management (EHS-MS) based on the environmental and occupational health and safety (OHS) legislation of Georgia, ISO 14001, ISO 45001 and ILO-OSH 2001. The EHS-MS Guidelines describes the management system approach, including area of application, responsibilities, several procedures, EHS training and audits, environmental inspections. The EHS-MS area of application covers railway operations and management of assets; it involves all GR employees. Labour or social issues are not covered by EHS-MS Guidelines and managed separately. The overall understanding is that the OHS management is more advanced than environmental management components, there is a lack of key procedures such as environmental aspects identification and management for ongoing operations. The environmental impacts for planned operations are identified in the framework of EIA and managed in respect to the monitoring and management arrangements identified in this documentation. The EHS reporting and performance assessment is focused on OHS indicators. The environmental components in the EHS-MS need to be enhanced. The social management shall be integrated in the ESMS management system of the Company. Overall score for the Project's compliance with PR1 is 'PC' (Partial Compliance).				
1.1	Environmental and Social Assessment	**FC**	The Project EIA materials provide brief and high-level information on baseline environmental and socio-economic characteristics of the Project area, brief analysis of impacts associated with air, surface water bodies and soils impacts, land acquisition, employment, community and workers' health and safety, traffic impacts. Impacts on tangible cultural heritage are also considered.	No actions required	n/a
1.2	Environmental and Social Management Systems	**PC**	ESHS management of the current operations is described in the Environmental and Health & Safety Management (EHS-MS) Guidelines. EHS-MS was developed in GR in the last two years in addition to Quality Management System and based on the environmental and occupational health and safety (OHS) legislation of Georgia, ISO 45001 and ILO-OSH 2001. The existing EHS-MS has not been certified to the date. The EHS-MS Guidelines describes the management system approach, including area of application, responsibilities, several procedures, EHS training and audits, environmental inspections. The EHS-MS area of application covers railway operations and management of assets; it involves all GR employees. Labour or social issues are not covered by EHS-MS Guidelines and managed separately.	Update the existing Environmental Management System (EMS) and Occupational Health and Safety Management System (OHSMS), in particular adjust the following components: • Introduction of ADB SPS, EBRD ESP and other relevant requirements; • Improvement of EHS planning procedure based on actual and achievable key performance indicators; • Develop and introduce screening and categorization tool for ADB financed activities; • Procedure of identification and management of environmental aspects;	1.1

KPI Ref.	Performance Requirement	Score	Comments/ Issues	Actions Required	ESAP Ref.
			The overall understanding is that the OHS management is more advanced than environmental management components, there is a lack of key procedures such as environmental aspects identification and management (and there is no register of aspects developed and managed at the corporate level). The EHS reporting and performance assessment is focused on OHS indicators. The environmental components in the EHS-MS need to be enhanced. The social management shall be integrated in the ESMS management system of the Company.	• Procedure of identification of OHS hazards and risks management	
1.3	Environmental and Social Policy[6]	**PC**	The EHS Policy is a part of EHS-MS Guidelines and includes EHS principles to mitigate environmental impacts and decrease health and safety risks. The EHS Policy does not include the contractors and their operations. Labour or social issues are not covered by EHS Policy	EHS Policy shall be updated: • to include the commitment to identify, assess and manage the environmental and social impacts in accordance with its significance; • to cover contractors and their operations in the framework of the Company projects.	1.1
1.4	Environmental and Social Management Plan	**PC**	The EHS planning procedure at the corporate level exists but shall be improved via setting objectives in respect to the EHS performance not activities conducted, i.e. emission decrease or incidents rates reduction.	Improve EHS planning procedure based on actual and achievable key performance indicators (see above)	1.1
		PC	At the Modernization Project level, good ESMP as well as a number or specific MPs are developed (such as Waste Management Plan) in 2012, however, not updated since then and not implemented at full. A comprehensive Construction HSE Management Plan is in place with a set of plans and procedures covering main HSSE aspects which are generally aligned with the lenders' requirements. The management plans have not been reviewed and/or updated since development in 2011-2012. The plans do not consider any changes in the project setup, unforeseen circumstances, incidents, legal framework in the past years and project risks re-assessment.	• Update and improve the Contractor's ESMP and sub-plans to be responsive to changes in project setup, unforeseen events, regulatory changes and the results of monitoring. • Conduct monthly control of the implementation of the Contractor' ESMP, including provisions of environmental and social monitoring programme	3.1

[6] Where the project represents a substantial extension to the client activities, confirm that Policy and supporting management systems and plans are appropriate for the new activities.

KPI Ref.	Performance Requirement	Score	Comments/ Issues	Actions Required	ESAP Ref.
			The implementation of management plans by the Construction Contractor in practice and the review by GR are lacking. No self-monitoring and reporting to GR of the management plans implementation is carried out. Although the Construction HSE MP contains all necessary procedures, inspection checklists, monitoring plans, the Contractor fails to maintain the documentation and to ensure compliance with the management plans at the construction sites.		
1.5	Organisational Capacity and Commitment	**PC**	GR employs qualified personnel responsible for managing various aspects of GR operation, including EHS issues, HR, PR, land acquisition and other specialists. However, no specific personnel is designated for managing social aspects of the Project.	GR to recruit experienced environment and social expert(s) to manage the implementation of the ESAP, work with the supervision engineer to monitor labour and working conditions of contractors' workers, manage/control development of the relevant management plans for the Project, monitor land acquisition and resettlement activities. This may be through GR recruitment of one combined E&S expert or one environmental and one social expert.	1.5
1.6	Supply Chain Management	**PC**	Though GR makes efforts to ensure that its suppliers are reputable organisations, no monitoring of GR suppliers with regard to child and forced labour and safety issues is conducted.	It is recommended to develop an approach to monitoring major suppliers' (or suppliers with high risks of non-compliance) performance against national and EBRD requirements with regard to child and forced labour and safety issues in the primary supply chain. This may be controlled through the procurement/ tender process or a special monitoring procedure. If any violation is revealed, inspections should be held regularly, and mitigation measures analysed prior to the next procurement.	-
1.7	Project Monitoring and Reporting[7]	**PC**	Environmental monitoring arrangements are developed in the framework of EIAs and followed at the operation stage (as the monitoring arrangements are required to obtain environmental permit). In addition, environmental monitoring is planned when required by any specific task,	OHS incidents monitoring, investigation and reporting in the Company shall be improved and all cases need to be investigated and reported	4.2

[7] At appraisal stage there will be limited information. Compliance assessment should address specific plans for monitoring and reporting (against for example ESAP requirements) and also consider whether there is evidence of weak monitoring/reporting by client on other relevant projects - which may reduce confidence in future performance.

KPI Ref.	Performance Requirement	Score	Comments/ Issues	Actions Required	ESAP Ref.
			i.e. drinking water quality check for wells, or contaminated ground surveys, etc. H&S incidents monitoring and reporting were not strictly required until recent times when OHS legal requirements were significantly improved. Based on the current audit results, OHS incidents are not counted and reported properly		
2	**Labour and Working Conditions**				
	Summary: The GR practices are compliant with the national requirements. However, most labour aspects have been scored as partial compliance with IFIs' requirements and the Company has to take actions to fill the identified gaps. These include actions related to development of the HR Policy (to apply to contractors also), undertaking proactive approach with regard to engagement with the trade unions and salary payment (and relevant salary indexation) to ensure these are comparable or exceed the average wages in Georgia, and development of Security Policy to apply to GR and contractors' security workers. Several major non-compliances were also identified. These relate to poor quality of accommodation services provided by the Project contractor to its workers, lack of monitoring of labour and working conditions related to contractors' workers, lack of formalised grievance mechanism for the Project workers. Relevant measures were proposed to address these gaps. Overall score for the Project's compliance with Performance Requirement 2 is 'PC' (Partial Compliance).				
2.1	Human Resource Policies and Working Relationships	**PC**	GR human resources practices are compliant with the national law. The working relationships are documented and the Company's workers are informed on their terms and conditions of employment. However, the grievance mechanism practices should be improved as currently they are not formalized and therefore properly introduced to workers and managed. It is recommended to include provisions on HR management principles into the overall HR Policy to be applied to the Company and all contractors.	Enhance GR's HR Policy, as applicable to the Lender financed activities, including the following: • Key provisions regarding labour relations as defined by the Georgian legislation and EBRD PR 2 (regarding documenting workers relationships and concluding labour contracts, having clear provisions on salary payments, etc.); • Provisions on the use of child labour and prohibition of forced labour; • Provisions for adherence to the key ILO standards; • Provisions for non-discrimination and equal opportunities (including gender equality); • Provisions to strengthen diversity inclusion (e.g. equal pay for equal work, parental leave, childcare, equal opportunities for promotion and career evaluation); • Collective dismissal principles; and • Availability of the grievance redress mechanism.	2.1

KPI Ref.	Performance Requirement	Score	Comments/ Issues	Actions Required	ESAP Ref.
				The HR Policy should apply to the Company and its (sub)contractors and be attached to all contracts concluded in relation to the Modernisation Project or any other activity (re)financed by ADB and EBRD. Bids to include statement of compliance with HR policy. Contracts include provisions for ad hoc reviews / audits (including site visits for construction works). HR Policy should be translated into the language(s) spoken by the workforce and shared with all employees.	
2.2	Child and Forced Labour	**PC**	The Georgian Labour Code has clear regulations regarding engagement of minors (under age 16). The Georgian Labour Code has provisions regarding forced labour and relevant fines imposed for its application. According to the EBRD requirements forced labour should not be employed. Though employment of forced labour is not considered to be a risk for GR, it is recommended to clearly outline the ban on forced labour in the Company's procedures.	It is recommended to clearly outline the ban on forced labour in the Company's HR Policy (refer to item 2.1).	2.1
2.3	Non-Discrimination and Equal Opportunity	**PC**	Discrimination is prohibited by the GR internal provisions. The Georgian Labour Code also has clear provisions with respect to prohibition of any type of discrimination. Employment decisions are not made on the basis of personal characteristics such as sex, race, nationality, etc. The salaries or men and women holding similar positions in GR are equal. The salary calculation does not consider such factors as sex or race, etc. GR employs over 12,000 employees, only 16% of which are women. The share of women holding managerial positions is lower. Though GR undertakes relevant measures aimed at women employment (mostly related to educational activities of the Railway Transport College), additional measures might be undertaken to promote equal opportunity for women.	To ensure equal opportunity it is recommended: • To document provisions on non-discrimination and equal opportunity (including gender equality) in the Company's HR Policy (refer to item 2.1); • Develop and implement a sexual harassment policy to prevent and address any form of violence or harassment, including any form of GBVH in the workplace. Inform employees on its provisions when hiring and during relevant training; • Adopt an Equal Opportunities Action Plan; • Increase share of female employees in total workforce by 5%.	2.1-2.3
2.4	Workers Organizations	**PC**	GR does not discourage workers from participation in trade unions. 59% of GR workers belong to two trade unions. Currently no collective bargaining agreement is concluded. However, GR concluded brief agreements with the trade	It is recommended to GR to undertake proactive approach with regard to salary payment (and relevant salary indexation) to ensure these are comparable or exceed the average wages in Georgia and with regard to	

KPI Ref.	Performance Requirement	Score	Comments/ Issues	Actions Required	ESAP Ref.
			unions in response to a strike that took place in 2019. It is expected that until July 2021 no additional claims will be made by the trade unions and no additional agreements with them will be concluded till that time. There is no evidence of GR's discrimination against its workers who take part in the trade unions or participated in the strike.	engagement with the trade unions to make the negotiations process manageable and to avoid potential conflicts or strikes in future.	
2.5	Wages, benefits, and conditions of work	**PC**	GR is one of the major employers in Georgia. It is the only railway company in the country, and there are no similar employers for wages' comparison. Reportedly, the wages in GR are more or less comparable with wages in the industrial sector of Georgia. The lowest full-time wage paid to a full-time, permanent employee in GR is 330 GEL, whereas the official minimal wage in Georgia in 2021 is 20 GEL for private sector and 350 GEL for government sector. The average full-time wage in Georgia in 2021 is 1315 GEL. The average salary in GR (not considering extra payments) in 2020 was 918 GEL. The claims of the trade unions (which resulted in a strike) related to salary payments' increase. Additional requests from the trade unions might be anticipated after July 2021.	It is recommended to GR to undertake proactive approach with regard to salary payment (and relevant salary indexation) to ensure these are comparable or exceed the average wages in Georgia and to engagement with the trade unions to make the negotiations process manageable and to avoid potential conflicts or strikes in future.	
2.6	Worker accommodation	**MN**	Though GR has relevant provisions with respect to workers' accommodation during business trips, there are no policies or procedures covering workers accommodation in camps. GR does not monitor accommodation services provided by the Project contractor to its workers. The Project contractor has developed the plan Organisation of Construction Camps covering workers' accommodation issues. However, there is no evidence that this plan is a working document as some of its provisions are clearly not observed, contractor's personnel is not aware of this document and relevant monitoring activities aren't conducted. The observed accommodation facilities of the contractor are in very poor condition. The accommodation services	Enhance HR Policy to include provisions with regard to provision of accommodation services in line with the EBRD/IFC Guidance note "Workers Accommodation: Processes and Standards". Develop and implement a Worker Accommodation Management Plan that will include, at a minimum: the need for worker accommodation; types; standards; impacts on local communities; management and monitoring arrangements. The plan should be consistent with the EBRD and IFC Guidance Note on Worker Accommodation. Conduct labour audits and conduct regular monitoring (refer to item 2.9)	2.1, 2.4, 2,5

KPI Ref.	Performance Requirement	Score	Comments/ Issues	Actions Required	ESAP Ref.
			provided are not in line with the EBRD and IFC requirements and in certain cases are unsafe for workers.		
2.7	Retrenchment[8]	**FC**	No retrenchment activities are anticipated by GR.	In the case labour restructuring becomes necessary, GR will prepare a plan for a gradual approach in consultations with staff/ trade unions. For any staff retrenchment of 10% or more at a time, develop a Retrenchment Plan.	n/a
2.8	Grievance Mechanism	**MN**	GR provides opportunity to lodge grievances and comments by sending letters to the GR chancellery, via the "telephone hotline" and by email (relevant contacts are provided at the GR website). However, the GR grievance procedure is not formalised, resolution of received grievances is not tracked, and there is no database or log for the grievances. Project contractors' workers may lodge grievances directly to their manager and via a comment box located on site. Ramboll considers that there is lack of grievance boxes on site and in the accommodation camps. Additional measures for lodging grievances are also lacking (for example, by phone). The received grievances are not tracked, and no information on them was provided to Ramboll. It should be noted that there were workers' grievances related to the contractor's performance in Georgia (including contractors' works on other projects). The workers complained that the contractor does not observe the schedule of work and rest hours, does not provide proper clothing and PPE, etc.	Develop and implement a workers' grievance mechanism. The grievance mechanism should allow for anonymous grievances; allow grievances to be raised in the language(s) of the workforce; and the existence and functioning of the grievance mechanism should be communicated to employees through a variety of channels. Ensure availability of the described grievance mechanism for GR contractors (including Project contractor). Contractor should regularly report to GR on grievance management.	2.6
2.9	Non-Employee Workers	**MN**	GR does not monitor whether labour and working conditions related to contractors' workers are in line with the national requirements and international standards. It should be noted that performance of such monitoring is not required by the national legislation. GR does not cascade its internal procedures to its contractors, does not request contractors' labour procedures	Enhance HR Policy for the Project (refer to item 2.1). a. Conduct a labour audit of contractor labour and worker accommodation practices against national legislation and lenders' labour and Workers' accommodation standards; identify gaps and agree a corrective action plan with contractors and document findings and actions in an Audit report.	2.1, 2.5

[8] Will not be applicable to many projects at appraisal stage. However evidence, within the last 3 years of client approach to retrenchment which is not compatible with the Policy should be taken into consideration.

KPI Ref.	Performance Requirement	Score	Comments/ Issues	Actions Required	ESAP Ref.
			and policies, and does not conduct monitoring of the labour relations between contractors and their workers. Though contractor has certain procedures on labour and working conditions of its workers and labour contracts are in place, relevant information regarding hours of work and rest, overtime arrangements and overtime compensation, benefits (such as leave for illness, maternity/paternity or holiday), etc. is not clearly provided to workers. Relevant improvements are required.	Relevant 'Worker Accommodation' related findings and actions to contribute to development of Worker Accommodation Management Plan (2.4 above) which will be developed in parallel; b. Conduct a follow up labour audit to verify the implementation of the corrective action plan; c. Implement monthly monitoring of labour and working conditions of contractors' workers (including the Project contractor). In particular, GR should pay attention to such contractors' labour issues as: • Labour contracts between contractor and its workers; • Salary payments and other relevant entitlements (for example, sick leave and holiday leave, etc.); • Workers accommodation services; • Workers health and safety; • Gender disaggregated analysis (e.g. salary payments); • Grievance management.	
2.10	Security Personnel Requirements	**PC**	GR uses State Security Agency (Police) for securing its facilities. In addition, police staff also accompanies passengers of long-distance trains to ensure their safety. The Project contractor also engages police staff for guarding its main office premise in Khashuri and its own security personnel for guarding Project accommodation camps and construction sites. The contractor's security personnel is not armed. The contractor has developed the Project Security Plan and Security Regulations. The latter specify requirements to the security workers and relevant penalties for improper behaviour. No grievances with respect to behaviour of security guards have been received, and no serious incidents have been reported so far.	It is advisable for GR to develop Security Policy to apply to all security workers engaged by GR, and to make reasonable efforts to ensure compliance with this policy of the engaged workers of the State Security Agency and other security staff. The policy should be in line with the Guidance Note "Use of Security Forces: Assessing and Managing Risks and Impacts: Guidance for the Private Sector in Emerging Markets". The Security Policy should also apply to all GR contractors. Development of Community Health, Safety and Security Plan for both Project construction and operation stages is necessary to ensure that relevant risks are properly defined and managed, including those related to behaviour of security personnel (refer to item 4.2).	2,6, 4.1, 8.2

KPI Ref.	Performance Requirement	Score	Comments/ Issues	Actions Required	ESAP Ref.
				Grievance mechanism(s) for the Project workers and external stakeholders should be developed (refer to items 2.7 and 10.4).	
3	**Resource Efficiency and Pollution Prevention and Control**				
	Summary: Most aspects addressed in Performance Requirement 3 are regulated by the national legislation. Some provisions of PR3 were not addressed during development of the Project, but according to the Ramboll's opinion, may be implemented by the GR. Identified non-compliances can be subsequently removed/rectified during the project development process. Overall score for the Project's compliance with Performance Requirement 3 is 'PC' (Partial Compliance)				
3.1	Resource Efficiency	**PC**	Design solutions and controls aimed at minimisation of consumption and improvement of efficiency of the use of various resources were selected in accordance with the requirements established in Georgia. No explicit comparison of the Project alternatives with consideration of best practice is found in the available documents.	No actions required	-
3.2	Pollution Prevention and Control - Air emissions	**PC**	The Project does not generate significant amounts of air emissions; the sources are limited to the inert material warehouses, concrete batch plant bunkers, belt conveyors, silos, welding works, construction equipment parking. The air emissions are inventoried and monitored on a regular basis in accordance with the Environmental Monitoring Programme; no violations over the limits were identified. The emissions are managed in accordance with the Georgian laws and applicable national standards; international and GIP standards are not considered.	Identify environmental standards applicable to the Project emissions, in addition to Georgian law and update the Project's Environmental Monitoring Plan. Note that in case of different standards, the most stringent criteria should apply.	3.2
3.3	Pollution Prevention and Control - Waste waters	**PC**	In 2020 the Project was fined for the contamination of the Zvarula River with the drainage water discharged from Tunnel#9 and Zvare construction camp. The effluent did not comply with the applicable MPCs established for the River Zvarula. In order to ensure compliance, a sedimentation reservoir was constructed at the outfall from the tunnel and the permissible limits for discharge for the Zvare camp were developed in 2021. The ESMP or sub-plans were not updated to address the regulator concerns. No monitoring is carried out to confirm that the quality of effluent from the Tunnel#9 and Zvare camp meets the applicable standards. Same issue with contaminated drainage water discharge may arise at the other tunnels and construction camps of the Project. The discharge points from	• Update and improve the Contractor's ESMP and sub-plans to be responsive to changes in project setup, unforeseen events, regulatory changes and the results of monitoring. Conduct monthly control of the implementation of the Contractor' ESMP, including provisions of Environmental and Social Monitoring Programme. • Identify drainage water discharge points from the tunnels to control contamination of river water during construction and include periodic wastewater sampling and analysis at these points into Environmental Monitoring Program for construction phase of the Project. Keep the monitoring records available for reporting and review by GR, while GR should maintain copies of	3.1 3.2 3.8

KPI Ref.	Performance Requirement	Score	Comments/ Issues	Actions Required	ESAP Ref.
			the tunnels are not included in the Environmental Monitoring Program, and the drainage water is not analysed. The discharges are managed in accordance with the Georgian laws and applicable national standards; international and GIP standards are not considered.	monitoring reports. In case the quality of discharged runoff does not meet the applicable environmental standards, corrective measures to be developed and implemented • Identify environmental standards applicable to the Project discharges, in addition to Georgian law and update the Project's Environmental Monitoring Plan. Note that in case of different standards, the most stringent criteria should apply.	
3.4	Greenhouse Gases[9]	**PC**	The organizations in Georgia are not required to report their annual greenhouse gas emissions and consequently, and there are no requirements on greenhouse gas emissions regulation. Georgian Railway does not report its greenhouse gas emissions. It shall be mentioned that the most GHG emissions of the Company are from indirect sources which are counted in the national inventories through the power generation (via generation companies). It is recommended to GR to analyse its main greenhouse gas emissions sources and estimate the direct (fuel combustion) and indirect (electricity consumption) emissions as well as consider potential emission reduction measures in the nearest several years, to be prepared for the development of the national climate change related legislation.	It is recommended to carry out high level GHG analysis of GHG emission during construction and operation phases of the project	-
3.5	Water	**PC**	The Project is not considered to have a high demand for water (exceeding 5,000 m3/day). Water consumption in the camps is limited to the drinking, sanitary purposes and cleaning, and for concrete batching. Drinking water is supplied in bottles; groundwater/mountain mineral water is used for supply of the Zvare camp with drinking and sanitary water and for technical purposes in other camps. The Construction Contractor holds a license for groundwater abstraction and regularly monitors that the water meets the applicable standard for drinking water. Surface water is abstracted from the river and is used for technical purposes (concrete batching) solely. The permit for surface water intake is included in the EIP.	No actions required	-

[*] Particular attention should be given to client demonstration of consideration of alternatives. Projects expected annually to produce more than 25,000 tonnes of Co2 equivalent should provide an emission inventory and plans for annual reporting.

KPI Ref.	Performance Requirement	Score	Comments/ Issues	Actions Required	ESAP Ref.
			The potential cumulative impacts of water abstraction upon third party users and local ecosystems were not considered in the national EIA process; however, given the limited water consumption, abundance of water resources in the Project area and the distance from potentially affected users, the impact is expected to be low to negligible.		
3.6	Wastes	**MN**	At a corporate level, several key priority issues were identified related to hazardous waste handling and disposal: legacy PCB-containing equipment and oil, asbestos-containing materials use/dismantling and asbestos waste management, waste creosote-soaked sleepers and soil contaminated with oils from around and under railway tracks. These are either not addressed at the moment by the relevant GR policies, or the practices currently used cannot be considered as appropriate. At a Project level, waste management is organised by the Construction Contractor in accordance with the internal Waste Management Plan (WMP) for 2020-2021 approved by GR, and the Waste Management Plan in the framework of ESMP. Hazardous waste currently generated at the Project is limited to spent oils, oily rags, filters, waste tires, obsolete machinery parts, empty oil drums which are removed and utilised by the licensed waste contractor. Asbestos and PCB containing hazardous wastes will be generated during reconstruction of the existing Moliti traction substation (discussed in item 3.7 Hazardous Substances and Materials). No corporate policy is implemented by GR to manage ACM and PCB wastes. The Contractor has allocated the areas for temporary accumulation of non-hazardous waste prior to transfer to waste contractors for disposal or recycling. The waste containers are placed on hard-paved ground; but not equipped with covers to protect from wind/precipitation. Hazardous oily wastes are collected indoors; the premise is locked but it does not have hard pavement and secondary spill containment. Spent tires and obsolete machinery and parts are collected at the construction camps at the dedicated area. The storage is not well-organized, wastes are accumulated on unpaved ground and are not appropriately segregated. Littering with household and	• At the corporate level, develop and implement a Management Plan (MP) for waste creosote-treated sleepers, including dismantling, handling, temporary storage and disposal requirements. This MP will need to be cascaded to contractors involved into the relevant works for implementation. Monitor management and temporary storage of such waste. • Develop and implement an asbestos and ACM management plan intended to avoid, minimize, and mitigate the potential EHS risks associated with the disturbance, removal, or demolition of structures containing asbestos or ACM. The plan will have to be develop by a competent person with suitable qualifications and experience, must be consistent with the ADB Good Practice Guidance from the Management and Control of Asbestos (2021), and must include a location register to prevent disturbance of ACM during dismantling, construction, and maintenance of rail infrastructure. • Develop the Company-wide inventory of potential PCB oil-containing equipment in use and respective PCB contaminated materials/waste stored on sites (if any). Update the inventory with the results of UNIDO programme testing when available. Develop and implement PCB contaminated materials management plan (consistent with the good practice guidance, including validation procedures). On availability of UNIDO programme testing results and phasing out options, develop Phase Out Plan for PCB oils. • Improve waste management and hazardous waste management practices at the Project sites in accordance with international requirements, including the following:	3.3 3.5 3.6 3.7

KPI Ref.	Performance Requirement	Score	Comments/ Issues	Actions Required	ESAP Ref.
			hazardous waste was observed around the construction camps, in some locations – at the riverbanks. Significant amount of waste will be generated during the construction camps demobilization, which will include large amount of obsolete machinery, parts of demolished temporary constructions, cables, tires, debris, etc. Certain amounts of such materials are already accumulated at the construction camps; however, they are not considered as waste yet. Removal of this waste and further utilisation/disposal will be organized as part of the territory clean-up with the use of the licensed waste contactors. GR and the Construction Contractor do not have a clean-up strategy that would specify the types and amount of waste to be generated, measures for hazardous waste removal and disposal and the appropriate potential waste contractors selected.	a. Hazardous waste accumulation areas at all camps should be brought in compliance with WMP and Lenders' requirements; b. Secondary containment should be constructed at the spent oils storage areas wherever liquid wastes are stored in volumes greater than 220 liters. The available volume of secondary containment should be at least 110 percent of the largest storage container, or 25 percent of the total storage capacity (whichever is greater); c. Hazardous waste storages at the construction sites should be clearly identified (labelled) and demarcated; d. No waste should be present outside the designated waste storage areas. Littering at the construction camp areas and surroundings with hazardous and household wastes should be strictly prohibited. Clean-up of the construction camps areas and their surroundings to be carried out; e. Conducting and documenting periodic inspections of waste storage areas, construction camps areas and surroundings to identify waste mismanagement findings should be undertaken by the Contractor and the Technical Supervisor. • Update the Waste Management Plan with a waste clean-up plan for the end of construction phase to assess the amount and types of waste expected to be generated during dismantling of construction sites and define appropriate final disposal methods. Validate that the WMP is implemented during the decommissioning phase	
3.7	Hazardous Substances and Materials	**MN**	The Project does not utilise large quantities of hazardous chemical, these are limited to maintenance oils and lubricants, solvents, paints, fuels and compressed gases (welding gases and propane). Explosive materials were used only during blasting operations. Several non-compliances were identified, specifically for the oil and	• Incorporate best practice ACM and PCB contaminated materials handling and storage procedures into the CEMP prior to the commencement of refurbishment works at the existing Moliti substation.	3.9

KPI Ref.	Performance Requirement	Score	Comments/ Issues	Actions Required	ESAP Ref.
			liquid chemicals storage, onsite vehicle fueling, compressed gas handling and storage. Legacy asbestos and PCB oil are present in the old Moliti traction substation. ACMs include asbestos-concrete slabs covering cable channels and thermal insulation inside some electrical equipment which were found not damaged. PCB transformer oil is contained in high voltage switches and transformers; the equipment is operated and well-maintained. No signs of transformer oil leakage or potential for asbestos dusting were observed. However, no procedures are currently present in the Project's CEMP for handling and storage of ACM and PCB contaminated materials during the refurbishment works.	• It is recommended that the Construction Contractor identifies the improper hazardous materials handling and storage practices and brings them in compliance with the Project HSE procedures and standards. Oil storage and onsite vehicle fueling should comply with the Project's Oil Spill Response Plan requirements. Secondary containment and spill collection equipment should be provided for the liquid chemicals stored and used at the construction camps and sites. Compressed gas storage and handling should meet the safety instructions for welders.	
4	**Health and Safety**				
	Summary: Though certain management plans have been developed with respect to the community and occupational health and safety, their provisions are not properly observed. This is scored as major non-compliance as certain risks to community safety were identified during Ramboll's overview of the construction sites. GR makes efforts to make its services more accessible to various groups and safer. Relevant recommendations were made with respect to improvement of the current practices. In relation to the occupational health and safety, the management system and supervision are found appropriate, while the timely and proper implementation of corrective actions identified by H&S inspections is not ensured. Overall score for the Project's compliance with Performance Requirement 4 is 'PC' (Partial Compliance)				
4.1	Occupational Health and Safety	**MN**	The Construction Contractor Performs routine HSE supervision of construction works using the checklists outlined in the CHSEMP, however these checks are not documented/reported to GR. The Engineering Supervisor conducts weekly and monthly HSE inspections of the Construction Contractor operations on behalf of GR revealing and documenting inconsistencies with the applicable designs, procedures, plans and regulations, and provides reports to GR. ILF reporting covers all HSE aspects and the progress achieved on corrective actions implementation. A consolidated corrective action plan is not developed and maintained based on the Engineering Supervisor observations, incidents reports, risk assessments and other inputs, the trackability of HSE findings and corrective actions is low. The corrective actions are not always timely implemented by the Construction Contractor. The Contractor continues	• Develop a formal incident reporting procedure and incident register. This should include reporting requirements of GR, regulatory authorities, and Lenders. Official correspondence in regard to major incidents should be filed. GR to monitor the incident reports, investigations and action plans and ensure that corrective actions are implemented, and appropriate financial compensation is provided for any persons suffering injury or illness caused by Project activities • Corrective action register to be developed by the Construction Contractor with support of the Technical Supervisor to consolidate and address the HSE inspections and other findings including incident reports, employee observation reports, risk assessments. The corrective action plans should include assignment of responsible employees, timeframe and tracking of corrective actions	4.2 4.3 4.4

KPI Ref.	Performance Requirement	Score	Comments/ Issues	Actions Required	ESAP Ref.
			using inappropriate unsafe tools and equipment (e.g. household-type electric equipment, damaged cables, hand-made tools, ladders, equipment with faulty or missing safety devices) after identification of issue by the Supervisor inspection. The control from GR as an employer is not sufficient to ensure implementation of corrective actions, especially for the "stop order" high risk situations and replacement of unsafe equipment. Not all H&S incidents have been included in the register maintained by the Construction Contractor; the incident reporting is not consistent. Not all incident report files contain full description of incidents and proper incident investigations carried out in line with the CR23 Incident Investigation Procedure to analyse what caused the incident, and what corrective actions are developed. The corrective actions are not consolidated in the incident register/ corrective action plan, annual action plans or any other documents where their implementation could be tracked.	implementation. GR to review the corrective actions implementation • All-Project safety inspection to be carried out by the Construction Contractor with support of Technical Supervisor to identify and inventory inappropriate unsafe equipment, make-up a replacement plan and replace it with safe certified tools and equipment. GR to review the results of work equipment replacement	
4.2	Community Health and Safety	**MN**	The Project EIA materials provide brief and high-level indication of community health and safety risks, stating that warning signs should be established near construction sites, access of unauthorised persons to construction areas must be prohibited, safety rules during transport operations should be observed, etc. The document Health and Safety Principles for Workers and Population has been developed for the Project, which outlines certain measures with regard to reduction of safety risks. For example, these include installation of warning signs around the perimeter of construction areas, regulation of traffic by trained regulators at the crossing points, measures of spreading contagious diseases, elaboration of code of conduct for workers. However, there is no evidence that provisions of this document are observed (for example, contractors' personnel did not name this document describing procedures regulating the community health and safety issues, no code of conduct is developed, and no monitoring and reporting according to this document's provisions is made).	Develop and implement a Community Health, Safety and Security Plan for both construction and operation stages. The plan should build on the existing plan "Health and Safety Principles for Workers and Population". At the construction stage, the plan should cover issues related to conducting construction works in the vicinity of residential areas (including delineation of work area boundaries, security issues and interactions), movements of Project equipment and traffic on public roads, communication practices between communities and workers (and availability of workers' code of conduct), behaviour of security personnel and grievance management. At the operation stage, the plan should cover issues related to communities' health and safety (related to noise impacts, risks related to access of local residents and cattle to the railroad, railway crossings), grievance management, etc. Relevant monitoring should be conducted and reporting should be prepared.	4.1
4.3	Infrastructure, Building, and Equipment Design and Safety	**MN**	As part of the site visit Ramboll observed several sites of current or future construction works located close to residential areas. Though access to some of the observed	It is required to use more comprehensive measures to prevent unauthorised access to construction sites in the communities: properly established warning tapes/	4.1

KPI Ref.	Performance Requirement	Score	Comments/ Issues	Actions Required	ESAP Ref.
			construction sites was prevented by warning tapes, these were not installed at every site and, where installed, did not cover the whole site perimeter. The construction site in Zvare located nearby the local school and residential areas was not properly fenced to prevent access and potential injury of local residents (including children). At certain sections of the Project its linear facilities will cross the communities and/or will be located nearby residential houses. The presence of the linear facilities and relevant train movements might pose certain danger to local residents and cattle in case these are not properly fenced. In addition, impacts on local residents associated with noise and lighting might be anticipated during the Project operation. The Project EIA materials cover some of the named impacts – in particular, with respect to noise impacts. However, no adequate management plan for managing the named risks is in place.	protection fences around the perimeter of the construction site, barriers or fences at the key entrances, signs warning communities on the construction works, etc. Development of Community Health, Safety and Security Plan for both construction and operation stages is necessary to ensure that relevant risks are properly managed (refer to item 4.2).	
4.4	Hazardous Materials Safety	**PC**	Hazardous materials safety issues are regulated by the national legislation. The national legal requirements aim to minimise and/or avoid the use of hazardous substances. The Project is not associated with manufacture or trade of hazardous substances and materials subject to international bans. However, the presence of legacy ACM and PCB containing equipment and oil was identified for the existing substation in Molity which in the future will be refurbished within the Project framework. Please refer to 3.6. Wastes and 3.7 Hazardous Materials and Substances under PR 3.	Refer to item 3.6 and 3.7	3.5 3.6 3.9
4.5	Product and Services Safety	**PC**	GR makes efforts to make its services more accessible to various groups and safer. In particular, it has programmes with regard to construction of lifts, toilets and special seats for disabled persons on key railway lines of the Company. However, GR does not provide escort services to vulnerable groups during their travel. The new trains are also equipped by baby changing tables. Security personnel accompanies passengers of long-distance trains to ensure their safety. Such trains are also equipped with video surveillance systems. Relevant measures might be implemented to contribute to making GR services safer and more accessible.	It is necessary to implement a grievance mechanism for railway passengers, including confidential channels for reporting any incidents of GBVH. GR makes certain activities aimed at making train services more accessible and safer for Georgian residents, in particular to women and vulnerable groups. It is recommended to develop an umbrella programme outlining the Company's approach with regard to this issue, its goals and key programmes. This will clearly demonstrate GR's commitment to making train services more accessible and safer and will contribute to making undertaken activities clearer and more manageable.	8.2

KPI Ref.	Performance Requirement	Score	Comments/ Issues	Actions Required	ESAP Ref.
				Analysis of international experience with respect to this matter will be also beneficial. It is advisable to run consultations with representatives of women and vulnerable groups and NGOs operating in related fields to ensure priorities and concerns of such groups are clearly articulated and understood by GR.	
4.6	Traffic and Road Safety	**MN**	The Project traffic impacts are briefly covered by the Project EIA materials (for the construction stage only). The materials state that traffic movements on public roads should be avoided as much as possible, damaged roads should be restored, communities should be informed on the schedule of construction works, movement of certain vehicles should be accompanied by flagman, grievance mechanism should be provided. The brief Construction Transport Management Plan was developed for the Project, which has certain provisions on methods for avoiding traffic accidents, general provisions on organisation of transportation, etc. However, there is no evidence that provisions of this document are observed (for example, contractors' personnel did not name this document describing procedures regulating traffic issues, no monitoring and reporting according to this document's provisions is conducted). By the moment of the site visit the Project traffic was not intense as major part of the construction works has been already completed and major part of the construction materials has been delivered. However, during the site visit it was observed that the contractors' equipment was moving along the public road in Zvare with no flagman or accompanying personnel. This road is also used by local residents and is located nearby the school in the named community. Relevant management and monitoring of traffic safety issues is lacking.	When the Project equipment uses public roads, flagman or accompanying personnel should be present. Development of Community Health, Safety and Security Plan for both construction and operation stages is necessary to ensure that relevant risks are properly managed, including traffic safety risks (refer to item 4.2).	4.1
4.7	Natural Hazards	**PC**	The Project is being developed taking into account potential impacts and risks caused by natural hazards as these relate to the Project implementation area. Potential natural hazards were assessed in the EIA process and the appropriate designs and protective measures were selected	No action required	-

KPI Ref.	Performance Requirement	Score	Comments/ Issues	Actions Required	ESAP Ref.
			to control and minimise the risks and impacts in the ESMP framework. Major risks are associated with the geohazards. Expected natural and man-caused geohazards during construction works include landslides, rock falls, mudflows, riverbanks washing, groundwater infiltration, etc. Technical and environmental oversight of instructive works, soil dumps, potential and developing geological impacts and geohazards, and is performed by the Engineering Supervisor with a qualified team to identify all present inconsistencies of the Construction Contractor's activities with the design and procedures and associated risks and hazards. Emergency Prevention and Response Plan is developed and implemented. On May 13, 2017, during construction works for the new line near Zvare Village a large-scale landslide occurred on the northern slope of the Zvarula Valley in 2 km from the village. Prior to the starting up of the construction works in the Zvare landslide area, the Engineering Supervisor pointed out the potential slope instabilities in the area and during excavation the Engineer has addressed to the Contractor the need to ensure the slopes stabilization near T9W considering the conditions of the existing geology. Slope protection measures were urgently taken by the Construction Contractor only after the sliding of slope material and occurrence of unfavourable soil conditions. No direct or indirect damage to community was caused. The alignment of the new railway track was changed to the southern slope of the valley to address the new geological conditions and hazards arising from the landslide incident. The supplementary EIA was conducted for the Project change, and the permit was obtained for the altered route.		
4.8	Exposure to Disease	**PC**	The document Health and Safety Principles for Workers and Population outlines certain measures spreading contagious diseases and elaboration of code of conduct for workers. However, there is no evidence that provisions of this document are observed (refer to item 4.2). Each of the Project camps has a first aid room. No medical personnel is available. Contractor uses ambulance services if a worker needs medical assistance. Reportedly, it takes	Develop and implement a Code of Conduct for Project workers to regulate workers behaviour. This should also include the prohibition of GBVH in local communities. Provide induction training on the code of conduct for all employees and contractors. Require all employees and contractors to sign the code of conduct. Development of Community Health, Safety and Security Plan for both construction and operation stages is	2.7, 4.1

KPI Ref.	Performance Requirement	Score	Comments/ Issues	Actions Required	ESAP Ref.
			30-40 minutes for an ambulance to arrive to any Project site or accommodation camp.	necessary to ensure that relevant risks are properly managed, including exposure to disease issues (refer to item 4.2).	
4.9	Emergency Preparedness and Response	**PC**	Emergency preparedness and response is regulated in accordance with the national legislation. The national legislation requires that construction organisations plan and implement emergency prevention and response measures. Emergency response is provided in accordance with the Emergency Prevention and Response Plan. Construction organisations and subsequent operators of the project facilities must develop these plans.	No actions required	-
5	**Land Acquisition, Involuntary Resettlement and Economic Displacement**				
	Summary: Significant part of the land acquisition and resettlement activities has been already conducted. The conducted activities are in line with the national requirements. The Resettlement Action Plans were developed for the Project according to Georgian requirements. However, only cash compensation option was provided to the affected persons. Consultation activities were not conducted in full as described by RAPs. Limited assistance to vulnerable groups was provided. Therefore, the conducted activities are mostly scored as partially compliant. However, the lack of monitoring activities with regard to resettlement process is considered as a major non-compliance. Conducting gap assessment to ensure compliance with the EBRD requirements is required. Additional measures to ensure compliance should be developed as necessary Overall score for the Project's compliance with Performance Requirement 5 is 'PC' (Partial Compliance)				
5.1	Consultation	**PC**	Major part of the land acquisition and resettlement activities for the Project was already completed. Consultations with affected land owners (sometimes involving their neighbours) were conducted by GR. The Company's representative delivered the compensation offers in person running consultations with the affected communities. Reportedly, the affected persons were in touch with GR's representative during the resettlement process and adequate communication was maintained. No identification of vulnerable groups was conducted, and therefore no targeted consultations with them were conducted. In addition, according to the RAPs, consultations were to be held with affected persons during the RAPs' implementation process. RAPs were to be available in the relevant offices of the district councils and at the community level.	Conduct a gap assessment of resettlement activities for the modernisation project and develop a Corrective Action Plan (CAP) if necessary. The gap assessment and CAP (if required) will focus on resettlement activities and expropriation cases. It will also cover land acquisition and livelihood restoration activities (relevant sampling will be made to ensure these activities are analysed in sufficient manner). The CAP will describe all activities to reach compliance with PR 5 in the form of a time-bound plan, including a budget, implementation arrangements, allocation of roles and responsibilities, and implementation schedule. The gap assessment will put a particular focus on an evaluation of compensation rates, complaints and outstanding court cases. Conduct a completion audit of the expropriation process to ensure that all actions in the Corrective Action Plan	5.1-5.4

KPI Ref.	Performance Requirement	Score	Comments/ Issues	Actions Required	ESAP Ref.
			The following steps were to be provided to ensure ongoing consultation: • The final RAPs were to be available to the public; • GR was to hold public meetings and provide information to the communities on the progress of the resettlement process and relevant activities; • GR was to hold public meetings to provide information to the public on compensation issues. It is Ramboll's understanding that these consultations were not conducted – except of interactions between GR representative and affected communities described above. The RAPs were primarily used by the Company internally to manage the process.	have been properly implemented. Ensure ADB funded activities which involve land acquisition related impacts such as involuntary physical or economic displacement, are screened and categorized using involuntary resettlement (IR) screening procedures (ref. 1.3), and appropriate management plans adopted in line with ADB SPS requirements for involuntary resettlement (SPS SR2). a) Results of IR screening and categorization are to be submitted to ADB for review prior to management plan (resettlement plan (RP) or livelihoods restoration plan (LRP)) development; b) If screening results in Cat B, Resettlement Plan / Livelihoods Restoration Plan to be developed by GR and submitted to ADB for review prior to implementation. Upon the resolution of outstanding court cases regarding expropriation, communicate to lenders the protocol for resettling any households who refuse the court settlements. Lenders should be timely informed on all cases of forced evictions (if any).	
5.2	Socio-economic Assessment and Census	**PC**	Socio-economic survey was conducted as part of the development of the Resettlement Action Plans (RAPs) for the Project. This covered such issues as demographic characteristics of affected persons, ethnic composition, education and economic activities. Impacts associated with land acquisition activities were also analysed as part of the RAPs. The inventory/ evaluation activities were conducted by the national certified bureau. GR had no opportunity to choose the organisation for conducting these activities. The activities conducted are considered adequate for the Project. However, no identification of vulnerable groups as part of the RAPs was conducted, and limited actions on relevant assistance were undertaken.	Refer to item 5.1	5.1-5.4

KPI Ref.	Performance Requirement	Score	Comments/ Issues	Actions Required	ESAP Ref.
5.3	Compensation for Displaced Persons	**PC**	Only cash compensation was provided to the affected persons, which is not in line with the EBRD requirements. The amount of cash compensation was defined by the national certified bureau. GR had no opportunity to choose the organisation for conducting inventory/ evaluation activities. The basis for calculating the compensation was the market value. The compensation included compensation for land, structures, vegetation and compensation for vulnerability status. It included the depreciation factor. The registration costs were covered by GR. The compensation provided is considered sufficient enough for purchasing alternative land plot and/or house. This was confirmed by three resettled persons during interviews conducted by Ramboll. If affected persons rejected GR's offer, expropriation process was initiated. This affected 11 land plots out of 238 (all of them are in the same community). The expropriation process is conducted in line with national requirements. However, as expropriation activities were conducted not in accordance with the EBRD and ADB standards, it is necessary to conduct gap analysis for the expropriation cases to ensure compliance.	Refer to item 5.1	5.1-5.4
5.4	Grievance Mechanism	**PC**	GR stakeholders generally have opportunity to lodge their grievances and comments by sending letters to the GR chancellery, via the "telephone hotline" and by email (relevant contacts are provided at the GR website). However, no information on availability of the grievance mechanism to the affected persons is available. Reportedly, the affected persons were in touch with GR's representative during the resettlement process and adequate communication was maintained.	Refer to item 5.1 Community grievance mechanism should be developed – refer to item 10.4	5.1, 8.2
5.5	Resettlement and/or Livelihood Restoration Plan	**PC**	Four Resettlement Action Plans (RAPs) were developed by independent consultant for different sections of the Project to manage the resettlement process. The RAPs cover description of relevant impacts and legal framework, conduction of socio-economic survey, consultations,	Refer to item 5.1	5.1-5.4

KPI Ref.	Performance Requirement	Score	Comments/ Issues	Actions Required	ESAP Ref.
			implementation schedule, provisions on monitoring and reporting. However, only cash compensation was provided, consultations as described in the RAPs were limited and no monitoring activities were conducted in line with the RAPs' provisions.		
5.6	Monitoring	**MN**	Though GR holds communication with the affected persons, no monitoring of the land acquisition and resettlement activities as per the RAPs' provisions is conducted.	Refer to item 5.1	5.1-5.4
6	**Biodiversity**				
	Summary: The Project has assessed the impacts on biodiversity and protected areas and developed mitigation measures within the national EIA process and additional surveys required by the national legal and regulatory requirements. However, not all the PR 6 requirements were met in regard to the assessment and mitigation of impacts on protected areas, critical habitats and priority biodiversity features. The monitoring of biodiversity impacts is lacking; the invasive alien species control is not fully ensured. Overall score for the Project's compliance with Performance Requirement 6 is 'PC' (Partial Compliance)				
6.1	Biodiversity Conservation – Assessment of Risks and Impacts	**PC**	The Project has assessed the impacts on biodiversity and protected areas and developed mitigation measures within the national EIA process, with 5 EIA packages covering the whole Project area, and additional surveys (Detailed Biological Environment Study dated 2012 and Impact Assessment for the Emerald Network Site dated 2019) required by the national legal and regulatory requirements. However, these assessments did not consider the project's potential impacts and dependance on ecosystem services in accordance with GIP.	No actions required	-
6.2	Biodiversity Conservation - The Protection and Conservation of Biodiversity, Priority Biodiversity Features and Critical Habitats	**PC**	A biodiversity study covering the major part of the new line was conducted in 2012. A total of 8 endemic and protected flora species and 10 Red List wildlife species were identified. Potential risks to biodiversity were identified and mitigation measures were developed. The study was performed in accordance with the nationally recognised methodology and therefore did not include critical habitats (CH)/ priority biodiversity features (PBF) assessment in line with PR 6. No additional assessments or monitoring have been executed in regard to the impact on the CH/PBF in the EIA process; no special mitigation measures were proposed. In accordance with legal requirements (Georgian Forest Code), before the wood cutting activities the Contractor carries out inventories of Red List species and taxation	• In case the biodiversity monitoring at the protected area and surroundings during 1 to 3-years period identifies that the Project activities affect CH/PBF (impact on the Emerald site is not expected since there is no direct footprint with the protected area), this finding should trigger development and implementation of the Biodiversity Conservation Plan to mitigate impacts on CH/PBF. The Biodiversity Conservation Plan can be based on recommendations developed within the Impact Assessment for the Borjomi-Kharagauli-2 Emerald Network site in 2019, if relevant. • Identify appropriate mitigation measures in addition to monetary compensations to ensure "no	6.2 6.3

KPI Ref.	Performance Requirement	Score	Comments/ Issues	Actions Required	ESAP Ref.
			surveys at the cutting area and obtains formal approval from the State Forestry Service prior to cutting. Damage compensation is calculated and paid accordingly. The Contractor generally meets the legal procedure. However, the Project cannot confirm that the paid damage compensations are used for equivalent trees plantation, thus "no net loss" principle cannot be fully ensured.	net loss" of priority biodiversity features during tree cutting activities in the natural habitats along the construction corridor that affect the number of Red List tree species in the Project area. Assess the need for compensatory forest plantations to balance loss of Red List species in the Project area. Include sufficient appropriate plantation amount in the Land Remediation Plan where possible.	
6.3	Biodiversity Conservation - Legally Protected and Internationally Recognised Areas of Biodiversity Value	**MN**	A part of the Project area coincides with the Borjomi-Kharagauli 2 Emerald Network site (GE0000056). The potentially affected area is located on a ridge top above Tunnel #9 and was recognised as part of the Emerald Network in November 2018, after the completion of the tunneling works. In 2019 GR prepared an evaluation document to assess impacts of the new line construction to the protected area. The Impact Assessment concluded that the impact was negligible. However, the assessment was based only on desktop studies and one reconnaissance site visit. A monitoring survey was not performed to confirm the assessment findings. No additional assessments or monitoring have been executed in regard to the impact on the protected areas in the national EIA process. No special mitigation measures were proposed in the EIA in regard to the protected areas other than to follow the Construction Management Plans developed at the earlier stages of the project implementation. The administration of the protected areas which is the part of the Ministry of Environmental Protection and Agriculture of Georgia (MEPA) has reviewed the scoping document for the EIA and provided remarks regarding to protected area and its mitigation actions. The findings of the EIA undergone the public hearings in July 2020 with the participation of Mr. Giorgi Tevzadze, Deputy Minister of Environmental Protection and Agriculture of Georgia. However, the Emerald Network site management did not take part in the public hearings/ consultations on the Project EIA.	• Organise monitoring of potential impacts (biodiversity, noise, vibration, background lights, etc.) on the Borjomi-Kharagauli-2 Emerald Network site area and surroundings for 1-3-years period to confirm that the impact is negligible (as considered in the Impact Assessment for the Borjomi-Kharagauli-2 Emerald Network site conducted in 2019). In case the monitoring identifies negligible impact of project activities on the protected area characteristics, the monitoring program can be closed. Such monitoring shall also allow identifying any Critical Habitats and Priority Biodiversity Features within the Project area of influence. • Organise consultation with the protected area (Emerald Network site) management to discuss the assessment of impacts on the protected area and how these impacts are mitigated.	6.1 6.6
6.4	Biodiversity Conservation – Invasive Alien Species	**PC**	The biological remediation of the soil dump sites, backfilled areas, banks, former construction camps is planned after the technical remediation of these artificial features created by the Project. The remediation activities include grass and	• Use of native species only for biological land remediation and landscaping after construction completion. Update the Land Remediation Plan with the requirement to use native species. Confirm that	6.4 6.5

KPI Ref.	Performance Requirement	Score	Comments/ Issues	Actions Required	ESAP Ref.
			trees plantations. The biological remediation should not affect the species structure and ecosystem characteristics by the introduction of alien species, especially invasive ones During the Project operation phase the spreading of invasive alien species may be possible with the increased trains and passenger traffic.	the biological remediation was completed using native species. • Organize periodic monitoring of the invasive alien species spreading along the new line railroad corridor in the framework of the Modernization Project (re)financed by EBRD, during the operation phase. Monitoring to be performed annually in May-June. A procedure for removing/cutting and removal of invasive alien species identified by monitoring should be developed and implemented (the use of chemicals shall be avoided).	
6.5	Sustainable Management of Living Natural Resources	**n/a**	The Project does not involve the primary production of living natural resources, including crop or livestock production, natural or plantation forestry, aquaculture or fisheries, production and use of biomass for energy and biofuels.	No actions required	-
6.6	Supply Chains	**PC**	GR makes efforts to ensure that its suppliers are reputable organisations, however no assessment of GR primary suppliers with regard the risks and impacts to biodiversity is conducted. GR procurement procedures are strongly limited by the procurement regulations for public companies.	It is recommended that GR will establish corporate policies, procedures and verification practices which will: a. identify the origin of the supply and habitat type of the source area; b. avoid procurement from suppliers that are contributing to significant conversion or degradation of priority biodiversity features, critical habitats and/or designated protected areas; c. provide for an ongoing review of the client's primary suppliers.	-
7	**Indigenous People**				
	Summary: This Performance Requirement is not applicable to the Project				
	Not applicable				

KPI Ref.	Performance Requirement	Score	Comments/ Issues	Actions Required	ESAP Ref.
8	**Cultural Heritage**				
	Summary: The Project is generally compliant with the requirements of PR 8. However, development of a formal chance finds procedure is recommended. Overall score for the Project's compliance with Performance Requirement 8 is 'PC' (Partial Compliance)				
8.1	Assessment and Management of Impacts on Cultural Heritage	**FC**	The Project impacts on cultural heritage are assessed as part of the national EIA process. The EIA materials identify one cultural heritage object in vicinity of the Project facilities – Moliti Train Station. In order to avoid potential impact on the object, GR changed the Project design to relocate the new line and bypass the Moliti Train Station. In addition, the EIA materials determine that applicable safety measures should be undertaken during construction works to mitigate potential impacts on this object. No impacts on intangible cultural heritage are anticipated.		N/a
8.2	Chance Finds Procedure	**PC**	The EIA materials describe the necessity of chance finds procedure for the Project. The materials state that if any cultural heritage object is found, the construction works should be stopped. Relevant experts (archaeologists) will be invited to examine the find and, upon their recommendation, the Company will assist in either conservation of the site or its relocation. The works might be resumed after obtaining the relevant permit. However, no written procedure or brochure with respect to this matter has been developed.	Develop a Chance Finds Procedure to ensure safety of potential chance finds. Workers conducting earthworks should be informed on the procedure during the EHS induction training. Relevant brochures with clear workers actions in case of a chance find and contact details of a manager to be informed should be provided to excavator drivers. The brochure might also include photographs of examples of cultural heritage objects that can be potentially found in the area. The procedure should apply to GR contractors.	7.1
8.3	Consultation with Affected Communities and Other Stakeholders	**N/a**	Potential impacts might be anticipated on Molity Train Station only. Relevant measures to mitigate the potential impact are described in the EIA materials. No additional consultations are deemed necessary.		N/a
8.4	Project use of Cultural Heritage	**N/a**	The Project will not use cultural heritage for commercial purposes.		N/a

KPI Ref.	Performance Requirement	Score	Comments/ Issues	Actions Required	ESAP Ref.
10	**Information Disclosure and Stakeholder Engagement**				
	Summary: Though certain stakeholder engagement activities were conducted for the Project, no systematic approach to information disclosure and consultation is undertaken. The Stakeholder Engagement Plan for the Project is lacking. No effective grievance mechanism is also available. Overall score for the Project's compliance with Performance Requirement 10 is 'PC' (Partial Compliance)				
10.1	Stakeholder Engagement Plan	**MN**	No Stakeholder Engagement Plan (SEP) has been developed for the Project.	Develop and implement a Stakeholder Engagement Plan (SEP) for the Project. The document should identify affected communities and other stakeholders, contain information on completed stakeholder engagement and provide a plan for further information disclosure and consultation activities (with a focus on affected communities and passengers). At a minimum, the SEP should be disclosed in the affected communities and on the GR website. The SEP should be updated on annual basis. Contractors to be made aware of provisions and requirements of the SEP.	8.1
10.2	Information Disclosure and Meaningful Consultation	**PC**	The EIA materials were disclosed to the public. The public hearings were organised by the local municipalities. These were conducted in the administrative centers of municipalities (in Zestafoni and Kharagauli) and in Zvare. In addition, affected communities were engaged during consultations conducted as part of the land acquisition and resettlement process (refer to item 5.2). Though certain stakeholder engagement activities were conducted, Ramboll considers that systematic approach with regard to information disclosure and consultations is required (according to the SEP to be developed).	Further information disclosure and consultation activities should be conducted, focusing on the affected communities. The frequency and specifics of the stakeholder engagement should be determined by the SEP (refer to item 10.1).	8.1
10.3	Engagement During Project Implementation and External Reporting	**PC**	GR publishes general information on the Project in media. However, GR does not conduct regular engagement with affected communities and other stakeholders during the Project implementation. No external reporting is prepared.	GR should conduct regular engagement with stakeholders focusing on affected communities. Relevant reporting on the status of the Project implementation and management of the Project impacts should be made. The frequency and specifics of the stakeholder engagement should be determined by the SEP (refer to item 10.1).	8.1

KPI Ref.	Performance Requirement	Score	Comments/ Issues	Actions Required	ESAP Ref.
10.4	Grievance Mechanism	**MN**	Though GR provides certain methods for lodging grievances, there is no evidence that these methods were communicated to the affected communities. GR does not track the received grievances (i.e. there is no grievance log or database) and no reporting on the grievance management is prepared. The contractor does not have an effective grievance mechanism also. There are no clear methods for the communities to lodge their grievances. The received grievances are not tracked, and there are no formal communication channels to lodge grievances or comments for local residents.	Develop and implement a community grievance mechanism applicable to affected communities and passengers. The existence and functioning of the grievance mechanism should be communicated to affected people by a variety of channels and reinforced throughout stakeholder engagement activities. Include channels for raising anonymous and confidential grievances (including those linked to Gender Based Violence and Harassment - GBVH).	8.2
	Overall Compliance				
	National Environmental, Social, Health and Safety Requirements	**FC**	The Project is being developed in accordance with the requirements of the national legislation.	Implement ESAP to meet fully national requirement	n/a
	EU Environmental, Social, Health and Safety Requirements	**PC**	The Project progress is generally in compliance with broad ESHS requirements of EU.	Implement ESAP and SEP to meet fully EU EHSS requirement	n/a