

Semi-Annual Environmental Monitoring Report

Project Number: 53178-001

Semestral Report (July – December 2025)

January 2026

Georgia: East-West Highway (Shorapani – Argveta Section) Improvement Project

Prepared by the Roads Department of the Ministry of Regional Development and Infrastructure of Georgia for the Asian Development Bank.

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Version	Date	Description
1.0	28/01/2026	First version of Semi-annual Environmental Monitoring Report

ABBREVIATIONS

ADB	Asian Development Bank
AT	Argveta – Tbilisi direction
CAR	Corrective Action Requirement
CC	Construction Contractor
CSCS	Consultancy Services for Construction Supervision
CSC	Construction Supervision Consultant
DNP	Defect Notification Period
EIA	Environmental Impact Assessment
EMP	Environmental Management Plan
FIDIC	Fédération Internationale Des Ingénieurs-Conseils
GRM	Grievance Redress Mechanism
MDB	Multilateral Development Banks
MoEPA	Ministry of Environmental Protection and Agriculture
NCR	Non-Conformance Report
PCEAP	Post-Construction Environmental Action Plan
RD	Road Department
SAEMR	Semi-Annual Environmental Monitoring Report
SC	Supervision Consultant
SSEMP	Site Specific Environmental Management Plan
TA	Tbilisi – Argveta direction
ToR	Terms of References

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1. INTRODUCTION

1. The Project involves construction of a new road section of the E-60 highway located in Imereti Region of central Georgia. Section F4 forms the Shorapani-Argveta portion of the Khevi-Ubisa-Shorapani-Argveta section of the E-60 Highway Route. The Construction Contractor (The Contractor, CC) of the Project is Guizhou Highway Engineering Group Co Ltd and China National Technical Import & Export Corporation Joint Venture. The Consultant for Construction Supervision (The Engineer, CSC/SC) of the Project is UBM Uluslararası Birleşmiş Müşavirler Müşavirlik Hizmetleri A.Ş. (Turkey) and SMEC International PTY LTD (Australia). The signature date of the Contract is 16.01.2020. All environmental safeguard documents are prepared by the Contractor, approved by the Engineer, and sent to the Roads Department of Georgia (the Employer, RD).

1.1 Preamble

2. This report presents the Semi-Annual Environmental Monitoring review for the Shorapani–Argveta Section (E60 Highway Route), Lot F4 Construction Project, covering the period of July to December 2025. The entire road was officially commissioned on 22.10.2024, and the Project is currently within its Defect Notification Period (DNP). Therefore, this report details only remaining Post-Construction Environmental Action Plan (PCEAP) items and the environmental issues included on this plan.
3. This report is the twelfth Semi-Annual Environmental Monitoring Report (SAEMR) prepared for the Project.

1.2 Headline Information

4. The Project is a newly built two-lane highway project with a total length of 14.7 km and involves the construction of a new road section of the E-60 highway, namely Lot F4, located in the Imereti region that is one of the main historical, economic, cultural and educational regions of central Georgia. Lot F4 forms the Shorapani–Argveta portion of the Khevi-Ubisa-Shorapani-Argveta section of the E-60.
5. The project involves the construction of 2x5 tunnels, 2x7 bridges, 4 interchanges, 2x1 overpasses, 5 underpasses, and 50 culverts. The length of the Project road is given below:
 - 1) Right lane (TA – meaning Tbilisi – Argveta direction) - 14.778 km,
 - 2) Left lane (AT – meaning Argveta – Tbilisi direction) - 14.726 km
6. The Project alignment is located within Zestaphoni Municipality, which covers a total area of 423 square kilometers and includes the towns of Zestaphoni and Shorapani as well as numerous small villages such as Kveda Tseva, Shorapani, Zestaphoni, Kveda Sakara, and Argveta. Besides, the alignment runs through forest areas, agricultural land plots, hilly forest slopes, residential areas, and riparian ecosystems.
7. The Project outlines (km 0+000 – 14.7+000):
 - Classification of road: Highway
 - Design speed: 100 km/h
 - Speed Limit: 80 km/h
 - Road length: 14.7 km
 - Road width: 27.60 m
 - Numbers of lanes: 2x2
 - Lane width: 3.75 m
8. The official work commencement date for the construction is 20 October 2020. The period of implementation of the contract, including the Defects Notification Period and until the issuing of the Final Acceptance and Performance Certificate is 60 (sixty) months after the Commencement Date. The project completion date has been extended by more than twelve (12) months. The new

target completion date is set for 30.09.2024. Partial road openings occurred on 24.04.2024, with final commissioning of the entire road achieved on 22.10.2024.

2. PROJECT DESCRIPTION AND CURRENT ACTIVITIES

2.1 Project Description

9. E-60 highway connecting the Black Sea coast to the capital of Georgia passes through a mountainous area 600-850 meters above the sea level. The Project road comprises Lot F4 (Shoropani – Argveta) of the Khevi-Ubisa-Shorapani-Argveta Road (E-60). The proposed highway is located in the complex hilly-mountainous geographical area and crosses numerous mountains, rivers, and ravines. Mixed forests, typical of this climate zone, cover the slopes of the mountains.
10. The alignment is located on the left side of the existing 2-lane road both as an exposed road and through two tunnels. The existing road passes through difficult mountainous terrain paralleling first the River Rikotula and then, the River Dzirula and consists of multiple bridges and several tunnels.
11. The government of Georgia has requested Asian Development Bank (ADB) to finance the construction of the proposed highway. The project is classified as Category A Project – Environmental Safeguards under ADB SPS 2009 since it is considered to have significant diverse impacts over a wide area, such as noise impacts, significant quantities of spoil disposal, road safety impacts, and vibration. Environmental Impact Assessment (EIA) was prepared in May 2019 and disclosed on the ADB website in October 2019.
12. The National EIA document was prepared and submitted by the Roads Department (RD) to the Ministry of Environmental Protection and Agriculture (MoEPA) in December 2017. State Ecological Expertise approval was obtained from MoEPA on 26.03.2018. This covers all scopes under the Project.
13. The Project involves the construction of a new road section of the E-60 highway located in the Imereti Region of Central Georgia (Figure 1). Proposed Lot F4 forms the Shorapani-Argveta portion of the Khevi-Ubisa-Shorapani-Argveta section of the E-60. The length of the Project road is given below:
 - 1) Right lane (TA – meaning Tbilisi – Argveta direction) - 14.778 km,
 - 2) Left lane (AT – meaning Argveta – Tbilisi direction) - 14.726 km

Figure 1: Location of Project Area



14. The project includes the construction of 12 tunnels with a total length of 8506.36 meters, 14 bridges with a total length of 5020.54 meters, 2 overpasses with a total length of 84.64 meters, 5 underpasses with a total length of 198 meters, 50 culverts with a total length of 1552.07 meters and 4 interchanges.
15. Bridges' length will vary from 32 meters to 846 meters. Tunnels will be constructed with double tubes with lengths from 399 meters to 1193 meters.
16. Technical parameters of the alignment considered during detail design include:
 - Design speed: 100 km/h,
 - Speed Limit: 80 km/h,
 - Number of traffic lanes: 4,
 - Width of traffic lane: 3.75 m,
 - Width of each carriageway: 7.5 m,
 - Width of paved shoulder (emergency lane): 2.5 m,
 - Width of verge: 1.0 m,
 - Width of central reserve: 5.0 m,
 - Width of the paved shoulder at the central reserve: 1.0 m,
 - Total width of each paved platform: 11.0 m,
 - Width of roadbed: 27.60 m,
 - Carriageway cross-fall on straight sections: 2.5%,
 - The minimum radius of the horizontal curve: 400 m,
 - Maximum longitudinal gradient: 4%,
 - Minimum convex curve: 15 000 m, and
 - Minimum concaved curve: 15 000 m.

2.2 Project Contracts and Management

17. Information related to the project execution is given in Table 1 below:

Table 1: Project Information

Employer	Roads Department of Georgia, Ministry of Regional Development and Infrastructure of Georgia
Funding Source	Asian Development Bank
The Engineer	UBM Uluslararası Birleşmiş Müşavirler Müşavirlik Hizmetleri A.Ş. (Turkey) and SMEC International PTY LTD (Australia)
Contractor	Guizhou Highway Engineering Group Co Ltd and China National Technical Import & Export Corporation Joint Venture
Contract Number	SARP/CW/OCB-01
Contract Date of the Contractor	16.01.2020
Starting Date of Construction	20.10.2020
Contract Period	36 months (36+24 month engineer)
Original Completion Date	20.10.2023
Extended Completion Date	30.09.2024
Completion Date	22.10.2024
Defects Notification Period	24.3 months 730 days
Contract Price (GEL)	GEL 582 777 310.00

18. The Terms of References (ToR) for the Consultancy Services for Construction Supervision (CSCS) Contract contains the following tasks for the environmental specialists:
 - Scrutinize the Contractor's construction method statement for its compliance with environmental aspects,
 - Review and approve Contractor Site Specific Environmental Management Plans (SSEMP),

- Supervise the Contractor in all matters concerning environmental aspects,
 - Monitor compliance with the EMP by the Contractor and issue Non-conformances Reports (NCR) as needed,
 - Review Contractor's Corrective Action Plans (CAR),
 - Review and approve temporary construction areas use and associated Site-Specific EMPs for such sites,
 - Assist the Employer in undertaking and monitoring environmental safeguards,
 - Identify and report any environmental issues that may arise during construction to the Team Leader and the Employer,
 - Perform regular coordination with the Employer for any matters related to the implementation, monitoring, and reporting of ADB's safeguards policy.
19. The obligation of the Contractor, to safeguard, mitigate adverse impacts, and rehabilitate the environment is addressed through environmental provisions in the Fédération Internationale Des Ingénieurs-Conseils (FIDIC) conditions of the contract for construction, Multilateral Development Banks (MDB) harmonized addition- June 2010, and special clauses included in the contract related to the environment, especially, section 116 (pollution) and Appendix X of technical specifications. FIDIC clauses 4.18 (protection of the environment), 4.8 (safety procedures), 6.4 (labor laws), 16.3 (cessation of work/ remedial work), 2.3b (employer's personnel), 4.21 (progress report) are important in this regard.
20. The Contract for CSCS was awarded to UBM for three phases of the project:
- 1) Phase 1: Design review, to be completed in a period of three months and submitted to RD
 - 2) Phase 2: Construction supervision and contract administration. The construction period is for 36 months (with an extension of 8 more months)
 - 3) Phase 3: Defects Notification Period, 24 months
21. Contact details of ADB, SC, CC, and RD representatives are given in Table 2 below:

Table 2: Main Environmental Staff of ADB, CC, SC, and RD

Organization	Position	Name
ADB	Head Office, Senior Environment Specialist, Portfolio, Results, Safeguards and Gender Unit (PSG), CWRD	Ninette Pajarillaga
	ADB National Environmental Safeguards Consultant	Giorgi Kobaladze
	Associate Safeguards Officer Georgia Resident Mission	Nino Nadashvili
RD	Environmental Specialist	Tamar Nasuashvili
	Deputy Head of Environmental Unit	Gia Sopadze
SC	International Environmental Specialist	Emre Duran
CC	Project Manager	Chen Yuqiang
	Environmental Specialist	David Kurdadze

22. Under the contract, the Contractor shall comply with all applicable national and local environmental laws and regulations as well as applicable respective standards under the Contract. The Contractor is responsible to:
- Establish an operational system for managing environmental impacts,
 - Develop the SSEMP as well as topic-specific EMPs by identifying environmental risks arising from the works, the mitigation measures to be applied, and monitoring to be carried out,
 - Implement the required mitigation measures and monitoring,
 - Take any corrective or preventative actions set out in safeguards monitoring reports that the Employer will prepare from time to time to monitor the implementation of the EMP,
 - Submit monthly compliance reports to the Engineer.

23. The Contractor, Guizhou Highway Engineering Group Co Ltd, is responsible for the implementation of SEMP throughout the project during the construction phase. The Supervision Consultant, UBM (Engineer), is responsible to:

- Monitor the implementation of SEMP by the Contractor at all its active construction sites and project-related facilities,
- Prepare monthly and semi-annual Environmental Monitoring reports for the Employer based on the SEMP monitoring and implementation activities.

24. This report presents the Semi-Annual Environmental Monitoring review for the Shorapani–Argveta Section (E60 Highway Route), Lot F4 Construction Project, covering the period of July to December 2025. The entire road was officially commissioned on 22.10.2024, and the Project is currently within its Defect Notification Period (DNP). During this DNP, Mr. Du Jun and other managers from Guizhou Highway Engineering Group Co Ltd, reporting to the Project Manager, will continue to be responsible for Health, Safety, Environmental, and Social management as needed. Therefore, this report details only remaining action plan items and environmental issues relevant to this period.

2.3 Project Activities during Current Reporting Period

25. All sections of the road are now fully operational and accessible to public traffic. The Project is within its Defect Notification Period, and there are no active construction or significant on-site activities currently underway.

2.4 Information on Personnel Working at Construction Site

26. Although the Project is currently within its Defect Notification Period (DNP), a contingent of Georgian and foreign workers remains on-site to conduct repair work and complete remaining auxiliary tasks. As of December 2025, the Contractor's overall personnel are summarized below. Table 3 provides detailed information about personnel working at the site.

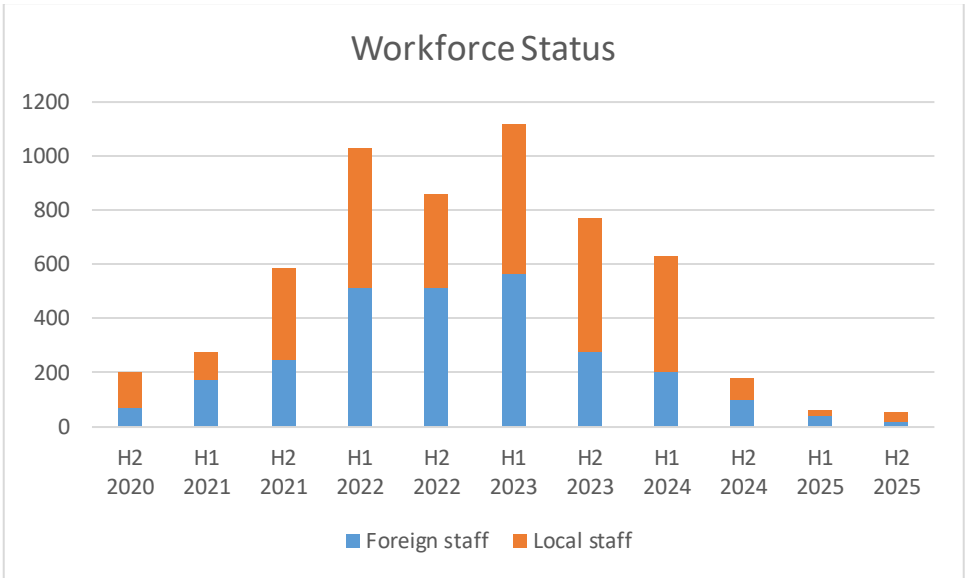
- Total number of employees: 54
- Foreign Staff (including management, administration, and technical Staff): 17
- Local Staff (skilled and unskilled workers): 37

Table 3: Information of Personnel Working at Site as of December 2025

Positions	Number of Employees
Site Management	2
Technical Office Manager	9
Highway Engineer	1
Bridge Engineer	1
Tunnel Engineer	1
Geotechnical Engineer	1
Quality Control	2
Surveying	1
Social/Resettlement Specialist	1
Environmental Specialist	1
Health and Safety Specialist	2
Road Safety Specialist	2
Design Coordinator	1
Contract Specialist	1
Support Staff	28
Total	54

27. Figure 2 shows a graphical representation of the number of foreign and local staff hired by the Contractor. As expected the total number of the Contractor's staff has decreased by 17% since the end of the first half of 2025 during this reporting period.

Figure 2: Project Workforce as of December 2025



2.5 Description of any Changes to Project Design

28. N/A

2.6 Description of Any Changes to Agreed Construction Methods

29. N/A

3. ENVIRONMENT SAFEGUARD ACTIVITIES

3.1 General Description of Environment Safeguards Activities

30. With the Project now within its DNP, the nature of environmental safeguards activities has transitioned from active construction phase monitoring to focused post-construction management. Currently, there are no active construction or significant on-site activities underway. Consequently, environmental safeguards during this reporting period primarily focus on the resolution of environmental issues identified during the preceding construction phase and through subsequent close-out inspections.
31. A comprehensive action plan detailing these outstanding issues, along with proposed remedial measures has been meticulously prepared and formally submitted to the Contractor. This action plan serves as the guiding document for all ongoing environmental management efforts, ensuring the sustained environmental integrity of the project area. During the preparation of this plan, timeframes were discussed with the Contractor, and planned completion dates for each action item have been requested for the next plan revision. Once this update is received, the revised plan will be shared with the Road Department. Furthermore, during the plan's presentation, a map visually depicting the identified environmental issues, complete with embedded photographs, was shared with the Contractor. This interactive map can be accessed via <https://www.google.com/maps/d/u/0/edit?mid=16CPQ2vtsnGa5cT4df-TDYjHgOP4Oooc>. The full Post-Construction Environmental Action Plan is provided in Annex 1.

3.2 Site Audits

32. During this reporting period, site inspections for EMP compliance have continued to be carried out by the Engineer, although at a reduced frequency. These inspections compose of mainly field-based visual observations and review of information submitted by the Contractor. These activities focused on tracking the status of previously identified environmental issues (see Annex 1) and assessing on-site conditions during the ongoing close-out and reinstatement phase.
33. In line with the continued demobilization process, several reinstatement and site management activities were observed across the project area. Visual inspections confirmed that certain works have been finalized or are ongoing; however, in multiple locations the absence of detailed information from the Contractor limits the ability to fully verify compliance with project requirements and approved designs.

3.3. Issues Tracking

34. As defined in the Post-Construction Environmental Action Plan (PCEAP), the same key environmental issues remain subject to monitoring during this reporting period. These issues continue to represent critical elements for achieving full environmental compliance and final site closure. Based on visual inspections and available information from the Contractor, the current status of each issue is summarized below:
35. **River Protection Measures for Spoil Disposal Areas:** At Spoil Disposal Site No. 2, all relevant works have been concluded, and the National Property Agency has officially handed over the area to another contractor for the construction of an motoway service area. For Spoil Disposal Site No. 1, the current status cannot be fully assessed, as the Contractor has not yet submitted the required information and completed activity details. Submission of this information remains necessary to confirm compliance with river protection requirements.
36. **Riverbed and Riverbank Restoration:** At Bridge No. 3, riverbed works have been undertaken, including the construction of a channel. However, the final configuration must strictly comply with the approved design specifications, and additional post-construction reinstatement is required in the surrounding area. For all other riverbed locations, re-evaluation is required to confirm both environmental compliance and structural integrity.

37. **Temporary Storage of Spoil Materials:** Rehabilitation has been completed at the majority of Temporary Soil (TS) storage areas, with visible revegetation of topsoil observed during site inspections. Nevertheless, a follow-up inspection is required, with particular attention to TS-1, TS-3, and TS-4, to verify the effectiveness and completeness of rehabilitation measures.
38. **Drainage Management at Spoil Disposal Site No. 3:** Detailed information regarding the construction and current condition of interceptor and drainage channels at Spoil Disposal Site No. 3 has not yet been provided by the Contractor. Until this information is submitted, the adequacy of drainage management measures cannot be fully assessed.
39. **Batching Plant Wastewater Management:** Dismantling activities at the batching plant were carried out between late November and mid-December. Although some ponds and peripheral structures remain on-site, the batching plant is no longer operational, and wastewater discharge into the river has ceased. This represents a positive development; however, remaining structures should be addressed as part of final site closure.
40. **Hazardous Waste Disposal:** Disposal and removal of hazardous waste from the site have not yet commenced. This issue remains outstanding and requires immediate action to ensure compliance with environmental regulations and to prevent potential environmental and health risks.
41. **Scrap Metal and Unused Equipment Disposal:** While a significant quantity of scrap material has been removed from Interchange No. 1 and Interchange No. 2, a limited amount of scrap metal and unused equipment remains on-site. Immediate clearance of these materials is required to reduce environmental and safety risks and to support final site reinstatement.
42. **Tree Planting:** With regard to tree planting activities, the exact level of progress cannot be fully confirmed at this stage, as the most recent detailed status updates have not yet been submitted by the Contractor. Consequently, it is currently not possible to determine the precise extent of completion or to verify compliance with approved planting schedules, locations, and species selection. Submission of up-to-date progress information is therefore required to allow effective monitoring and verification of this mitigation measure.
43. **Abandoned Camp/Workshop Site Remediation:** While most worker camps have been vacated, the structures at Worker Camp No. 3 remain in place and require cleaning. In addition, the Workshop No. 2 area must be cleared of remaining materials and restored in line with project close-out requirements.
44. To date, the Contractor has not provided a comprehensive timetable or schedule for the completion of the outstanding activities listed above. The absence of a consolidated implementation timeline hinders effective monitoring of final site closure and reinstatement works.
45. Submission of a detailed and realistic completion schedule by the Contractor is therefore urgently required. This timetable is essential to track progress, verify compliance, and ensure the timely and orderly completion of all remaining environmental obligations under the Project.

3.4 Trends

46. N/A

3.5 Unanticipated Impacts or Risk

47. A key identified risk is the potential inability to execute the tasks outlined in the action plan with sufficient speed; therefore, project management must ensure that appropriate equipment and dedicated teams are promptly assigned to mitigate this.

4. RESULTS OF ENVIRONMENTAL MONITORING

4.1 Overview of the Monitoring Conducted During Current Period

48. During this reporting period, formal environmental monitoring activities, such as quantitative sampling or instrument-based surveys, were not undertaken. Environmental oversight was instead maintained through systematic visual inspections and a review of information partially submitted by the Contractor. These inspections focused on verifying the status of outstanding environmental issues identified in the Post-Construction Environmental Action Plan, with particular attention to site reinstatement works, waste management practices, spoil disposal areas, and river-related restoration measures.

4.2 Summary of Monitoring Outcomes

49. Visual inspections confirmed that certain close-out and rehabilitation activities have been initiated or completed at selected locations; however, the overall assessment of environmental compliance remains constrained by the lack of comprehensive and up-to-date documentation from the Contractor. While positive developments were observed—such as the cessation of batching plant operations and rehabilitation at several temporary soil storage areas—multiple issues remain unresolved or cannot be fully verified due to missing information and progress updates.

4.3 Waste Management

50. As identified in Section 3.3 and detailed in the Post-Construction Environmental Action Plan, waste management continues to represent a critical outstanding environmental issue during the Defect Notification Period. Key concerns include the delayed initiation of hazardous waste disposal activities and the incomplete removal of scrap metal and unused equipment from several project locations. Although limited progress has been observed at certain interchanges, significant quantities of waste materials remain on-site. Continued monitoring and prompt action by the Contractor are required to ensure full compliance and final site clearance.

4.4 Spoil Disposal

51. In accordance with Section 3.3 and the Post-Construction Environmental Action Plan, several remaining environmental issues are directly related to spoil disposal and associated river protection measures. While works at Spoil Disposal Site No. 2 have been completed and the area has been handed over to another contractor, the status of Spoil Disposal Site No. 1 and drainage arrangements at Spoil Disposal Site No. 3 cannot be fully assessed due to pending submissions from the Contractor. In addition, riverbed and riverbank restoration works, including those at Bridge No. 3, require further verification to ensure full compliance with approved designs and environmental standards.

4.5 Health and Safety

52. N/A

4.6 Training

53. N/A.

4.7 Social Management and Grievance Redress Mechanism

54. Although the project is in the DNP phase, social management-related studies are still ongoing.

55. A total of twenty-two (22) grievances were received during the reporting period, either directly from the local community or through the Employer. Of these, fifteen (15) grievances were related to damaged infrastructure/assets, six (6) grievances pertained to restrictions or loss of access, and one (1) grievance is related to Disturbance Due to Noise, Vibration and Dust, as detailed in Table 5. Out

of the twentytwo grievances, fifteen (15) have been resolved, seven (7) grievances are on hold due to technical reasons (i.e. the complainant's private properties subject to the grievances require continuous monitoring throughout the construction period). In case any deviation from the baseline measurement is observed during the monitoring, implementing of appropriate mitigation measures will be considered, no (0) grievances remain open pending resolution by the Contractor.

Table 5: Status of Grievances

Number of Complaints by Category:	Closed	Open	On Tech. Hold	Total
Damage to Infrastructure / Assets	8	0	7	15
Restriction or loss of access	6	0	0	6
Disturbance with noise, vibration and dust	1	0	0	1
Total	15	0	7	22

56. The details of the post-construction social management studies are given in the Social Safeguard Monitoring Report.

5. FUNCTIONING OF SEMP

5.1 SEMP Review

57. While the project has transitioned into the Defect Notification Period, certain components and principles of the Site-Specific Environmental Management Plan (SEMP) remain relevant and continue to guide general environmental practices. However, the primary focus of environmental management during this post-construction phase has shifted to the diligent implementation and tracking of the Post-Construction Environmental Action Plan. This action plan now serves as the principal framework for addressing all outstanding environmental issues and ensuring the project's final environmental close-out.

6. GOOD PRACTICES

6.1 Good Practices

- N/A

7. SUMMARY AND RECOMMENDATION

7.1 Summary

58. The Project remains within the Defect Notification Period, with all major construction activities completed and only limited close-out and reinstatement works ongoing. During this phase, environmental management efforts are primarily focused on addressing outstanding issues identified during construction and confirmed through post-construction inspections.
59. A comprehensive Post-Construction Environmental Action Plan (PCEAP) remains in force, outlining the key environmental issues that require resolution prior to final project close-out. These issues include river protection and riverbed restoration, spoil disposal site management (including drainage and rehabilitation), batching plant wastewater management, hazardous waste and scrap material disposal, tree planting and landscaping, and the remediation of abandoned camps and workshop areas.
60. Environmental oversight during the current reporting period has been carried out mainly through targeted visual inspections and limited review of information submitted by the Contractor. The effectiveness of this oversight is currently constrained by the absence of a consolidated completion schedule and detailed progress reports/information for several critical activities.
61. While certain positive developments have been observed—such as the dismantling of the batching plant, rehabilitation of most temporary soil storage areas, and the initiation of landscaping activities—the timely and complete implementation of all PCEAP actions remains essential to achieve full environmental compliance and final site closure.

7.2 Recommendations & Follow-up Actions

62. To ensure full environmental compliance and integrity of the Project upon completion of the Defect Notification Period, the following recommendations and follow-up actions are required:
63. **Strict Adherence to the Post-Construction Environmental Action Plan (PCEAP):** The Contractor must comply with all actions defined in the PCEAP and urgently submit a comprehensive and updated timetable for the completion of each outstanding environmental issue.
64. **Expedited Issue Resolution:** Priority should be given to unresolved issues, particularly hazardous waste disposal, scrap metal and equipment removal, incomplete spoil disposal site management, and outstanding remediation works at camps and workshops.
65. **Continued Monitoring of Remedial Works:** Regular visual inspections and follow-up reviews should be maintained to verify the adequacy and effectiveness of remedial measures related to river protection, riverbed restoration, and spoil disposal areas.
66. **Finalization of Site Reinstatement:** All remaining reinstatement activities, including cleaning and restoration of Worker Camp No. 3 and Workshop No. 2, as well as verification of temporary soil storage site rehabilitation, must be completed to ensure environmentally sound conditions.
67. **Confirmation of Wastewater and Tree Planting Compliance:** The Contractor should formally confirm the permanent closure of batching plant wastewater discharge arrangements and submit detailed progress information on tree planting and landscaping activities to allow verification against approved plans.

ANNEXES

Annex 1: Post-Construction Environmental Action Plan (PCEAP)

Item ID	Issue	Issue ID	Issue Location	Required Action/Task	Responsible Party	Target Completion Date	Actual Completion Date	Status	Progress Notes / Comments
1	River Protection for Spoil Disposal Areas	S-1	Spoil Disposal Site 1	- To effectively contain sediment and prevent erosion from spoil disposal areas, permanent control measures should be implemented. - Sediment barriers must be installed along the perimeter of all spoil disposal areas to intercept and contain any sediment runoff.	Contractor's Environmental Team, Contractor's Engineering Team	-	-	Open	
		S-2	Spoil Disposal Site 2	- Exposed slopes within the spoil disposal areas are particularly vulnerable to erosion and require stabilization. - Establishment and maintenance of a natural, undisturbed riparian buffer zone between the spoil disposal area and the river. - Reinstatement, topsoil replacement and revegetation of the disposal areas.	Contractor's Environmental Team, Contractor's Engineering Team	-	21.10.2025	Closed	The site has been environmentally stabilized and handed over to a third party by the Road Department for specific use.
2	Spoil Disposal Site Drainage Management	S-3	Spoil Disposal Site 3	A comprehensive drainage system must be designed for the spoil disposal site to effectively manage both surface water runoff and any potential seepage.	Contractor's Environmental Team	-	-	Partly Open	Drainage works have been initiated; however, the final channel construction remains outstanding.
3	Riverbed and Riverbank Restoration	R-1	Under the Bridge 2 (several locations)	- Any accumulated construction debris, sediment plugs that may be obstructing flow, and other unnatural obstructions should be carefully removed from the riverbed. Hard armoring techniques like rock riprap or gabions (rock-filled wire baskets) can provide immediate stabilization in areas experiencing high flow stress. - Enhancing the riparian zone, the vegetated area adjacent to the river, is critical for the long-term health of the river ecosystem	Contractor	-	-	Partly Open	River basin works have been conducted at specific locations, but a secondary inspection is required.
		R-2	Under the Bridge 3 (Borimila River)		Contractor	-	-	Partly Open	The existing channel has not yet reached the design length proposed by the Engineer. Completion of the channel and clearing of the riverbed are required.
4	Temporary Spoil Materials Storage Management	TS-1	Next to the road close to the interchange 4	- Erosion and sediment control measures should be taken. Ensure that proper drainage is maintained around the storage areas. - Topsoil replacement and vegetation.	Contractor	-	-	Partly Open	The Engineer must be formally notified regarding stability concerns at the designated temporary spoil disposal area.
		TS-2	Next to the Zestaponi ferro-alloy plant and its opposite (close to the Camp 6)		Contractor	-	-	Partly Open	The temporary spoil disposal area appears environmentally stable; however, a follow-up inspection is recommended.

		TS-3	Next to the Tunnel 5		Contractor	-	-	Partly Open	A reassessment of the drainage channels around the temporary spoil disposal area is necessary.
		TS-4	Between Tunnel 4 & 5 (2 locations)		Contractor	-	-	Partly Open	A reassessment of the drainage channels next to the temporary spoil disposal areas is necessary.
		TS-5	Next to the Batching Plant		Contractor	-	-	Partly Open	The temporary spoil disposal area appears environmentally stable; however, a follow-up inspection is recommended.
5	Batching Plant Wastewater Management	BP-1	Batching Plant	- Settling ponds will be cleared and the waste materials should be removed and the ongoing wastewater should be stopped. - At the final stage the batching plant should be dismantled and all settlings ponds should be cleared and returned to their original state.	Contractor	-	10.01.2026	Closed	The batching plant is decommissioned and dismantled. A final inspection of the sedimentation ponds and remaining structures is required.
6	Hazardous Waste Disposal	HW-1	Hazardous Waste Storage Area	All segregated hazardous waste should be sent to a licensed and certified hazardous waste management company. This item is crucial and requires immediate and focused attention	Contractor, Specialized Waste Management Company	-	-	Open	
		HW-2	Fuel Storage Area (Batching Plant)		Contractor, Specialized Waste Management Company	-	-	Open	
7	Scrap Metal Disposal	SM-1	Interchange 1 (Batching Plant Area + under the Bridge 3)	All scrap metals should be sent to a licensed recycle company	Contractor, Scrap Metal Recycling Company	-	-	Partly Open	Partial removal of scrap metal has been completed; the remaining material must be cleared from the site.
		SM-2	Interchange 2 (Workshop 2 and storage sites around it)		Contractor, Scrap Metal Recycling Company	-	-	Partly Open	Partial removal of scrap metal has been completed; the remaining material must be cleared from the site.
8	Abandoned Camp/Workshop Site Remediation	WC-1	Worker Camp Site 1	- A site assessment should be conducted to determine the extent of any contamination present. - A detailed cleanup should be made with the removal of all remaining waste, debris, and any abandoned equipment from the camp site. - Once the camp site has been thoroughly cleaned of all waste and debris, the site should be restored (depending on the owner's decision).	Contractor	-	21.10.2025	Closed	This area has been reinstated and handed back to the owner for use by another firm.
		WC-2	Worker Camp Site 2		Contractor	-	10.01.2026	Closed	Reinstatement works have been completed.
		WC-3	Worker Camp Site 3		Contractor	-	-	Partly Open	Reinstatement works for this area have not yet fully completed.
		WC-4	Worker Camp Site 4		Contractor	-	10.01.2026	Closed	Reinstatement works have been completed, and the site has been formally returned to the owner.
		WC-5	Worker Camp Site 5		Contractor	-	21.10.2025	Closed	Reinstatement works have been completed, and the site has been formally returned to the owner.
		WC-6	Worker Camp Site 6		Contractor	-	10.01.2026	Closed	Reinstatement works have been completed, and the site has been formally returned to the owner.
		WS-1	Workshop 1		Contractor	-	10.01.2026	Closed	Reinstatement works have been completed.
		WS-2	Workshop 2		Contractor	-	-	Partly Open	Reinstatement works for this area have not yet commenced.
		WS-3	Steelshop 1		Contractor	-	-	Partly Open	Reinstatement works for this area have not yet commenced.

9	Tree Planting	T-1	All required ares	Tree planting should be initiated and finished according to the Tree compensation plan	Contractor, Landscaping Subcontractor	-	-	Open	
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Annex 1: Photos from the

Before	After
	
Spoil Disposal 1 (facing North East)	Spoil Disposal 1 (facing North East)
	
Spoil Disposal 1 (facing South East)	Spoil Disposal 1 (facing South East)

				
Riverbed/bank Restoration Loc 5.		Riverbed/bank Restoration Loc 5.		

	
Riverbed/bank Restoration Loc 6.	Riverbed/bank Restoration Loc 6.



Temp Spoil Disposal 1



Temp Spoil Disposal 1





Temp Spoil Disposal 2/1 – 2/2



Temp Spoil Disposal 2/1 – 2/2

				
Temp Spoil Disposal 3			Temp Spoil Disposal 3	



Drainage Channel Structure for Spoil Disposal Site 3



Drainage Channel Structure for Spoil Disposal Site 3



Batching Plant



Batching Plant



Hazardous Waste Storage Area



Hazardous Waste Storage Area



Worker's Camp No:2



Worker's Camp No:2



Worker's Camp No:4



Worker's Camp No:4



Worker's Camp No:6



Worker's Camp No:6

