

Environmental Monitoring Report

Project Number: 45389-004
February 2019

AZE: Second Road Network Development Investment Program, Tranche 2

Prepared by Azerbaijan Automobile Roads State Agency for the Republic of Azerbaijan and the Asian Development Bank.

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ABBREVIATIONS

ADB	–	Asian Development Bank
AAA	–	AzerAvtoYol
BEMR	–	Biannual Environmental Monitoring Report
EIA	–	Environmental Impact Assessment
EMP	–	Environmental Management Plan
EPM	–	Environmental Protection Manager
GRM	–	Grievance Redress Mechanism
PIU	–	Project Implementation Unit
PPE	–	Personal Protective Equipment
RoW	–	Right of Way
SSEMP	–	Site-Specific Environmental Management Plan

WEIGHTS AND MEASURES

m	–	Metre
km	–	Kilometre

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I. INTRODUCTION

A. Introduction to Project

1. The Project, a 30Km section of the Alat-Astara Motorway (M3), commences at the Bilasuvar Interchange (Km80+600) and runs in a generally south westerly direction ending at the Jalilabad Interchange (Km 110+700). It forms part of the road connection from Baku to the Iranian border (Astara). The road alignment passes through the Mahmudchala and Akchala wetlands.
2. The Implementing Agency for the project was the Azerbaijan Automobile Roads State Agency (AAR) formerly AzerAvtoyol Open Joint Stock Company (AOJSC).
3. An Environmental Impact Assessment (EIA) was carried out for the project in 2007 and included an Environmental Management Plan (EMP) that set out the environmental requirements for the project. The EIA report was approved by AAR and Asian Development Bank (ADB) in 2012¹, and has served as a basis for the development of the specification and contract documents, and for the preparation of the Contractor's Site-Specific Environmental Management Plan (SSEMP).
4. The Supervision Consultant (SC) appointed by AOJC was TERA International Group. Inc. (TERA). The Contract was Design and Build (DB)² and the Construction Contractor (CC) was Kolin Construction Tourism Industry and Trade Co. Inc. (Kolin).

B. Project Details

1. The Project, a 30Km section of the Alat-Astara Motorway (M3), commences at the Bilasuvar Interchange (Km80+600) and runs in a generally south westerly direction ending at the Jalilabad Interchange (Km 110+700). It forms part of the road connection from Baku to the Iranian border (Astara). The road alignment passes through the Mahmudchala and Akchala wetlands. The location of the alignment within Azerbaijan is shown in **Error! Reference source not found.**

¹ ADB project 45389-001 in Azerbaijan. Second Road Network Development Investment Program: Masalli (Sarcuvar) Interchange to Shorsulu (Bilasuvar) Interchange. <http://www.adb.org/projects/documents/second-road-network-development-investment-program-masalli-to-shorsulu-interchange-eia>

² Design and Build is a method to deliver a project in which the design and construction services are contracted by a single entity (the Design and Build Contractor in this case is the CC (Kolin)).

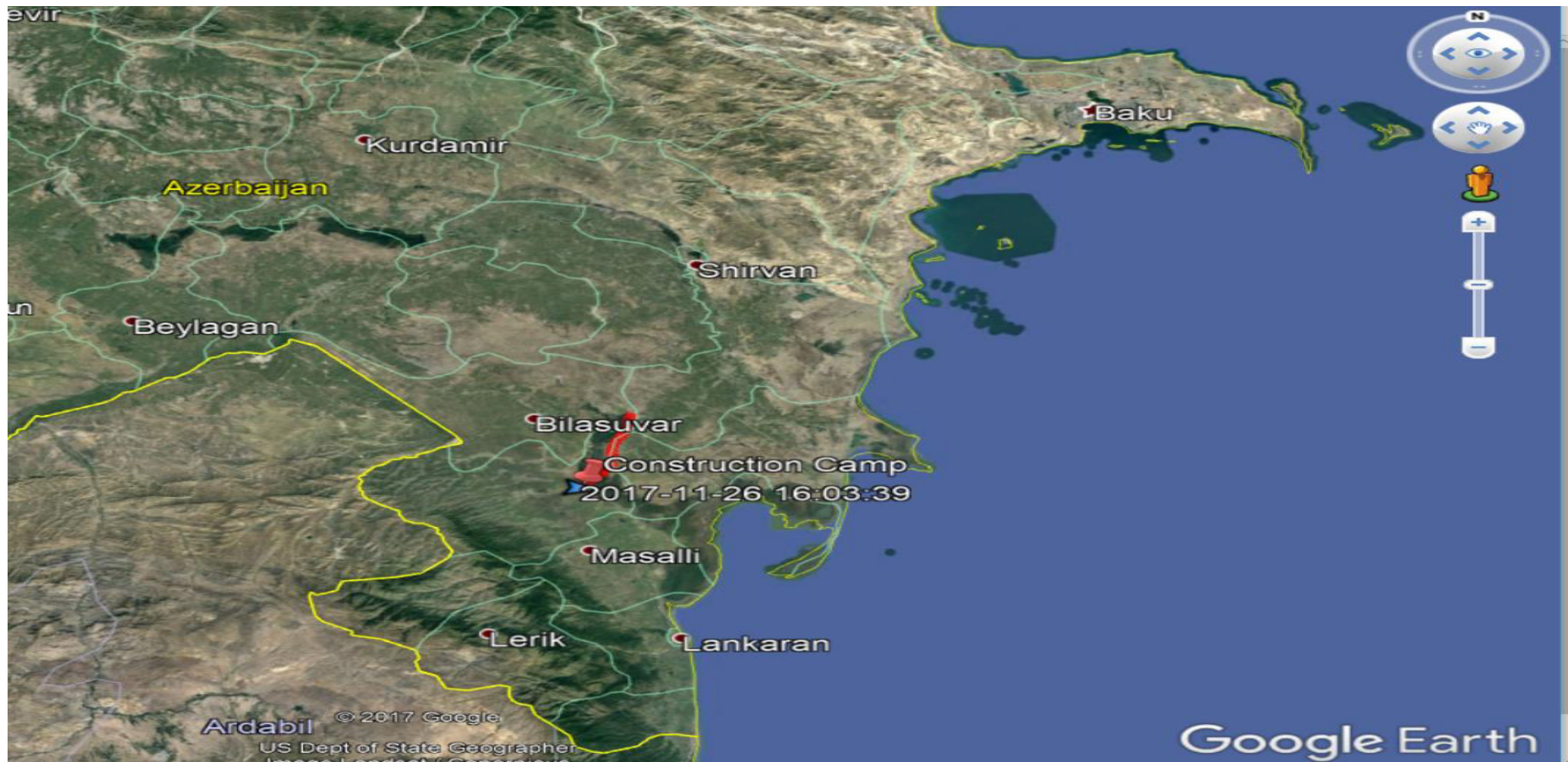


Figure 1: Location of the alignment within Azerbaijan

C. Objectives of Final Environmental Reporting

1. The purpose of the Final Environmental Monitoring Report is to provide an overview of the history of environmental management and monitoring throughout the project construction period, and to report on the status of final project-end activities such as site reinstatement.

D. Methodology

1. The BEMR were prepared by reviewing and extracting key information from a number of sources, as follows:

In preparing this document the following reports were referenced:

- Project Environmental Impact Assessment (2012);
 - Site Specific Environmental Management Plan (KOLIN 2016)
 - SSEMP for Akchala & Mahmudchala Wetlands (KOLIN 2016)
 - SSEMP Quarterly Report 9 [Jan to March 2018] (KOLIN 2018)
 - SSEMP Quarterly Report 10 {Apr to June 2018} (KOLIN 2018)
 - Air Quality Noise and Vibration Monitoring Feb 2018 (KOLIN 2018)
 - Air Quality Noise and Vibration Monitoring May 2018 (KOLIN 2018)
 - Water Quality Monitoring Report June 2018 (KOLIN June 2018)
 - 8th AIDS Training for Construction Workers February 2018 (KOLIN 2018)
 - 9th AIDS Training for Construction Workers May 2018 (KOLIN 2018)
 - 5th Public Consultation for People located near the Project Road – Feb 2018 (KOLIN 2018)
 - Monthly Environmental Management Reports #22 to #26 – Jan to May 2018 (KOLIN 2018)
 - Monthly Progress Reports – Jan to June 2018 (KOLIN 2018)
 - Site Audits by TERA
 - Complaints Log (Held by KOLIN)
 - Grievance Redress Mechanism Log (Held by TERA)
 - Turtle Log (KOLIN 2018)
 - Minutes of Monthly Progress Meetings 2018
2. The Final Environmental Monitoring Report was prepared using the above resources, in addition to a review of all previous reports, and a final site audit.
 3. Project works under the reporting period included post construction works such as:
 - Demobilization of campsite and workshop facilities
 - Reinstatement and restoration works along the whole alignment and at project facilities

E. Project organization and environmental management team

1. The two contracts were managed as follows from the perspective of environmental safeguards:
 - The Owner's (AAY) Project Implementation Unit (PIU) included one Environmental Specialist, responsible for oversight of the environmental safeguards aspects of the project, and charged with liaison with the Engineer's and ADB's environmental management teams. The AAY specialist was also responsible for reporting to ADB.
 - Each contractor had an Environmental Protection Manager (EPM) as part of their site team. The EPM was responsible for preparing the SSEMP, obtaining the required permits and approvals, managing the Grievance Redress Mechanism (GRM), implementing public consultations, managing instrumented monitoring, conducting site audits and training, and preparation of quarterly environmental management reports during the construction period.
4. The Engineer's and AAY's environmental management teams worked closely and successfully throughout the project implementation. Likewise, the contractor EPMs coordinated and liaised with AAY and the Engineer throughout the work during the construction period.
5. Though the internal organization of the two contractors changed during the implementation period, indicative organization charts are provided below:

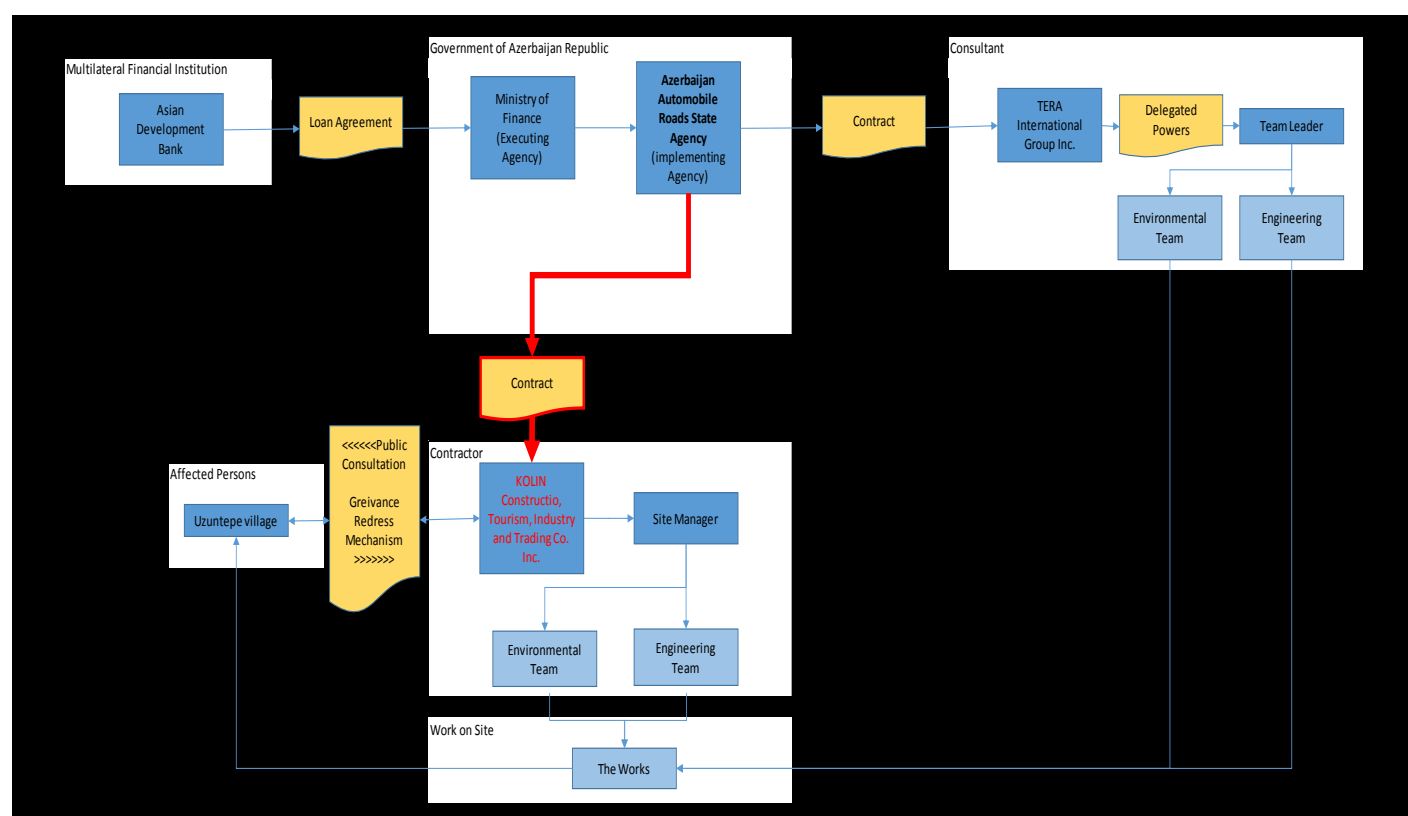


Figure 2: Organization Structure for the Project

II. ENVIRONMENTAL SAFEGUARDS DURING PROJECT PREPARATION AND CONTRACTOR MOBILISATION

1. An Environmental Impact Assessment (EIA) was carried out for the project in 2007 and included an Environmental Management Plan (EMP) that set out the environmental requirements for the project. The EIA report was approved by AAR and Asian Development Bank (ADB) in 2012³, and has served as a basis for the development of the specification and contract documents, and for the preparation of the Contractor's Site-Specific Environmental Management Plan (SSEMP).
2. During the preparation of tender documents, the Engineer worked with AAY and ADB to ensure that the Contract Specification and Special Conditions of Contract included sufficient provisions to ensure an acceptable level of environmental protection and management by the contractors. These provisions included, *inter alia*:
 - Requirement for Site-Specific Environmental Management Plan (SSEMP);
 - Obligation of contractors to implement mitigation measures described in the SSEMP;
 - Requirement for pre-construction monitoring and regular monitoring during implementation;
 - Requirement for pre-construction site condition photos;
 - Requirement to hire Environmental Protection Managers; and
 - Numerous site rules, for example relating to effluent discharge, waste management, dust management etc.
3. Numerous permits and licenses were required prior to construction, including for:
 - Water abstraction;
 - Waste disposal; and
 - Borrow pit opening and operation and others
4. The above and all other required permits were all obtained by the contractors, and included in their respective SSEMPs. In addition, various contracts were set up with local suppliers, for example waste management services, liquid waste removal and land agreements at the beginning of the project. The project and reinstatement were completed totally.
5. Throughout project implementation, the Engineer provided environmental management support and auditing, via a combination of local on-site presence and short term visits from an international specialist. Biannual Environmental Monitoring Reports were prepared every six months by AAY, supported by the Engineer. The overall environmental management task was carried out with close liaison between AAY, the Engineer and ADB, and a summary of the procedures and outcomes during the construction period.

³ ADB project 45389-001 in Azerbaijan. Second Road Network Development Investment Program: Masalli (Sarcuvar) Interchange to Shorsulu (Bilasuvur) Interchange. <http://www.adb.org/projects/documents/second-road-network-development-investment-program-masalli-to-shorsulu-interchange-eia>

III. ENVIRONMENTAL SAFEGUARDS DURING PROJECT IMPLEMENTATION

A. Introduction

The Supervision Consultant (SC) appointed by AAY OJC was TERA International Group. Inc. (TERA). The Contract was Design and Build (DB)⁴ and the Construction Contractor (CC) was Kolin Construction Tourism Industry and Trade Co. Inc. (Kolin).

1. The relationships between Funding Agency (ADB), Implementing Agency (AzerAvtoyol), Supervision Consultant (TERA) and Construction Contractor (Kolin) were considered to be normal working relationships during the construction period.
2. The Engineer's supervision of the contractors' environmental management included the following tasks and responsibilities during the construction period:
 - Advice and assistance with preparation of SSEMPs, GRM and other documents/management systems;
 - Review and approval of SSEMPs, instrumented monitoring results, and quarterly reports;
 - Regular auditing of all work sites, camps and facilities to check for compliance with SSEMP (covering presence and function of physical mitigation measures, the correct application of mitigation actions, and the absence of prohibited actions);
 - Regular auditing of contractor documentation, licences & permits, public consultations and GRM implementation;
 - Provision of advice to contractors for remedial actions and improvements following non-compliance;
 - Provision of general advice and troubleshooting to AAY and the Engineer's site team;

B. Summary of Contractor Environmental Management

1. The EMS for the project functions procedures identified in the SSEMP that was based on the EIA including the Contractors operating procedures and site specific information, that was not known when the EIA was prepared. The SSEMP was made up of a series of four Management plans for Camp operations, Workshop, Plant operation and Road Construction and supporting plans for environmental indicator areas
2. The road is being used from September, 2018
3. There has not been any complaint during the reported period as the project was completed. The road is being used from September, 2018.

⁴Design and Build is a method to deliver a project in which the design and construction services are contracted by a single entity (the Design and Build Contractor in this case is the CC (Kolin)).

C. Key Issues and Non-Compliances

1. There have not been any “non-conformity” during the reported period as the project was completed. The road is being used from September, 2018.

D. Health and Safety

1. There have not been held any Health and Safety training as the project was completed. The road is being used from September, 2018.

E. Inspections, Audits and Documentation

1. The document comprising a series of one page sheets covering specific aspects of the work. The Road construction is fully complete, with all sections asphalted and central reservations completed. During the reported period PIU and SC environmentalists have made monthly site visits in order to monitor the reinstatement and restoration works and there have not been found any non-conformity. All works were implemented according to the requirements and according to the best practices.

F. Consultations

1. There have not been held any Public consultation because the project was completed, the road is in use from September, 2018.

G. Grievance Redress Mechanism

1. The Grievance Redress Mechanism (GRM) was included in the EMP and had been developed in the Kolin SSEMP. During the construction period A Grievance Focal Point had been established for the Uzuntepe – Celilabad Area with two hotlines. A complaints’ register was held in the KOLIN offices at Camp and the GRM log was held in the TERA office at Camp

IV. FINAL AUDIT (JANUARY 2019)

A. Introduction

1. The project was completed, the road is being used from September, 2018.
2. The works took place within the bounds of the SSEMP and contract specifications, and that site reinstatement was carried out correctly and the reinstatement was totally completed in August,2018.
3. All works including embankments, bridges, asphaltting, line painting, installation of signage, fencing and clearing of the RoW were finished.

B. Reinstatement

2. The Road construction is fully complete, with all sections asphalted and central reservations completed. All along the alignment, the Right of Way has been smoothed, and compacted where necessary. The site was found to be clean and tidy, with no evidence of waste, equipment, or materials from the construction works.
3. The borrow pits Yardimli and Asurlu (rock), Alar and Sabirabad (Sand) were totally completed and the following figure shows the current status of the sites (January,2019).



Yardımlı borrow pit



Ashurlu borrow pit



Alar borrow pit



Sabirabad borrow pit

4. Culverts inspected were all clear and running, and vegetation is starting to re-establish itself on worked ground.

5. Main road section itself is open to traffic during the audit, the local road crossings and flyovers were open, and were well trafficked.
6. The project was completed, the road is being used from September, 2018:

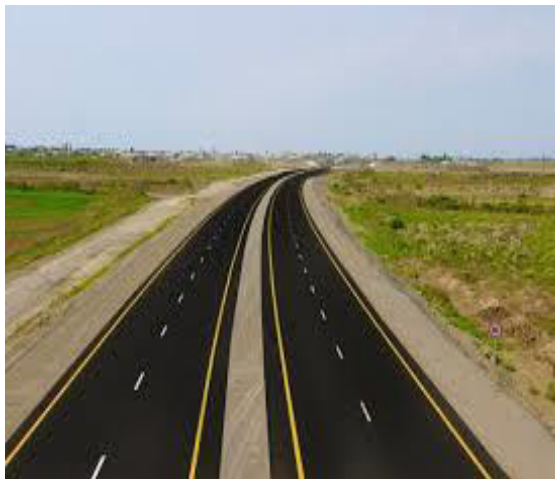


Table 2: Final Audit Checklist

No.	Activity	Impacts	Final Mitigation Measures	Check	Measures Implemented
1.	Project site rehabilitation	Change of land cover, erosion resulting from the construction activities	Adequate forming and scraping with drainage	✓	All RoW correctly formed and shaped. Drainage clear and operational
			Vegetation re-establishment	✓	Underway
2.	Top soil management	Erosion of soil	Storing and managing removed topsoil for re-use for landscaping activities	✓	All stockpiles have been removed and areas restored
3.	Waste management	Waste accumulation, air and soil pollution	Collect and disposal all wastes including construction debris at designated location;	✓	ALL areas are clean and free of solid and liquid wastes.
4.	Traffic management	Hazards and safety issues related to traffic	Public access and access to the housing, shops, business and public activities	✓	Local roads and crossings are all open. All diversions and temporary access roads are removed/reinstated.
			Appropriate signage is installed	✓	Installation of signage completed.
5.	Road reinstatement	Road damages causing pollution, traffic disturbance and accidents	Streets with installed network reinstated to pre-construction or better conditions,	✓	All reinstatement is fully complete.
6.	Borrow sites and quarries	Land slide, soil erosion, change in riverbed and landscape, accidents	Borrow sites and quarries restored	✓	Final reinstatement completed.
7.	Existing Infrastructure facilities	Damage or disturbance to existing services (supply of electricity, water, gas, telecom etc.)	Reinstatement to pre-construction conditions or proper relocation, to be certified by the service companies	✓	All relocations have been successfully carried out
8.	Camp site facilities	Residual pollution and disturbance to the localities	All temporary/field plants (asphalt, concrete, crushing, etc.) have been dismantled and removed.	✓	Final reinstatement of camp complete.
			Permanently operating plants (asphalt, concrete, crushing, etc.) have been properly handled and closed/surrendered.	✓	
			All temporary facilities removed and cleaned up	✓	
9.	GRM	Complaints from Affected People	All grievances have been solved and AP's satisfied	✓	All grievances are satisfactorily resolved

V. CONCLUSIONS

1. The most important task for the Contractor was related to post-construction works (to demobilize all its equipment and ensure that the camp site was reinstated without any significant pollution incidents or accidents). No significant pollution events had occurred during this stage of the project and completion of construction works.
2. The construction was completed and project closed, avoided harm to the environment, followed up inspections taken for restoration of borrow pits
3. The Contractor complied the environmental safeguard requirements. ADB and the Engineer provided technical support to the Contractor as needed and followed up on full accomplishment of post-construction environmental management and cleaning works by the Contractor such as reinstatement of borrow pits and camp areas as per the findings of the post-construction inspections.
4. The project was totally completed and the road is being used from September 2018.