

Bi-Annual Environmental Monitoring Report

Project Number: 45389-004
July 2017

AZE: Second Road Network Development Investment Program, Tranche 2

Prepared by AzerAvtoyol Open-Joint Stock Company for the Republic of Azerbaijan and the Asian Development Bank.

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CURRENCY EQUIVALENTS

(As of 1 June 2017)

Currency Unit – Azerbaijan New Manat (AZN)

AZN 1.00 = USD 0.5926

USD 1.00 = AZN 1.6876

ABBREVIATIONS

ADB	–	Asian Development Bank
AAY	–	AzerAvtoyol Open Joint Stock Company
EIA	–	Environmental Impact Assessment
EMP	–	Environmental Management Plan
EMS	–	Environmental Management System
GRM	–	Grievance Redress Mechanism
SEMP	–	Site Environmental Management Plan

WEIGHTS AND MEASURES

cm	–	centimeter
km	–	kilometer
l	–	liter
m	–	meter
mg	–	milligram

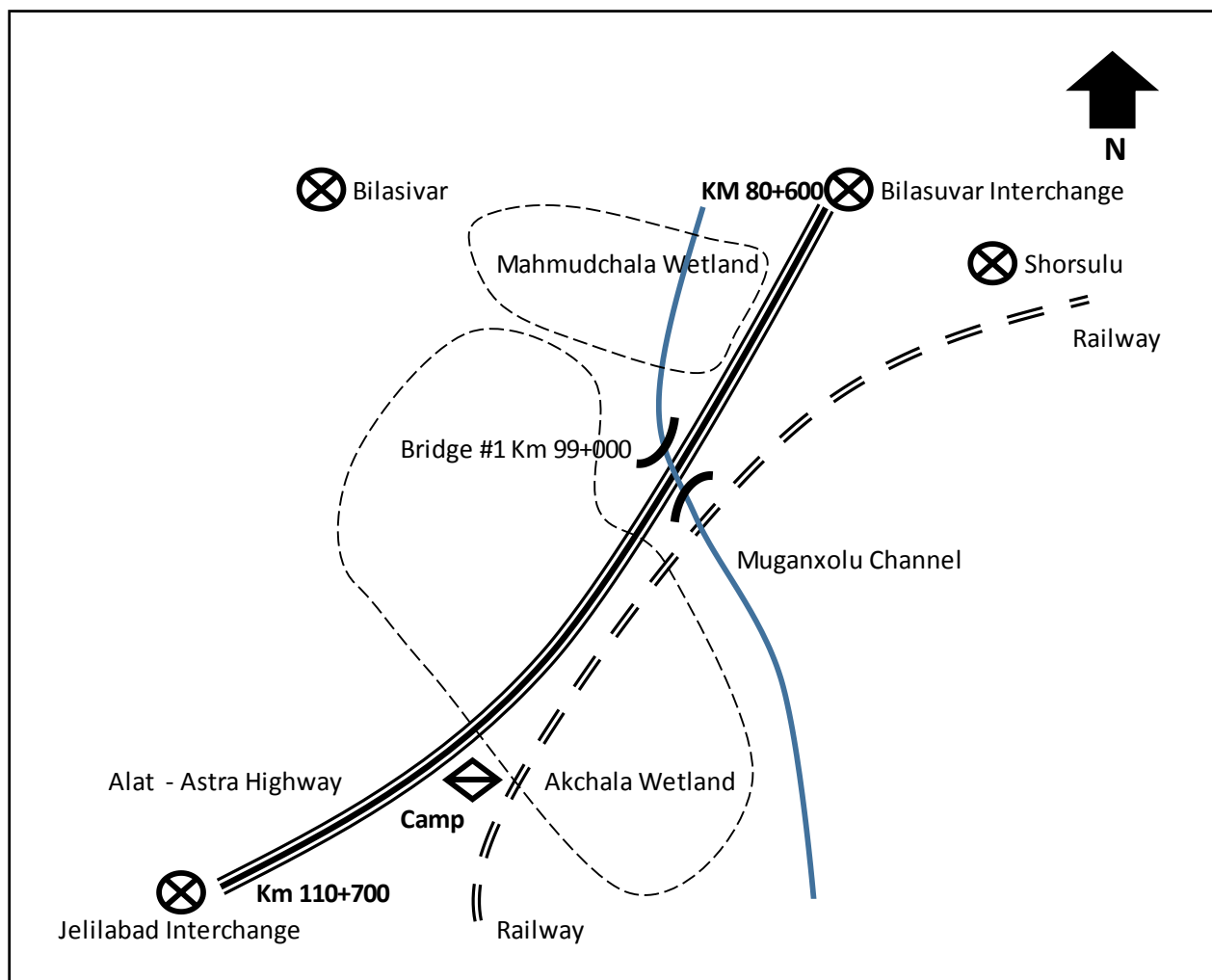
Part I - Introduction

1.1. Construction activities and project progress during the previous 6 months

i. General information

1. The Contract, which comprises sections 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 (at Astara). The road alignment passes through the Mahmudchala and Akchala wetlands. A schematic arrangement of the project is presented in the following figure.

Figure 1: Schematic arrangement of the alignment



2. The Executing Agency for the project is the AzerAvtoyol Open Joint Stock Company.
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 AzerAvtoyol 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 (SEMP). The SEMP includes a set of 4 main plans (Camp, Workshop, Plant Operation and Road Construction) and 8 sub plans (Water, Air Pollution, Noise, Waste, Soil, Site Drainage, Borrow Pit, Flora & Fauna and Cultural and Archaeological Find and Grievance Redress Mechanism).

4. The Supervision Consultant (SC) appointed by AzerAvtoyol is TERA International Group. Inc. (TERA). The Contract is Design and Build (DB)² and the Construction Contractor (CC) is Kolin Construction Tourism Industry and Trade Co. Inc. (Kolin).

ii. Objectives of Biannual Environmental Reporting

5. The purpose of the Bi-annual Environmental Monitoring Reports is to provide a summary of the key issues relating to environmental management over the past six months. The summary includes an update on overall project progress, the status of Site Environmental Management Plan (SEMP) implementation, any progress made with environmental management, environmental monitoring results, and other relevant issues such as non-compliance and corrective actions, and monitoring of the Grievance Redress Mechanism (GRM).

iii. Progress

6. The 30.1 Km. site has been handed over to the CC and Formation of Embankment in both wetland area by rock material and dry area with sand material are being carried out over 20.7 Km. In addition, manufacturing of Pipes, Construction of Pipe & Box Culverts, Road Underpasses, Pre-stressed Girders, Test Piles, Working Piles, Piers, Transoms, laying of capping layer etc. are in progress. General construction items and materials have been procured. Aggregate production for subbase and asphalt is in progress which will enable the Contractor to start the asphalt activities without any lack of material.
7. Progress of work powered up from March up to June 2017. Due to hot and suitable weather condition in the first period of the year, the Contractor is believed to have the resources to accelerate progress and reach the planned completion date.
8. Kolin has acquired a lease on land at km110 +700 and established a construction camp and manufacturing area.
9. The CC has transported material from, Alar quarry, Sabirabad Quarry, and Bahramtapa Quarry

¹ADB 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>

²Design 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 the CC (Kolin).

Table 1: Progress by percentage of contract sum

		Notes
Contract Time Elapsed (up to the end of June 2017)	529 Days	
Planned Progress (1 st submission document)	55.58%	
Actual progress (Revised cash flow subject to approval)	49.48%	

1.2. Changes in project organization and environmental management team

10. The organization structure is shown in the following figure.

Figure 2: Organization Structure for the Project

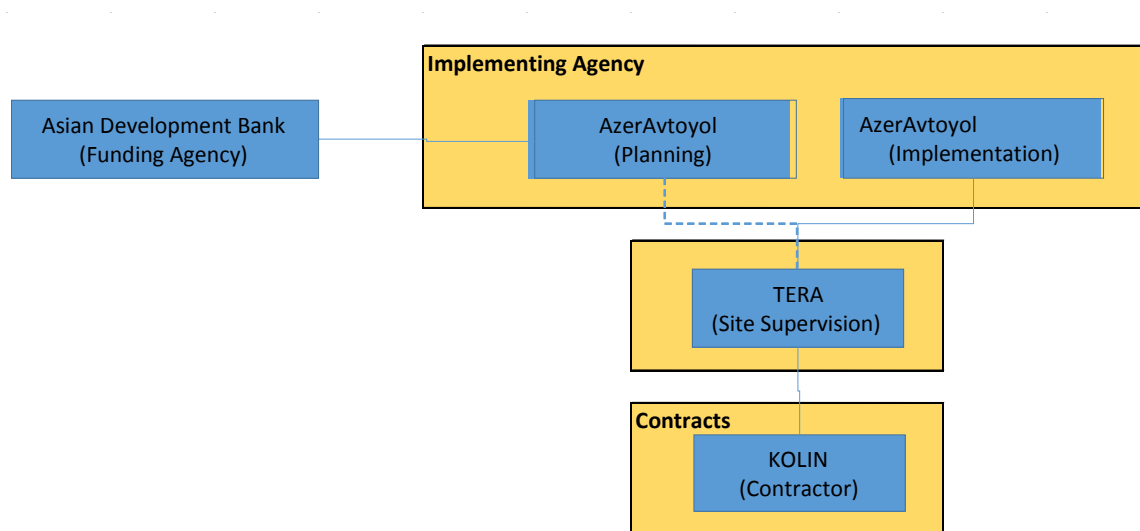


Table 2: Environmental Management Team active on project

Organization	Name	Title	Responsibilities	On project
AzerAvtoyol OJC PIU	Yusif Atakishiyev	Environmental Specialist	Overall management of the environmental safeguards in project	Since the beginning
TERA (SC)	Andrew Taylor	International Environmental Specialist	Confirming acceptable levels of environmental performance on site	(1) 31 Mar 2016 to 28 Apr 2016 (2) 17 Nov 2016 to 27 Nov 2016.
	Alizamin Mustafayev	National Environmental Specialist	Day to day observation and recording of environmental performance on site of	From 11 Feb 2016 to date
	Prof. Luca Luiselli	Turtle Expert	Assessment of turtle population on site and production of Turtle Action Plan	25 Apr 2016 to 7 May 2016
KOLIN (CC)	Hafiz Abilhasanov	Environmental Manager	Day to day implementation of SSEMPs	Full time
	Elchin Kerimov	Health and Safety Officer	Day to day implementation of SSEMPs	Full time
		Turtle Catch Group	Implement the turtle management plan and ensure fencing, notices and workers are aware of turtle issues	

1.3. Relationships with contractors, owner, lender, etc.

11. The relationships between Funding Agency (ADB), Implementing Agency (AzerAvtoyol), Supervision Consultant (TERA) and Contractor (Kolin) are considered to be normal working relationships.

12. At the working level, communication with regards to environmental issues remains good and interaction with the public is good.

Table 3: Environmental subcontractors active on the project

Activity area	Organization	Description of work
Laboratory	KOLIN	The CC (KOLIN) operate a materials testing facility in the construction camp. The facility is audited by TERA under the requirements of the Quality Plan. There is no environmental testing carried out onsite by KOLIN
Environmental Monitoring	AKO group of Azerbaijan	Carry out noise, air and water quality sampling. Water quality testing is carried out by the Azerbaijan National Laboratory
Waste Management	Local responsible authority	Collect waste from transfer station on camp and transport it to disposal facility

Part II - Environmental Monitoring

13. Preconstruction monitoring of Air Quality, Water Quality, Noise and Vibration took place on 7th February 2016. The monitoring comprised six air quality, noise and vibration monitoring locations and one water quality site at Muganxolu channel (upstream and downstream from Bridge No1 Km 99+000). The six air, noise and vibration monitoring points are at three locations in Uzuntepe Village (immediately east of the camp), the sand borrow pit (located north of Uzuntepe Village) and two locations at the Vilash rock borrow pit (south of Bambashi Village). The first round of construction phase monitoring was carried out on May 21, 2016 and an interim sampling exercise was carried out in November 2016. In the first period of the year construction phase monitoring was carried out on February 18, 2017 and on May 21, 2017.
14. In addition to daily informal monitoring by the TERA and KOLIN environmental teams there is a joint weekly inspection by TERA and KOLIN at the camp and working sites. Observations are that work was being carried out in accordance with the environmental requirements of the EIA its EMP and the SSEMP. There were no environmental non-conformities recorded in the reporting period.

2016 year

The first round of construction phase monitoring was carried out on May 21, 2016.

The second round of construction monitoring was carried out on August 06,2016.
The third round of construction monitoring was carried out on November 13,2016

2017 year

The fourth round construction monitoring was carried out on February 18,2017.
The fifth round construction monitoring was carried out on May 21,2017.

The next monitoring was scheduled to be hold on August,2017.

15. In addition to daily informal monitoring by the TERA and KOLIN environmental teams there is a joint weekly inspection by TERA and KOLIN at the camp and working sites. Observations between January and June,2017 are that work was being carried out in accordance with the environmental requirements of the EIA its EMP and the SSEMP. There were no environmental non-conformities recorded in the reporting period.

i. Results

16. The following tables set out the results of the pre-construction environmental monitoring programme.

Table 4: Water Quality Monitoring Results (at Muganxolu channel)

Parameter	Units	Upstream	Downstream	Allowable
pH		6.8	7.0	6.0 – 9.0
Conductivity	X10 ³ cm/cm	0.180	0.182	-
Limpidity	cm	16.7	16.8	>30
Turbidity	mg/l	18.4	18.6	>30
Dissolved Oxygen O ₂	mg/l	4.1	4.2	4.6 – 6.0
BOD	mg/l	2.3	2.4	3
Roughness		5.1	5.2	7.0
Calcium Ca ²⁺	mg/l	128.1	129.0	180
Magnesium Mg ²⁺	mg/l	43.2	43.4	200
Chloride Cl ⁻	mg/l	144.8	145.0	350
Sulphate SO ₄ ²⁻	mg/l	221.3	221.4	500
Bicarbonate HCO ₃ ⁻	mg/l	198.2	198.4	-
Na ⁺ & K ⁺	mg/l	168.4	167.8	-
Sum of Ions	mg/l	904.0	905.1	1000
Ammonium NH ₄ ⁺	mg/l	0.434	0.435	0.39
Nitrite NO ₂ ⁺	mg/l	0.012	0.012	0.02
Nitrate NO ₃ ⁺	mg/l	6.4	6.6	9.0
Oil & grease	mg/l	0.002	0.002	0.05
E-coli	Per liter	837	840	1000
Total SS	mg/l	0.238	0.240	0.25
SSAM	mg/l	0.03	0.04	0.1
Phenol	mg/l	0.0001	0.0001	0.001

Table 5: Air Quality Monitoring Results

	Close to the Camp (Uzuntepe village)												Vilash Borrow (Banbashi Village)					
	N of camp			E of Camp			SE of camp			S of sand borrow			N of Borrow			NE of Borrow		
Units (mg/m ³)	Dust	NO ₂	CO	Dust	NO ₂	CO	Dust	NO ₂	CO	Dust	NO ₂	CO	Dust	NO ₂	CO	Dust	NO ₂	CO
Allowable	0.5	0.085	5	0.5	0.085	5	0.5	0.085	5	0.5	0.085	5	0.5	0.085	5	0.5	0.085	5
09:00 7 Feb 16	0.1	0.32	1	0.1	0.034	1	0.1	0.035	1	0.2	0.038	2	0.2	0.039	2	0.2	0.036	2

Table 6: Noise Monitoring Results

	Close to the Camp (Uzuntepe village)				Vilash Borrow (Banbashi Village)	
	N of camp	E of Camp	SE of camp	S of sand borrow	N of Borrow	NE of Borrow
Allowable	70	70	70	70	70	70
09:00 7 Feb 16	59.4	50.0	56.7	59.4	52.2	57.5

Table 7: Vibration Monitoring Results

	Close to the Camp (Uzuntepe village)				Vilash Borrow (Banbashi Village)	
	N of camp	E of Camp	SE of camp	S of sand borrow	N of Borrow	NE of Borrow
Allowable	77	77	77	77	77	77
09:00 7 Feb 16	65	56	63	65	57	64

The following tables set out the results of the May and November 2016 environmental monitoring programme

Table 8: Water Quality Monitoring Results (at Muganxolu channel)

- No work, so no monitoring carried out in February or May 2017. Note that weekly site audits include reporting markers for visual indicators of silty runoff

Table 9: Air Quality Monitoring Results

	Close to the Camp (Uzuntepe village)											
	N of camp			E of Camp			SE of camp			S of sand borrow		
Units (mg/m ³)	Dust	NO ₂	CO	Dust	NO ₂	CO	Dust	NO ₂	CO	Dust	NO ₂	CO
Allowable	0.5	0.085	5	0.5	0.085	5	0.5	0.085	5	0.5	0.085	5
18,February 2017	0.1	0.37	1	0.3	0.039	1	0.1	0.0039	1	0.1	0.042	2
21May 2017	0.3	0.048	2	0.2	0.050	2	0.2	0.045	2	0.3	0.042	2

18. All compliant. Note that the weekly site audits include reporting markers for visual impacts of dust. Given the open arrangement of the alignment (for dispersion) and the good standard of equipment vehicle exhaust emissions are not anticipated to be a problem on this project.

Table 10: Noise Monitoring Results

	Close to the Camp (Uzuntepe village)			
	N of camp	E of Camp	SE of camp	S of sand borrow
Allowable	70	70	70	70
18 February 2017	52.3	47.4.	46.8	48.5
21 May 2017	49.3	48.6	45.7	48.2

Table 11: Vibration Monitoring Results

	Close to the Camp (Uzuntepe village)			
	N of camp	E of Camp	SE of camp	S of sand borrow
Allowable	77	77	77	77
18 February 2017	58	52	51	54
21 May 2017	57	56	53	56

19. Given the absence of sensitive receivers on the alignment noise and vibration issues are not considered to be an issue but are included as a checklist item in the weekly monitoring audits.

Part III - Environmental Management

3.1. The environmental management system (EMS), site-specific environmental management plan (SSEMP), and work plans

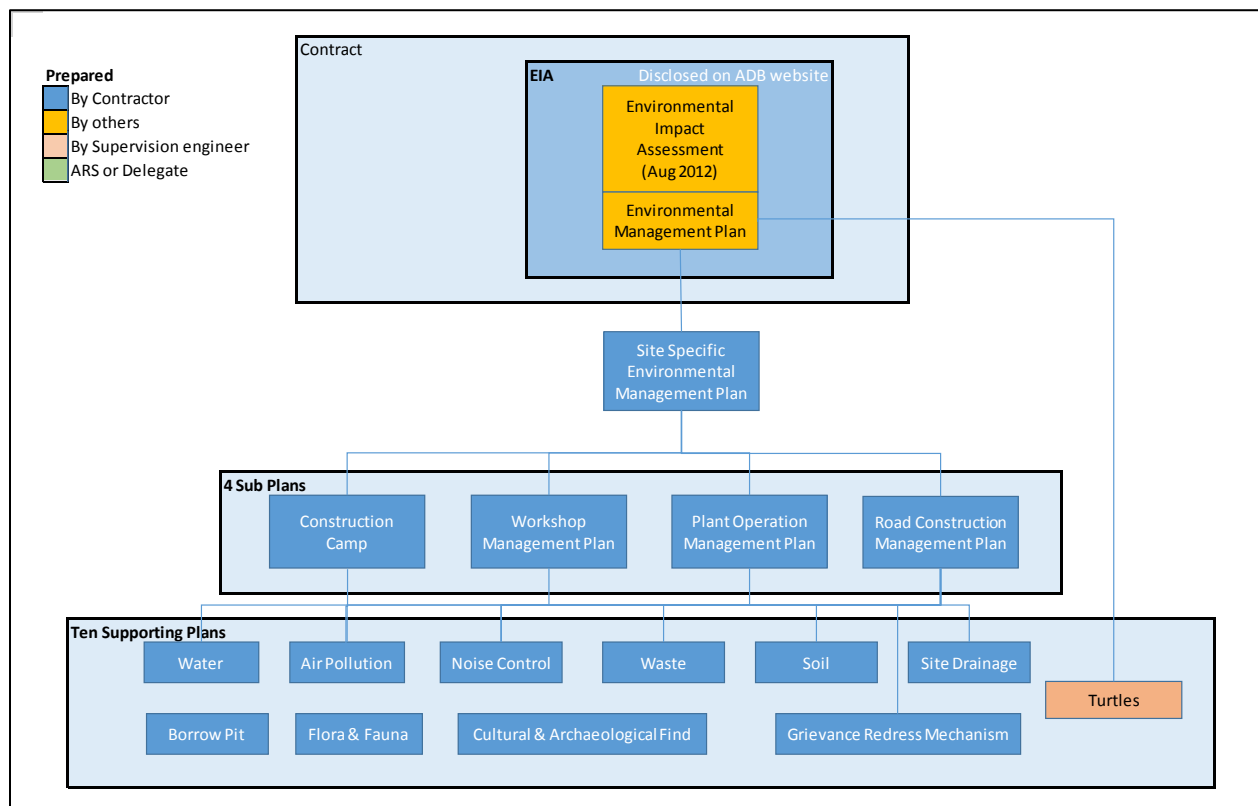
i. Status

20. The project is in its first year and a half and in terms of environmental management the key issue is to ensure that the Contractor (Kolin) understands the environmental requirements of the project and that these requirements are being met, and that the necessary environmental documentation and licenses are in place.

ii. Documents

21. Guiding environmental documentation used on the project.

Table 12: Environmental documentation used on the project

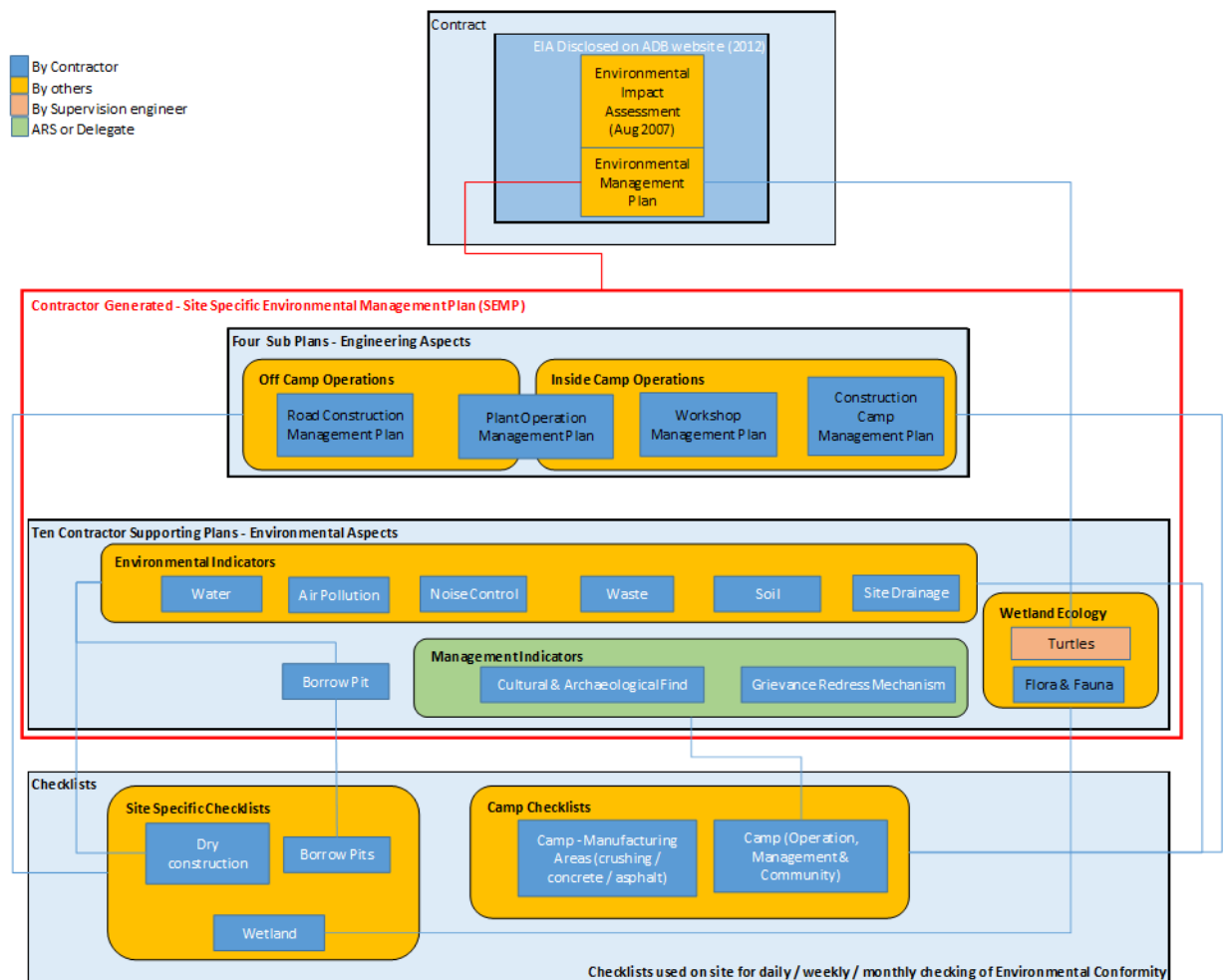


iii. Inspections and Audits

22. Kolin and TERA carry out weekly site audits covering all operational sites and the camp compound. Kolin use a checklist identified in the SSEMP comprising a single document that covers all work aspects. Kolin have developed this document over a number of years and projects and they find that it provides the detail that they need to monitor environmental performance of the works. TERA use a modified document comprising a series of one page sheets covering specific aspects of the work.

23. The TERA checklists feed from the Contractor generated SMP. The following figure illustrates the relationship.

Table 13: TERA checklist concept – Feeding from Contractor SEMP



24. The sheets cover:

- Camp (including the offices, canteen, recreation areas and accommodation units)

- Crushing plant (including the pre-processing and post-processing stockpiles) (not in use from April 2017)
- Concrete Plant (Including the batching plant stockpiles and settlement tanks);
- Workshop Area (including bundled storage of liquids, wash down & settlement tanks);
- Borrow Pits (Operation activities including dust & noise control, and runoff control)
- Wetland (activities within the wetland)
- Management and Community (Environmental document control, Grievance Redress)

25. The TERA sheets also include options for recording three level of impact:

- Observation – a potential for localized environmental impact but none has occurred;
- Opportunity for Improvement – a recurrent “observation” requiring action but again no incident has occurred.
- Non Conformity – recurrent OFI or an incident has occurred and a Corrective Action Plan (CAP) and staff retraining / education may be required

Table 14: Log of Audits carried out

Date	Weekly Joint monitoring		Monthly TERA Audit by::	Non-conformity
	Kolin	TERA		
07 Jan 17	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
14 Jan 17	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
21 Jan 17	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
28 Jan 17	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
04 Feb 17	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Alizamin	Septic tanks were full of water. Resolved.
11 Feb 17	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
18 Feb 17	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
25 Feb 17	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
03 Mar 17	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
10 Mar 17	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Alizamin	Concrete Plant drainage line was observed to be in a poor state, filled with mud
17 Mar 17	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
07 Apr 17	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
14 Apr 17	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Alizamin	Some oil drums were observed near the oil drums storage area without bund Resolved
21 Apr 17	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
28 Apr 17	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
0 May 17	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
11 May 17	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
18 May 17	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Alizamin	Some oil drums were

				observed near the Concrete Plant Resolved
25 May 17	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
03 Jun 17	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
10 Jun 17	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
17 Jun 17	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
24 Jun 17	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Alizamin	

iv. *Non-Compliance and Corrective Actions*

26. The Contractor, Kolin, has registered minor deviations from the Environmental Management Plan in the project EIA. These deviations are considered to be in the lowest level of the “non-conformity” and have been rectified promptly without significant impact on the environment.

27. TERA performs audit using a three-tier level of “non-conformity”.

- Observation – a potential for localized environmental impact but none has occurred;
- Opportunity for Improvement – a recurrent “observation” requiring action but again no incident has occurred.
- Non Conformity – recurrent OFI or an incident has occurred and a Corrective Action Plan (CAP) and staff retraining / education may be required.

v. *Consultations and Complaints*

a. *Public Consultations*

28. In the SEMP Kolin identifies public meetings at six monthly to inform the local community of project activities. The first public consultation was on 5th February 2016 in the Kolin Camp for the villagers of Uzuntepe, immediately east of the camp. The next meeting was on 27th August 2016 . The last Public Consultation was carried out on 13th February 2017

Table 15: Schedule of Public Consultations

Scheduled	Actual	Venue	Discussion Items	Attendees
20 Dec15	5 Feb 16	Kolin Camp	Construction schedule & Grievance Redress Mechanism	21 – No comments from attendees.
15 Jun 16	27 August	Kolin Camp	Construction schedule & Grievance Redress Mechanism	16-complaints about some dust problem from attendees
10 Dec 16	13 February 17	Kolin Camp	Construction schedule & Grievance Redress Mechanism	19-no questions from attendees
5 Aug 17				
10 Dec 17				

15 Jun 18				
20 Dec 18				

b. Grievance Redress Mechanism

29. The Grievance Redress Mechanism (GRM) is included in the EMP and has been developed in the Kolin SSEMP. A Grievance Focal Point has been established for the Uzuntepe – Celilabad Area with two hotlines. No complaints were registered in the complaints log in the first six monthly reporting period. The Grievance Redress Committee has not had course to convene in January to June 2017.

Table 16: Complaints and Compliments

Date	Number	Description	Resolved
Jan 2017	N/R	-	-
Feb 2017			
Mar 2017	N/R		-
April 2017	N/R	-	-
May 2017			
June 2017	N/R	-	-

c. Staff Training and Education

30. Environmental Training – TERA presented a training workshop about turtle preventive action on the SSEMP for the environmental team of Kolin on 28th April 2017 in the TERA offices at the Kolin Construction camp. The workshop covered lines of ways of preventive turtles and potential environmental impacts to the turtles during the project.
31. Water Quality – Due to the presence of valuable wetlands that the project will cross, TERA organized a training workshop on the ways that construction activity can affect the water environment and the precautions needed to prevent runoff. The workshop was held in the TERA offices on 25 May 2017.
32. Turtle Management Plan –Mr. Luca Luiselli (Ecologist – Turtle Specialist) presented the Turtle Management Plan to members of the KOLIN site team on 05 May 2016. The main items covered were how to protect turtles from construction impacts. Both direct impact from construction activity (e.g. siltation, fatalities due to turtle plant interaction) and indirect actions (e.g. disruption of breeding activities).
33. The PowerPoint presentations used in the training are included as an appendix to the document.

Table 17: Staff training

Date	Subject	Venue	Presenter	Attendees
14 April 2016	Site Specific Environmental Management Plan (SEMP)	TERA office, Kolin Camp at Km110	A Taylor – International Monitoring Specialist (TERA)	7
05 May 2016	Turtle Management Plan	TERA office, Kolin Camp at Km110	Mr. Luca Luiselli-Ecologist – Turtle Specialist (TERA)	5
25 May 2016	Water Pollution	TERA office, Kolin Camp at Km110	Alizamin Mustafayev – Environment/Safeguard specialist (TERA)	4
28 April 2017	Turtle Prevention Action	TERA office, Kolin Camp at Km110	Alizamin Mustafayev – Environment/Safeguard specialist (TERA)	4
25 May 2017	Water Quality	TERA office, Kolin Camp at Km110	Alizamin Mustafayev – Environment/Safeguard specialist (TERA)	5

d. HIV / AIDS

34. Kolin presented the first HIV / AIDS briefing for site staff on 21st February 2017. The presentation was made by Mr. Murselov (Camp Doctor of Kolin) and was attended by 19 members of the construction team.
35. Kolin presented the first HIV / AIDS briefing for site staff on 15th May 2017. The presentation was made by Mr. Murselov (Camp Doctor of Kolin) and was attended by 18 members of the construction team

Table 18: HIV / AIDS briefing

Scheduled	Actual	Venue	Presenter	Attendees
20 Apr 16	11 Apr 16	Kolin Camp at Km 110	Dr. Murselov (Camp Doctor of Kolin)	33
20 Jul 16	No influx		No influx, meeting deferred	-
20 Oct 16	12 Nov 16		Dr. B. Hasanov (Camp Doctor of Kolin)	35
20 Jan 17	21 February 17		Dr. Murselov (Camp Doctor of Kolin)	19
20 Apr 17	15 May 17		Dr. B. Hasanov (Camp Doctor of Kolin)	18
20 Jul 17				
20 Oct 17				

vi. Emerging Issues

36. No specific emerging environmental issues have been identified but with work in and close to wetlands. Kolin must be vigilant on the potential for adverse impact and continue implementing the mitigation measures identified in the Contractor Site Specific Environmental Management Plan (SEMP)

Table 19: Status of Environmental Management System Plans

Management Plan	Responsibility	Status
Environmental Impact Assessment (EIA)	Pre project	Completed – uploaded to ADB website
Environmental Management Plan (EMP)		As part of approved EIA
Turtle Management Plan (TMP)	TERA – Turtle expert.	Prepared and included in CC SEMP
Site-Specific EMP (SSEMP)	CC - KOLIN	Submitted, approved
Monitoring plan	CC - KOLIN	Submitted and approved as part of CC SEMP

3.2. Site inspections and audits

37. This chapter summarizes the number and type of site visits performed by environmental professionals associated with the project:

Table 20: Site visits and audits

	Dates	Associated actions/recommendations
PIU environmental specialist	PIU environmentalist made monthly site visits to the	
TERA (SC) international environmental specialist	Not during the reporting period	
TERA (SC) national environmental specialist	Permanently on Site	Table 14, 29, 30, para 26
KOLIN (CC) environmental specialist	Permanently on Site	Recommendations provided on a regular bases and immediate actions were taken
ADB mission review	No visit during the	

	reporting period	
National Environmental Consultant of ADB	ADB national environmentalist made several site visits to the Project site during the reported period	No serious non-compliances were noted during the visits

3.3 Non-compliance notices

TERA has found some non-compliance notices during the last six months. Working on three levels of audited impact: observation; opportunity for improvement; and non-compliance, environmental issues have been in the observation and opportunity for improvement range and the CC (KOLIN) have been very responsive in addressing these issues. (*Table 27-28 Non-compliances and resolved photos*)

3.4. Corrective action plans

37. There were no incidents in the reporting period that required a Corrective Action Plan. As noted environmental incidents were in the “observation” or “opportunity for improvement range and the CC (KOLIN) have been responsive to audit observations.

3.5. Consultation and complaints

38. In the SEMP Kolin identifies public meetings at six monthly to inform the local community of project activities. The first public consultation was on 5th February 2016 in the Kolin Camp for the villagers of Uzuntepe, immediately east of the camp. The next meeting was held in August. The local people were informed about the project activities. There have been no complaints from the local community. The third Public Consultation was carried out on 13 February, 2017. There were no question from the attendees.

3.6. Impacts and mitigation measures on wetland and its biological resources

39. Due to the importance separate chapter in this report is dedicated to actions taken at wetland site during the reporting period.

40. Contractor followed SEMP requirements at the wetland site. Following paras describe actions taken to protect wetland area and turtle and to avoid and minimize negative impacts on them.

41. To avoid of destruction of nesting sites of waterbird species construction activity have been restricted from the beginning of April up to end of July. Vegetation clearance during the bird breeding season in areas with nests have been avoided during April and July.

42. All workforce have been informed on the prohibition of hunting, trapping/poaching and on prohibition of timber collection from wetland areas during the reported period.
43. Any material extraction from and disturbance of wetland area have been prohibited in the reported time.
44. No excavated soil has been dumped in the wetland area and all soil has been removed off Site.
45. Only well-maintained machinery were used and no oil/fuel leaks were visible in the reported period.
46. Pouring of excess concrete from concrete mixer to un-appointed areas were strictly prohibited during the reported time.
48. Other mitigation such as switching of engines when they were not in use, avoidance of any burning close to wetland site, extraction of water from wetland, discharge to wetland site and others that were mentioned in SSEMP has been strictly followed by Contractor.
49. All the other activities at wetland site were done under control and supervision of Environmental specialist of Contractor and under supervision of specialist of TERA.
50. Besides, that all critical turtle locations (km-s) were provided with warning sign boards.
51. Turtle catch group was formed at the site and they were provided with appropriate identification uniforms.
52. All turtles found on a road alignment were caught and relocated 200 m from construction site as proposed in Turtle Action Plan. These actions were properly documented in Turtle Record Book.
53. Two sided fence were provided at critical locations to prevent turtles moving across the road alignment under.
54. In order to ensure proper implementation of wetland site SSEMP and as well as Turtle Action Plan number of training and awareness action were conducted before and during the reporting period. List and details of these action were provided in several paras above as well as in table 17.

3.7 Borrow Pits

55. Necessary permits were obtained for all borrow pits from the competent authorities - For current borrow pits, Contractor has written agreements with the local agencies for borrow materials.

56. Contractor developed SSEMP for borrow pits management and all the related works were implemented according to the SSEMP. SSEMP cover all borrow pit sites mentioned in table 21 below.

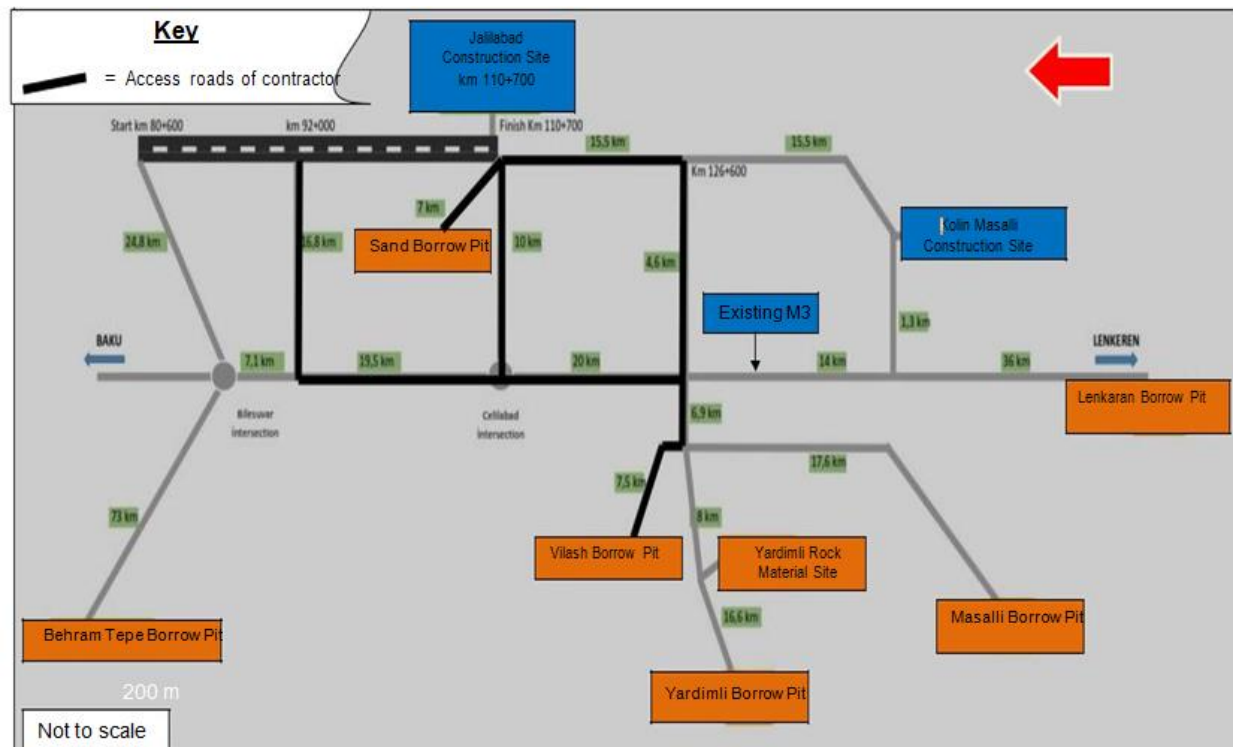
57. No excavations were allowed within a distance of 500 meters of the ROW during the reporting period as a requirement of SSEMP.

58. In borrow pits, the depth of the pits regulated so that the sides of the excavation will have a slope not steeper than 1:4 - No non-conformity during the reported period

59. Soil erosion along the borrow pits were regularly checked to prevent/ mitigate impacts on adjacent lands

60. Contractor developed restoration plan for borrow pits within SSEMP including top soil protection, water body protection and remediation actions. Under supervision of CSC contractor follow all necessary actions at borrow pit sites.

Table 21. Borrow Pits location



3.8 Topsoil Management

61. SSEMP for soil management including the top soil management, sub soil management, stockpile management and vegetation clearing was developed by Contractor and all related activities were strictly followed according to the requirements of the plan.

62. The Contractor has completed the improvement of the soft ground by excavation of the top unsuitable material by 50cm and replace it with suitable material and place a geo composite layer.

62. During the reported period, no Top Soil Stripping was claimed by The Contractor. All top soil activities completed on main road.

63. The denuded ground cover will be re-vegetated as soon as possible following fill placement to facilitate regeneration of a stabilizing ground cover.

64. The road embankments and road cuttings will be vegetated with a fast-growing crop and a native seed mix immediately after fill placement to prevent scour and to encourage stabilization. Use of stone pitching or riprap will be made at appropriate places especially at overpasses, bridges, culverts.

65. Down drains/chutes shall be lined with rip-rap/masonry or concrete to prevent erosion.

66. Side slopes shall be adjusted to a gradient necessary to reduce erosion potential or, if steeper, stabilized, covered with riprap or other material to prevent soil erosion.

67. Stockpile locations selected carefully with approval of CSC. Environmental surrounding, wind direction and distance were main issues carefully considered during the site location to avoid any negative impact to environment and as well as to ensure the proper protection of top soil.

Part IV – Action Plan for the Next Period

68. International ES will visit site in September 2017. He will conduct compliance monitoring of the environmental safeguards and provide necessary recommendations and need for corrective actions.

69. Besides, he will facilitate a turtle workshop for TERA (SC) and KOLIN (CC) relevant staff.

- Next training for the Turtle catch group for 2017
- Training for other relevant staff on wetland and on turtle action plan

70. IES also will discuss and confirm the environmental audit programme for the second period of the year together with national environmental specialist of TERA and with environmental specialists of Kolin.

71. All environmental safeguard related actions will continue according to the SSEMPs prepared for the project.

72. PIU environmental specialist will continue monthly site visits to ensure proper implementation of environmental management plans and as well as fully compliance of environmental safeguards.

ANNEXES:

Annex 1: Photographs

Table 22: Turtle team evacuate the turtle from the road alignment (March 2017)



Table23: Construction Progress photos (March, 2017)



Progress photo of construction area waste bin



Progress photo of construction area



Progress photo of traffic notices



Progress photo of manholes safety ribbons

Table24: Concrete Plant (April,2017)



Current photo of Concrete Plant



Current photo of Concrete Plant



Current photo of Concrete Plant
sedimentation tank



Current photo of Concrete Plant drainage
line

Table 25.Camp site (May,2017)



Current photo of office area



Current photo of office area



Current photo of general camp area



Current photo of general camp area

Table 26. Workshop and Fuel filling station (June,2017)



Current photo of general workshop



Current photo of general workshop

Image 4 Fuel filling station



Current photo of fuel filling station.



Current photo of fuel filling station

Table 27 .Oil change area (April,2017)



Current photo of oil change area



Current photo of oil change area

Table 28. Concrete Plant (May,2017)



Current photo of Concrete Plant



Current photo of Concrete Plant



**Current photo of Concrete Plant
sedimentation tank**



**Current photo of Concrete Plant drainage
line**

Table 29. Non-compliances and the resolved photos (May, 2017)



Image 11 Non compliances and progress photos



Table 30. Non-compliances and the resolved photos (March, 2017)

