Semi-annual environmental monitoring report

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January – June 2021

KGZ: Central Asia Regional Economic Cooperation Corridor 3 (Bishkek -Osh Road) Improvement Project, Phase 4

Prepared by Joint Venture Temelsu International Engineering Services Inc., E.Gen Consultants Ltd., and Desh Upodesh Ltd. in association with Kyrgyz TREC International, Ltd. for the Ministry of Transport and Communications of the Kyrgyz Republic and the Asian Development Bank

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Abbreviations

ADB	-	Asian Development Bank
CAREC	-	Organization of Central Asian Regional Economic Cooperation
CSC	-	Construction Supervision Consultant
EMP	-	Environmental Management Plan
IPIG	-	Investment Project Implementation Group
km	-	kilometer
KR	-	Kyrgyz Republic
MPC	-	Maximum permissible concentration
MPL		Maximum permissible level
MoTC	-	Ministry of Transport and Communications of the Kyrgyz Republic
MoF		Ministry of Finance of the Kyrgyz Republic
SAEPF	-	State Agency for Environmental Protection and Forestry under the Government of the Kyrgyz Republic
SIETS	-	State Inspectorate for Environmental and Technical Safety under the Government of the Kyrgyz Republic
DDPTSSES	-	Department of Disease Prevention and State Sanitary-Epidemiological Surveillance of the Ministry of Health of the Kyrgyz Republic
TS	-	Technical Specification
CEMWP	-	Construction Environmental Management Work Plan
AP	-	Asphalt Plant
SCP	-	Stone crushing plant
CBP	-	Concrete batch plant

1. INTRODUCTION

1.1 Preamble

1. Roads are essential for the Kyrgyz Republic, in this regard, the Government of the Kyrgyz Republic appealed to the Asian Development Bank (ADB) to assist in funding for the implementation of CAREC Corridor 3 Improvement Project (Bishkek-Osh road), Phase 4.

2. The report is the eighth semi-annual environmental monitoring report covering the period from January to June 2021, under the ongoing CAREC Transport Corridor 3 Improvement Project (Bishkek-Osh road), Phase 4. The monitoring report contains environmental issues, mitigation and monitoring measures taken by the Contractor and monitored by the national environmental specialist (Tatyana Volkova) of the construction supervision consultant Temelsu. Road rehabilitation works included: reconstruction of six bridges, replacement of culvert pipes, construction of underground passages, taken out of old asphalt, preparation of new road lanes in the eastern and western directions, construction of sidewalks and culvert chutes, tree planting, and operation of asphalt and concrete plants, stone-crushing plant for the processing of inert materials.

3. The report contains information about work progress and changes related to the prevention of environmental impacts. The results are based on numerous site visits, conducted by a Consultant's national environmental specialist from January to June 2021, wherein the main focus was on monitoring of compliance with the environmental and safety requirements during the road construction, construction of bridges and culvert pipes, seedling planting, and traffic management.

1.2 Headline Information

4. The Bishkek-Osh road represents about one fourth of international road network in the Kyrgyz Republic, and links the country to Kazakhstan in the north, Uzbekistan and Tajikistan in the south, and the People's Republic of China in the southeast. The road crosses four of the seven regions of the country and serves about 2 million people. It is the only direct surface link between the southern and northern parts of the country making it crucial for maintaining the country's social, political, and economic integrity. The Bishkek-Osh road is part of the Central Asia Regional Economic Cooperation (CAREC) Corridor 3, which runs from the west and south Siberian region of the Russian Federation through Kazakhstan, Kyrgyz Republic, Tajikistan, Afghanistan, and Uzbekistan to the Middle East and South Asia.

5. The CAREC Corridor 3 Improvement project (Bishkek-Osh road), Phase 4, (Bishkek-Kara-Balta section, 45.1 km long) aims to improve connectivity and market access in the Kyrgyz Republic. The project's benefits will be efficient movement of freight and passenger traffic along the Bishkek-Osh road, improved safety for both road users and pedestrians, as well as mitigation the environmental impact of the road in terms of noise impact from passing traffic by upgrading of asphalt pavement.

6. In 2016 during bidding process China Railway No.5 company was selected for implementation of project component 1. On March 28, 2017, Civil Works Contract was signed between the Ministry of Transport and Roads of the Kyrgyz Republic and China Railway No.5 for civil works. The overall contract price is 70,239,899.29 USD. In the course of extensive contract negotiations, the work group managed to change the fixed escalation coefficient to an increase, i.e. from 0.15 up to 0.51 – thus, minimizing price escalation. On April 3, 2017, Consultant issued a Notification for Commencement. The construction works commenced on 3 April 2017.

Revision of Bishkek-Kara-Balta Road Rehabilitation Project

7. Initially the road designed length was 52,5 km length. Feasibility Study (FS) was completed by the Consultant Kocks Consult as part of ADB Technical Assistance, the purpose of which was to identify economic soundness of the Project. Feasibility Study set out approximated cost of the Project based on the preliminary topographic survey at a scale of 1:2,000 and geotechnical studies conducted. Following the FS, ADB made a decision to allocate 100 M USD, 65M USD out of which is loan money and 35M USD - grant. Co-financing by the Government of the Kyrgyz Republic is 20.8M USD. Out of this, the Project provides 92.06M USD for civil works. The detailed design preparation carried by the Consultant Eptisa, the detailed topographic survey (at scale of 1:1,000) was conducted including additional geotechnical and other surveys which allow specifying engineering costs of the Project. Based on the results on the detailed designing, the Civil Works cost is about 115.1M USD. Thus, there was a lack/deficit of funds in the amount of 23.06M USD. In this connection, the Ministry of the Transport and the Roads of the Kyrgyz Republic decided to revise the design within the available funds for the Civil Works.

8. As a result, through agreement with ADB, it was decided to decrease the project road by 7.4 km and to deem the road start at 15.9 km instead of 8,5 km on Bishkek-Osh road. Thus, the overall length of the project road is now 45.1 km. The reduction of the specified site was taken before the announcement of the tender for the purchase of Civil Works.

9. In addition, it is also worth noting that cost of the contract signed between the Ministry of Transport and Roads of the Kyrgyz Republic and General Contractor China Railway No.5 amounts to 70.24M USD, i.e. there should be spare of funds up to 22M USD. In 2019, the saved funds were planned to use for construction of remaining road section (8.5 km – 15.9km). International competitive bidding would be conducted in accordance with ADB's Single-Stage Two – Envelope bidding procedure. The bidding process has been started on July 17, 2019. However, in 2020 the bidding process was canceled. Further, by the method of direct contract award, the contract was awarded to China Railway No. 5. Notification on Commencement of Works was issued on November 19, 2020.

10. On May 31, 2020, the contract with the consulting company Eptisa was completed. Following the bidding process, Temelsu International Engineering Services INC.(Turkey); Desh Upodesh Ltd. (Bangladesh) and e.Gen Consultants Ltd. (Bangladesh) new Joint Venture consulting companies were selected. New Consultant started to work on May 11, 2020.

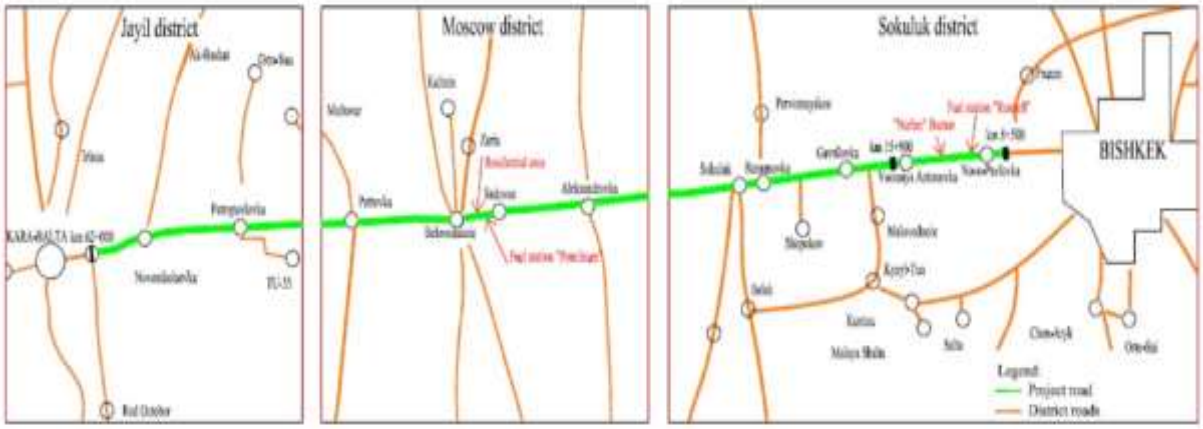


Figure 1 Administrative districts of project road

Project Map

Figure 2 Bishkek-Kara-Balta road section, of the Bishkek-Osh Road (Source: Hagler Bailly, Pakistan, 2016)

2. PROJECT DESCRIPTION AND CURRENT ACTIVITIES

2.1 Project Description

2.1.1 Location of the project site and design

11. The project will improve connectivity between north and south in the Kyrgyz Republic. The project output will be efficient movement of freight and passenger traffic along the Bishkek-Osh road. According to the classification of the ADB Safeguard Policy Statement, the project classified as Category B. Improvement of the Bishkek-Osh road section (Bishkek-Kara-Balta section) will connect important, but densely populated areas, what will ultimately provide better access to services, goods and markets; improve regional connectivity and increase road safety for all road users in general.

12. The project provides for the rehabilitation of 45.1 km of the Bishkek-Osh road. The project site is located between Bishkek and Kara-Balta cities and between 15.9 km and 61 km of the Bishkek-Osh road. At km 61, at the roundabout, the Bishkek-Osh road turns to south, and marks the end of the project site.

13. The terrain across the site can be classified as a foothill plain with a height of 750-800 m above sea level and steadily gaining altitude southward toward the Tian Shan mountain range.

14. The road reconstruction should meet the laws and legislation of the Kyrgyz Republic. This reconstruction will bring the geometric parameters of the road to the required category, becoming a 4-lane highway for the entire length to Kara Balta, increasing the radii of curvatures in the vertical and horizontal alignment.

15. In order to improve drainage systems, the work includes the reconstruction and replacement of most of the degraded culvert system, and the addition of new cross-drainage structures. Existing bridges are being totally replaced. And it will be constructed more than 64 km of sidewalks and six underground pedestrian passages.

16. Environmental impact resulting from the rehabilitation of the Bishkek-Osh road is short-term and local, since most of the construction work is carried out along the existing right-of-way. The project includes number of related activities, such as the development of borrow-pits, operation of the asphalt plant, crushing and screening plant, construction of work camps and warehouses of the contractor, etc.

17. The environmental impact includes:

(i). noise impact, as well as vibration, which is particularly important within localities near the Project road and in the areas where sensitive recipients are located, such as schools, hospitals, mosques, etc.

(ii). Impact to the air;

(iii). Impact to water courses and rivers;

(iv). Impact resulting from sourcing of aggregates in borrow-pits;

(v). Impact on soil and vegetation, including tree stands near the Project road, due to site clearing work;

(vi). Impact resulting after bridge rehabilitation works;

(vii). Impact of asphalt production plants and aggregates crushing plants;

(viii). Impact of workers camps.

18. Due to the serious resettlement issues and the need to address them before commencement of construction period, such a sequence of construction works was planned, where the works primarily covered those sections where there are no or there are minor resettlement issues.

Table 1 Road sections where the construction work started in 2017

Section No.	Start of the section, km	End of the section, km	Length of the section, km
1	15.900	21.300	5.400
2	35.500	40.580	5.080
3	45,600	51,600	6.000
4	54.200	59.350	5.150

Table 2 Road sections where the construction work started in 2018

Section No.	Start of the section, km	End of the section, km	Length of the section, km
5	21+300	35+500	14+200
6	40+580	45+600	5+020
7	51+600	54+200	2+600
8	59+350	60+926	1+576

19. According to the Terms of Reference, the road pavement will be designed for an initial design life of 10 years with structural overlay options for 15 and 20 years of design life.

2.2 Project Contracts and Management

Table 3 Project Contracts and Management

Project	Central Asia Regional Corridor 3 (Bishkek-Osh Road) Improvement Project Phase 4
Contractor	China Railway No.5 for Component 1 implementation
Road section:	15.9 km – 61 km, the overall length is 45.1
Donor:	Asian Development Bank.
Contract Sign Date:	28/03/2017
Executive Agency	Ministry of Transport and Communications of the Kyrgyz Republic
Notice to Commence	03/04/2017
Completion Date	16 July 2021
Time for Completion – Days	1565 days
Extension of Time – Days	-
Defect Liability Period – Days	365 days
Contract Amount	USD 70,239,899.29
Minimum Amount of Interim Payment USD (3%)	USD 2,107,196.97
Total Amount of Advance Payment	Maximum 20% of the Accepted Contract Amount less Provisional Sums

Amount of Performance Security	%20 of Accepted Contract Price
Amount of Third-Party Insurance	500,000 USD per occurrence with the number of occurrence unlimited
Periods for submission of insurance a) evidence of Insurance b) relevant policies	 14 days 14 days
Delay damages for the Works	0.05% of the Accepted Contract Amount for each lot, which is in delay, per day in USD
Maximum amount of delay damages	10% of the Accepted Contract Amount
Repayment Amortization of Advance payment	10%
Limit of Retention Money	10% of Accepted Contract Amount
Percentage of Retention	5% of Value of Works certified for Payment

Table 4 List of Consultant's staff

INTERNATIONAL STAFF	
Resident Engineer-Team Leader	Kenan Kose
Pavement and Materials Engineer	Mohammad Arifur Rahman
Contract Specialist	Ali Yagci
Social Development and Resettlement Specialist	Md. Nurul Hoque
Contract Specialist	Mahmut Nedim Altay
Environment Specialist	Dr. Md. Mohsin Almaji
PBM Engineer	Seyfettin Akinci
NATIONAL STAFF	
Highway Engineer/Deputy Team Leader	Shekeev Omurbek
Social Development and Resettlement Specialist	Dolgov Yirii
Road Safety Specialist	Begaliev Soolot
Materials Engineer	Alymkulov Ulanbek
Quality Assurance Engineer	Mamyrkulov Sabyrbek
Structural Engineer	Turdubaev Shekirbek
Inspector	Choibekov Bazarbek
Surveyor	Bokonbaev Turatbek
Surveyor	Sagynbaev Damir
Surveyor	Baiguchukov Manas
Quantity engineer	Alymkulov Zhoodar
Quantity engineer	Abylbekov Abai
laboratory assistant	Zholdoshev Ruslan
laboratory assistant	Minazarov Dyikan
laboratory assistant	Abdykaparov Damir
Estimator – quantity engineer	Kozevnikova Setlana
Translator	Glinov Vyacheslav
Office manager	Kalil uulu Suiun
Environmental Specialist	Tatiana Volkova

2.2.1 Scope of work

20. Project design meets standards of Technical Category 1-b (main urban arteries) with the following geometrical attributes:

- Number of lanes – 4 and 6

- Lane width –3,5 - 3,75m;
- Carriageway width – 2x7,5;
- Shoulder width – 3,75м
- Carriageway shoulder breakpoint stabilization – 0,75m
- Axle design weight – 11,5 tones.

21. Over the entire project site, the two layers of the asphalt-concrete pavement (14 cm thick) will be placed, the upper one is 5 cm and the lower one is 9 cm thick, with underlying black crushed stone course (9 cm thick)

22. The RoW (Right of Way) width is 50 - 60 meters. The design provides for construction and repairing works for the following engineering structures and the communications as well as work scope.

Pavement Construction Quantities:

- Wearing course 5cm thick – 46,692m3;
- The same in junctions 5cm thick – 4,169m;
- Binder course 9cm thick – 84,046m3;
- The same on junctions 9cm thick – 7,505m3;
- Asphalt treated base course 9cm thick – 86,906m3;
- Base 15cm thick – 157,257m3;
- Sub-base 28cm thick – 448,920m3;
- Asphalt-concrete course on sidewalks 4cm – 9,754m3;

In addition, it also includes:

- Bridge repairs with widening– 6 units;
- Minor engineering structures – 548 units;
- For water diversion, reinforced-concrete chutes – 77661 linear meters;
- Intersections and junctions – 477 units;
- The design provides for parking lots next to market places – 4 units;
- Auto pavilions – 114 units;
- Sidewalks – 81 285 meters;

Road Safety Features:

The Project provides for repair of 4 existing pedestrian underground passages and construction of 6 new pedestrian underground passages;

- Marker posts – 515 units;
- Metallic foot-walk guard rails – 3980 linear m;
- Parapet guard rails – 1158 units;
- Median railings – 14 887 units;
- Retaining walls – 3669 linear m;
- Street lights – at 26 intersections.

Reconstruction of the Utilities

- VL-10kV – 43 poles
- VL-0,4kV – 166 poles
- Communication lines –507 posts
- Lighting poles – 2190
- Gas casings – 650 linear m.

Vegetation Planting

23. Almost throughout the entire length the project road is planted with trees on both sides, many of which were cut down during the rehabilitation of the road. In total, 5812 trees will be cut down. As compensation, planting of hardwood seedlings will be required to replace the cut down trees. As of June 30, 2021, **2,245** seedlings have been planted on the road, which is 19.5% of the planned amount.

Land Acquition and Ressetlemnt Plan

24. The project site passes through densely populated areas. The project provides for the demolition of commercial services, pavilions, billboards, service stations, gas stations, fences and houses that will be affected by the project, in the sections of road widening and sections of construction of new sidewalks. A Resettlement Plan was drawn up, based on which compensation was paid to 106 affected persons, including owners and users of land, business owners, tenants and employees.

2.2.2 Main Organizations Involved in the Project

25. Relevant organizations involved in the project are:

- Ministry of Finance of the Kyrgyz Republic (MOF),
- Ministry of Transport and Communications of the Kyrgyz Republic (MoTC);
- Investment Projects Implementation Group (IPIG);
- State Committee for Ecology and Climate of the Kyrgyz Republic (SCEC);
- Department of Disease Prevention and State Sanitary and Epidemiological Surveillance under the Ministry of Health of the Kyrgyz Republic (DDPSSES)
- *MoTC* is responsible for the development of the transport sector, and is the Executing Agency (EA) of the project. MoTC has overall responsibility for the planning, designing, implementation and monitoring of the project. IPIG, works under the MoTC and implements the tasks assigned by MoTC.
- *The Ministry of Finance of the Kyrgyz Republic* is the authorized state body responsible for coordinating actions with ADB and other donors on external assistance issues.
- SCEC – ensuring environmental safety, strengthening environmental protection measures and reducing climate risks, the leading environmental state agency responsible for the state's policy in this area and coordinating the actions of other state bodies in these matters. Its functions include:
    - development of environmental policy and its implementation;
    - conducting a state environmental assessment;
    - issuance of environmental licenses;
    - environmental monitoring;
    - provision of environmental information services.

- Department of Disease Prevention and State Sanitary and Epidemiological Surveillance supervises the sanitary and epidemiological welfare of the population, the safety of goods, products, environmental objects and conditions, and the prevention of harmful impact of environmental factors on human health.

Table 5 Main Organizations involved in the project Environmentals Safeguards

No	Organization Name	Role in project	Responsible person for the environmental safeguards	Contacts

1	ADB	Environment Specialist	Ninette R.Pajarillaga	npajarillaga@adb.org
2	ADB's Kyrgyz Republic Resident Mission (KYRM)	Environment Consultant	Sultan Bakirov	Sbakirov.consultant@adb.org
3	IPIG under MoTC	Environment Specialust	Asylbek Abdygulov	asylbeka@piumotc.kg
4	Temelsu	Consultant	Tatiana Volkova	volkova_ti55@mail.ru
5	The limited liability company "China Railway Engineering Group No. 5»	Contractor	Narynbek Myrsaliev	narynbek_m@mail.ru
6	LLC Kyrgyz branch of "Kaganat Group"	Subcontractor, work on installing chutes;	Narynbek Myrsaliev	narynbek_m@mail.ru

2.3 Project activities during the current reporting period

Table 6 Work Progress. Main Section (KM 15,9 – KM 61)

№	Bill 3 (Earth Works)	Unit	Scope per design	Actually completed	April	May	June	% of completion
1	Clearing and grubbing	ha	76	63				83%
2	Cutting and grubbing of trees	pcs	3348	3348				100%
3	Excavation and disposal of suitable material from existing road to reuse as fill material	m3	201 530	188 575,00				94%
4	Formation of embankment using common soil from borrow pits	m3	67511	33882				50%
5	Excavation and dispose of unsuitable soil to a spoil area	m3	103 129	87480		5000		85%
6	Scarifying of existing asphalt concrete pavement	m3	84340	83412	353			99%

№	Bill 4 (Drainage Works)	Unit	Scope per design	Actually completed	April	May	June	% of completion
1	Pipe culverts, d= 1.5 m	pcs.	53	53				100%
2	Culverts with opening 0.8x0.8 m	pcs.	100	100				100,0 %
3	Culverts with opening 0.5x0.5 м	pcs.	363	267				73,6%
4	Box culverts - 2.0x2.0 m	pcs.	1	1				100%

5	Provision and mounting of reinforced concrete chutes B-3.	pcs.	21600	11368		1044	1021	53%

№	Bill 5 (Pavement Works)	Unit	Scope per design	Actually completed	April	May	June	% of completion
1	Sub-base – 28cm	m3	448 920	440 378	148		1 200	98%
2	Base course - 15см	m3	157 257	145 951	41			93%
3	Black crushed stone – 9cm (asphalt treated base)	m3	86 906	80 572	41			93%
4	Binder course – 9cm	m3	84 046	77 725	88			92%
5	Wearing course - 5см	m3	46 692	33345,5		6212		71%

№	Bill 6 (Bridges)	Unit	Length per design	Actually completed	April	May	June	% of completion
1	The bridge over the Jelamysh r. 18.3 km	rm	25,1	24,1				96%
2	Jantay channel 24.4 km	rm	35,5	32,7				92%
3	The bridge over the Sokuluk r. 27.7 km	rm	35,2	33,7				96%
4	Krepostnoy channel 40.7km	rm	35,5	33,8				95%
5	The bridge over the AkSuu r. 44km	rm	29,2	27,4				94%
6	The bridge over the AkSuu r (mudflow channel) 44.6km	rm	20,1	19,7				98%

№	Bill 9 (Miscellaneous Works)	Unit	Scope per design	Actually completed	April	May	June	% of completion
1	Underground passage KM30+481	m	25					45%
2	Underground passage KM32+194	m	25					45%
3	Underground passage KM33+091	m	24,5					90%
4	Underground passage KM37+520	m	24,5					90%
5	Underground passage KM42+797	m	25,5					30%
6	Underground passage KM55+410	m	27,9					90%

7	Underground passage KM57+415	m	24,5					90%
8	Underground passage KM59+640	m	24,5					90%
9	Installation of parapet OP-1	pcs	14 887	13 134			789	88%
10	Reconstruction of 10 kV + 04 kV power line poles	pcs	209	304				145%
11	Reconstruction of communication line poles	pcs	507	391				77%
12	Sidewalk	pcs	94 885	24000	3350	11855	900	25,29 %
13	Relocation of the cable communication line	m		8500		270		
14	Relocation of waterpipe line	m		1250				

2.3.1 Road construction works

26. In the winter period of the 1st quarter of 2021, the Contractor carried out road maintenance work, including snow removal, winter slipperiness control, ice control. The work was aimed at ensuring the smooth and safe movement of vehicles.

27. Regular monitoring over compliance with the requirements of environmental legislation during construction work on the Bishkek-Karabalta road started in March 2021.

28. During the reporting period, construction work on the road section from km 15.9 to km 61 included:

- earthworks - removal and disposal of excess unsuitable soil and old asphalt, rolling and compaction of roadside slopes. As directed by ADB, soil compaction work was carried out without vibration;
- pavement construction, laying of subbase and asphalt;
- installation of parapets (small concrete fence / dividing fence), installation of reinforced concrete chutes;
- construction of underground passages;
- construction of culvert pipes;
- construction of bus stops and sidewalk.

29. These works were carried out at road sections in the villages of Sokuluk and Novo-Nikolaevka.

Figure 3 Removal of asphalt

Figure 4 Leveling and compacting of roadbed

30. Soil compaction works according to the direction of ADB (letter dated May 23, 2018) were carried out without vibration at all sections of the road, with the exception of section km 15.9 - km 19.8 where there are no settlements. Supervision over the fulfillment of this requirement was constantly conducted by the inspectors of the Consultant, Construction Supervision Consultant, environmental specialist of the Consultant. Vibration control was also carried out by laboratory monitoring. The results of laboratory monitoring are attached in table 16, page 65.

31. Wearing course (5 cm) laying works were carried out at all sections of the road from Gavrilovka to Novo-Nikolaevka.

Figure 5 Asphalt laying

32. Subcontractor carried out work on the installation of roadside culvert chutes. Work continued on the construction of junctions to the streets adjacent to the road.

Figure 6 Installation of roadside culvert chutes and junctions adjustment to the road

33. Also, work was carried out on the construction of bus stops, construction and asphalting of sidewalks, which included installation of curbs, preparation and asphalt laying.

Figure 7 Construction of bus stops and sidewalk

34. During the reporting period, work was also carried out on installation, cleaning and strengthening of "New Jersey" type parapets. Welding works, works on concreting of ditches on passages between parapets were carried out. Soil accumulated near the parapets was cleaned out and taken out.

Figure 8 Installation and strengthening of New Jersey type parapets

35. Material quality checks were carried out in the laboratory and onsite to verify compliance with technical specifications. The laboratory tests were carried out for concrete, unbound materials and asphalt treated base materials which will be used for the pavement layers. At the site, the contractor conducted density and moisture tests to verify the compaction ratio. Asphalt concrete was collected during paving in order to test compressive strength at various temperatures, the content of bitumen and granulometry.

36. Inspectors monitored the performance of site trials on materials of wearing course, asphalt treated base and subgrade.

Figure 9 Sampling works for asphalt quallity control

37. Currently, construction of five underground passages is almost completed. Now, adults and children are crossing the road through some underground passages, for this purpose temporary lighting was installed.

Figure 10 Construction and rehabilitation of underground passages

38. During the reporting period, installation of traffic lights has been started on the road section from km 15.9 to km 61.

Figure 11 Installation of traffic lights

7.4 km section

39. In the spring of 2021, at the road section from km 8.5 to 15.9 culvert replacement has been started.

Figure 12 Construction of culvert pipes

40. Given that this section of the road is overloaded with vehicles and there are no bypass roads, it was decided to remove the old asphalt and prepare for asphalting alternately along three lanes. The work was started at section km 8 + 511 - km 8 + 800 (south side), the asphalt was removed on the first lane, excess unsuitable soil and old asphalt were removed, the soil was rolled and compacted. As directed by ADB, soil compaction work was carried out without vibration.

Figure 13 Rolling and compaction of soil at section KM 8+511 – KM 8+800

41. Dust control (water sprinkling) works were regularly carried out at all sections of the project road where construction work underway. Dust control works were carried out according to the agreed schedule to exclude dusting.

42. No complaints from the local residents about dust have been recorded so far.

Figure 14 Dust control works (water sprinkling)

7.4 KM SECTION

Table 7 Work Progress at 7.4 km section

	Description	Unit	Qty.	Comp. Qty.	Actual Progress	Remaining Qty.	Remaining Ratio
1	Subgrade	km	14,8	0,5	3,38%	14,3	96,6%
2	Subbase	km	14,8	0,5	3,38%	14,3	96,6%
3	Base	km	14,8	0,3	2,03%	14,5	98,0%
4	ATB	km	14,8	0	0,00%	14,8	100,0%
5	Binder course	km	14,8	0	0,00%	14,8	100,0%
6	Wearing couese	km	14,8	0	0,00%	14,8	100,0%
7	Shoulder	km	14,8	0	0,00%	14,8	100,0%
8	Curbs- BR100.30.18	m	3220	0	0,00%	3220	100,0%
9	Box culverts(0.5*0.5)	NO.	83	6	7,23%	77	92,8%
10	Box culverts(1*1)	NO.	6	1,5	25,00%	4,5	75,0%
11	Pipe culverts(1.5*1.5)	NO.	10	5,5	55,00%	4,5	45,0%
26	Old Underpass	NO.	1	0	0,00%	1	100,0%
27	Old Underpass	NO.	1	0	0,00%	1	100,0%
29	Longitudinal ditches	km	12,583	0	0,00%	12,583	100,0%
30	Sidewalk	km	13,366	0	0,00%	13,366	100,0%
31	OP-1	NO.	2463	0	0,00%	2463	100,0%
33	Bus stop	NO.	20	0	0,00%	20	100,0%
35	Road junctions（base）	NO.	83	0	0,00%	83	100,0%
36	Traffic lights.	NO.	4	0	0,00%	4	100,0%
37	Road signs	NO.	384	0	0,00%	384	100,0%
38	Road marking	r.m.	56950	0	0,00%	56950	100,0%
39	street lights	NO.	900	0	0,00%	900	100,0%
40	Guard Rail	m	1350	0	0,00%	1350	100,0%

2.3.2 Borrow pits

43. Originally, 6 areas were allocated for borrow-pits at the project road (Bishkek – Kara-Balta section, km 15.9 – km 61). The Contractor has obtained all necessary permits for the borrow-pits mining from local authorities, the State Committee for Industry, Energy and Subsoil Use and State Agency for Environmental Protection and Forestry (SAEPF). Table 8 provides main information about borrow-pits

Table 8 Characteristics of borrow pits

No. of borrow-pit	Stocks (m^3)	Area (ha)	Distance from the road (km)
No.1 «Jelamysh»	242 093	10,77	11
No.2 «Sokuluk -1»	185 000	9,02	3,3
No.3 «Sokuluk -2»	185 000	9,7	7,7
No.4 «Ak-Suu -1»	210 000	11,89	2,5
No.5 «Ak-Suu -2»	850 000	68,19	8,6
No.6 «Kara-Balta»	275 323	73,70	3,5
No.7 «SAZ»	197 600	5,2	14.5

44. Sokuluk-1, Sokuluk-2, Ak-Suu-1, Ak-Suu-2, and Kara- Balta borrow-pits are belonging to self-reclaimed category, since they are located in floodplains of rivers that are subject to mudslides.

45. During the conclusion of agreement with Krupskoy aiyl okmotu, on the territory of which Sokuluk-1 and Sokuluk-2 borrow-pits are located, it turned out that when allocating areas for these borrow-pits, the borrow-pit area was overlapped with the area of neighboring adjacent borrow-pit, and therefore mining of Sokuluk-1 borrow-pit was rejected, and the area of Sokuluk-2 borrow-pit was reduced to 1.73 ha.

46. After testing the material quality of Sokuluk-2 borrow-pit by Quality Assurance engineer and Materials engineer, it was found that the material contains a large amount of humus and it cannot be used for the construction of the roadbed, in this regard, the mining of Sokuluk-2 borrow-pit was suspended.

47. For mining, a Saz borrow-pit was proposed, located on the area of the Sazskiy ayyl of the Sokuluk district.

48. During the reporting period, sourcing of inert materials was carried out at the Saz and Ak-Suu 2 borrow-pits.

49. ***Ak-Suu 2 borrow pit.*** Currently, a large volume of inert materials has been accumulated at the borrow-pit, they were transported to the construction of a road on the territory of Moskovsky district, as well as to the territory of the production site for crushing and stockpiling.

Figure 15 Development of Ak-Suu 2 borrow pit

Figure 16 Water sprinkling on the road to Ak-Suu 2 borrow pit to avoid dusting

50. Access roads to the borrow pit are constantly wetted.

51. ***Saz borrow-pit***. Currently, a large volume of inert materials has been accumulated at the borrow pit, which are being transported for the construction of a road in the Sokuluk district.

Figure 17 Development of Saz borrow pit

52. ***Jelamysh borrow pit.*** To date, reclamation of borrow pit work has been completed. The work was carried out according to the Borrow pit Reclamation Plan.

Figure 18 Jelamysh borrow pit before development

Figure 19 Jelamysh borrow pit after development

Figure 20 Jelamysh borrow pit after reclamation

53. Reclamation works at the Jelamysh borrow pit were completed in early April. However, the contractor has not completed the formal handover of this site, and the reclamation completion certificate has not yet been signed. The district Commission conducted a visit to the Jelamysh borrow pit on June 14, 2021. Based on the results of the site inspection, the district commission found some problems with leveling the ground, which must be eliminated by the Contractor. The contractor expects to complete the levelling work by the end of July 2021. The commission's repeated visit for the acceptance of the reclaimed borrow pit is scheduled for July 23, 2021.

54. To date, Ak-Suu 1 and Kara-Balta borrow pits have been prepared for hand over to the reclamation Commission.

55. ***Ak-Suu 1 borrow pit.*** During the floods on the Ak-Suu river, the borrow pit was restored. Reclamation will not be required if development is not carried out by unauthorized persons.

56. ***Kara-Balta borrow pit.*** During the floods on the Kara-Balta River, a partial restoration of the borrow pit took place. But the main area of the borrow pit is subject to reclamation, which includes the leveling of all irregularities in the area of the excavations carried out. On July 15, 2021, the district commission plans to conduct site visit to the Kara-Balta borrow pit to conduct inspection and acceptance.

57. For the road section **km 8.5 - 15.9**, a permit was obtained for temporary use (2 construction years) of a land plot with an area of 10 hectares for development of sand and gravel mixture. Currently, the surface of the borrow-pit is being prepared for development - removal and storage of the upper fertile and vegetative layer.

2.3.3 Plants

58. Production site is located at the territory of Sokuluk ayil okmoty, close to Ak-Torpok village. The area belongs to the industrial and communal zone. Total land area - 10 hectares.

59. The following buildings and structures are located in the site: console control building, stone-crushing plant (SCP), asphalt-bitumen plant (asphalt plant), concrete batch plant (CBP), silos - bin for cement, workers camp, office, eating room, car parking; parking for trucks; storage for fill materials - crushed stone and sand; transformer substation, platform for the installation of garbage containers, concrete cesspit pit for sewage.

Concrete Batch Plant

60. Concrete batch plant site is intended for the manufacture of reinforced concrete products. The technological process for the manufacture of reinforced concrete structures, includes the

preparation of a concrete mixture and its transportation to the object under construction, its supply, distribution, laying and compaction in the structure, curing of concrete.

61. Various reinforced concrete products are manufactured for usage on the road (concrete rings, chutes, curbs, New Jersey type fences, etc.).

Figure 21 Production of reinforced concrete structures

Stone-crushing plant

62. At the production site for the plant's placement, works are carried out on crushing sand and gravel raw materials and preparing material stocks.

63. Raw materials for production of crushed stone and sand is delivered to the stone-crushing plant from Ak-Suu 2 borrow-pit by dump trucks. Crushing of raw material is carried out in crush lines of crushers. Water sprinkling should be done during the crushing, which reduces the emission of inorganic dust by 70%. Sieving is carried out with washing - on vibrocribble screens, transportation is carried out by belt conveyors.

Figure 22 Stone crushing plant

Concrete mixing plant

64. Concrete mix is prepared at a concrete mixing plant and delivered in finished form for the construction. Concrete production involves mixing cement, sand, gravel and water in the right

proportions. Transportation of concrete mix from the place of preparation to the place of unloading or directly to the concreting unit is carried out by road.


Figure 23 Concrete mixing plant

65. Washing of concrete mixers is carried out on a specially designated area. The flushing water is discharged into a special three-section sump. Further, the flushing water, after settling, is used for water-sprinkling the area of the production site.

<u>Asphalt bitumen plant</u>

66. Asphalt mixture is prepared in forced mixing asphalt mixers with periodic action and preliminary drying, heating and dosing of mineral materials. The finished asphalt mixture is loaded into dump trucks and transported to road sections.


Figure 24 Loading of asphalt mixture into dump trucks and unloading into asphalt pavers

67. To prepare the asphalt mixture, a large number of barrels with bitumen were delivered to the production site, which were partially placed on a specially prepared area. A large number of barrels were installed on the ground, without the use of an anti-filtration coating.


Figure 25 Barrels of bitumen on a special prepared site

Camps for workers residence

68. Due to the proximity to the main gas pipeline, in 2018 the relevant services have repeatedly issued orders to relocate the residential sector outside the sanitary protection zone. Once the land plot owner's (Emergency Control Ministry) permission was obtained, in 2019 the residential area was relocated to a safe distance and placed on the east side of the industrial zone in accordance with safety requirements and hygiene standards.

Figure 26 Workers ' accommodation camp on the territory of the production site

69. The worker's camp accommodates 50 people. Each room is designed to accommodate two workers. There are kitchen room, equipped place for eating, shower rooms, washbasins, toilets at the camp.

70. In the new camp sewage water is discharged into an existing septic tank by pipelines.

71. After a verbal warning concerning the need for a fire shield equipment, 2 shields were installed in the camp.

Figure 27 Fire shields on the territory of the camp

Figure 28 Dining and kitchen area

72. Water supply at the production site is carried out from an existing well on the basis of the Agreement No.38 “On the provision of the well for temporary use” dated October 10, 2017. The well was restored to supply the plant with water. The contractor laid a pipeline to the plant. Currently there are no problems with water on the territory of the production site.

2.3.4 Workers camp at the villages of Sokuluk and Belovodskoe

73. At the worker camps in the villages of Sokuluk and Belovodsk, household waste and sewage from septic tanks are disposed in a timely manner, and all protective measures for sanitary hygiene are observed. On the territory of the camps, all necessary maintenance measures are observed. Periodic checks are carried out over compliance with environmental requirements. However, both in Sokuluk and in Belovodsk, during the repair and other works, waste is accumulated which is not always taken out in time, as a result it creates a mess. On the part of the Consultant, additional instructions were given about the need to clean work places every day after the completion of work.

2.3.6 Tree management

74. On the road section **km 15.9 - km 61**, initially the number of trees falling under forced cutting was 5916, but after additional study of the project site, a change was made to the design of the sidewalks, thereby saving 104 trees. The total number of trees that fell under forced cutting amounted to 5812 pcs.

75. Work on cutting down trees on the section from km 15.9 - km 61 was carried out from 2017 to 2019.

76. Cutting of trees on the project site was carried out in accordance with the legislation of the Kyrgyz Republic, namely, all the necessary permits were obtained from the State Agency for Environmental Protection and Forestry. On the part of the State EcoTechInspection under the GKR, checks were also carried out for the presence of all permits for cutting trees. As compensation measures, to restore the number of green spaces, it is planned to plant new tree seedlings at a rate of 1: 2. Instead of one cut down, two new trees are planted.

77. Work on cutting down trees was carried out in the presence of a representative from aiyl okmotu. All cut trees (trunks and tree stumps) were handed over to the aiyl okmotu for further use at their discretion. The hand over process is recorded and formalized by the appropriate acceptance act.

78. According to the terms of the current contract between the MOTC KR and China Railway No. 5, the contractor should plant new seedlings to replace the cut trees, as well as carry out maintenance (watering, replacing dried seedlings with new ones) until the end of the defect’s notification period.

79. Since 2019, the China Railway No. 5 contracting company has started a phased planting of tree seedlings at selected sites in the Petrovka and Poltavka, where the main road works on the construction of sidewalks and the installation of drainage trays have been completed.

80. To date, 2245 have been planted. young seedlings: (in the autumn of 2019 - 300 pcs; in the spring of 2020 - 300 pcs; in the autumn of 2020 - 625 pcs; in March 2021 - 315 pcs; in April 2021 - 680 pcs.). Saplings of birch, willow (4 varieties), catalpa, honey locust, poplar were planted. Control and monitoring over the seedlings planting and watering, as well as monitoring of the survival rate of seedlings on an ongoing basis is carried out by the environmental specialists of the Construction Supervision Consultant, the contractor and representatives of MoTC KR.

Figure 29 Planting seedlings in the spring of 2021

81. On the section of the road, km **8.5 -15.9**, initially 1000 pieces of trees were determined for demolition, which are located on the areas where road will be widened and areas where construction / restoration of sidewalks and drainage system will be carried out. However, this number will be updated as the road axis is completed.

82. To date, 321 trees have been cut down on this section of the road. The tree cutting works were carried out in December 2020 (“Azamat” car market area). Cutting in this section was carried out mostly on the southern side of the road, where the roadbed is being widened.

83. According to the terms of the current contract between the MoTC KR and China Railway No. 5, the contractor will plant new seedlings to replace the cut down ones, and will also carry out maintenance (watering, replacing dried seedlings with new ones) until the end of the defect’s notification period.

84. On this section, after the completion of the main types of repair and construction work, considering the initially determined number of trees falling under the "forced cutting", it is planned to plant 2,000 new tree seedlings.

Figure 30 Tree cutting on the road section km 8.5 - 15.9

2.3.7 Work in winter 2021

85. In the winter period of 2021, the Contractor carried out road maintenance work, including snow removal, winter slipperiness control, and anti-icing work. These works were aimed at ensuring the smooth and safe movement of vehicles.

Figure 31 Work in winter 2021

2.3.8 7.4 km section (km 8,5 – km 15,9)

86. The environmental impact as a result of the rehabilitation of this section of the Bishkek - Osh road (km 8.5 - 15.9) will be short-term and local, since most of the construction work is carried out along the existing right-of-way. The project includes a number of related activities, such as quarrying, operation of the asphalt plant and crushing plant, operation of the contractor's work camps and warehouses, etc.

87. Problems related to resettlement were resolved before the start of the construction period.

88. Since the Project provides for the rehabilitation of the existing road, and the given that there are no specially protected natural areas within the project's impact zone, the resulting environmental impact is mainly limited to the construction phase. In 2018, additional field survey work was carried out to clarify the previously obtained information. Also, in 2018, laboratory monitoring of environmental components was conducted on this road section. Based on the initial environmental examination (IEE) of the Bishkek-Osh road section (km 8.5 - km 61) rehabilitation project and the new data obtained during additional field surveys and the results of laboratory monitoring of environmental components, a Supplementary IEE was prepared for the project road section from km 8.5 to km 15.9 of the Bishkek - Osh road.

89. The contractor prepared Site-Specific Environmental Management Plan, that was approved in December 2021, after what a permission was obtained to carry out work on this section of the road. 321 trees were cut down. According to preliminary estimates, more than 1,000 trees are to be cut down. In the spring of 2021, culvert pipes replacement works has been started.

Figure 32 Laying of pipes at 7.4 km section

90. Local administration has allocated an area for the removal of construction waste: unsuitable soil and removed asphalt.

91. Laboratory monitoring of background levels of environmental components at the project road section was carried out in the period 2013 - 2018. Considering that at present, due to the increase in traffic intensity, the background levels of environmental components have changed, therefore, in the spring of 2021, with the improvement of weather conditions, laboratory monitoring of the background levels of environmental components was carried out in sensitive areas of the project road section.

2.3.9 Information about personnel

92. During contract negotiations with the Contractor on the personnel structure for the Bishkek-Kara-Balta road rehabilitation project, an agreement was reached according to which:

- the composition of management and engineering personnel:
  - 60% - foreign personnel,
  - 40% - local personnel;
- the composition of the workers:
  - 20% - foreign personnel,
  - 80% - local personnel.

93. Currently, 544 people are involved in the Bishkek-Karabalta road rehabilitation project, including 58 people from the PRC and 486 people from the local staff.

94. In the third quarter of 2021, it is planned to recruit up to 500 people of local staff.

2.4 Description of any project changes

95. Initially, 6 areas were allocated for borrow-pits on the project road. In particular, Sokuluk-1 and Sokuluk-2 borrow-pits were intended for mining during work on the territory of the Sokuluk district. The contractor has obtained all the necessary permits for the development of these borrow-pits from local authorities: The State Committee for industry, energy and subsoil use and The State Agency for environmental protection and forestry.

96. However, during the conclusion of agreement with Krupskoy aiyl okmotu, on the territory of which Sokuluk-1 and Sokuluk-2 borrow-pits are located, it turned out that when allocating areas for these borrow-pits, the borrow-pit area was overlapped with the area of neighboring adjacent borrow-pit, and therefore development of the Sokuluk-1 borrow-pit was refused, and the area of the Sokuluk-2 borrow-pit was reduced to 1.73 ha.

97. After testing the quality of the material of the Sokuluk-2 borrow-pit by the Quality Assurance engineer and Materials engineer, it was found that the material contains a large amount of humus and it cannot be used for the construction of roadbed, in this regard, the

development of the Sokuluk-2 borrow-pit was suspended. For construction works it was necessary to find a new borrow-pit.

98. Saz borrow-pit was proposed, located on the territory of the Sazskiy ail okrug of the Sokuluk district, and the development of which was carried out during the work on the territory of the Sokuluk district.

2.5 Changes to project design and construction method

99. In 2017, earth works at section 3 in the village of Petrovka were suspended by the ADB until the winter season, due to complaints of the local residents - 17 homeowners at Tsentralnaya Street for vibration coming from construction equipment when compacting materials using vibration, in particular, from rollers.

100. IPIG and EPTISA have found that the most effective and least costly solution was to exclude compaction with vibration at all road sections where there are residential houses.

101. EPTISA's consultant (materials engineer) conducted a study to verify the possibility of compaction without vibration. The study was conducted on fill materials, unbound materials and binders.

102. The study has shown that it is possible to compact available materials without vibration using a reasonable number of passes.

103. It was decided not to use vibration in the future during the compaction of materials. Soil compaction works as directed by the ADB (letter dated 23.05.2018) were carried out without vibration at all road sections, except for section km 15.9-19.8 km where there are no settlements. These changes in the accepted construction methods resulted in an increase in the cost of the work performed.

104. During the reporting period, earthworks on the road sections were carried out without the use of vibration. Supervision over the fulfillment of this requirement was constantly carried out by the inspectors of the Consultant, construction supervision consultant, environmental specialist of the Consultant. Vibration control is also carried out by laboratory monitoring.

105. In 2019, the Consultant developed a mix design of wearing course that meets the requirements of local standards and the British standard. This mix design also includes the noise reduction requirements recommended in the "Noise Modeling report. During the reporting period, the laying of wearing course using a mix design continued.

3. ENVIRONMENTAL SAFEGUARD ACTIVITIES

3.1 General description of environmental safeguard activities

106. During the reporting period, regular visual monitoring over compliance with environmental requirements during construction work at all sections of the road was carried out by a local environmental specialist, construction supervision consultant TEMELSU, an environmental specialist of the MoTC Investment Projects Implementation Group, an environmental specialist of the Contractor.

107. Regular monitoring began in March 2021. Visual monitoring included one-day visits and inspections of all work sites, borrow pits, workers' camps and plants.

108. Since the beginning of the introduction of quarantine by the Government of the Kyrgyz Republic in March 2020, the Contractor has taken additional measures based on the recommendation of the Republican Headquarters to Combat COVID-19 and the Action Plan for the Prevention Spread of COVID-19 approved by the Contractor, in particular the requirement for mandatory wearing masks by the consultant's and contractor's specialists in the offices, the presence of a sanitizer, the person in charge measuring the body temperature of employees with a non-contact thermometer at the entrance and a survey of the well-being of workers before starting work, the mandatory suspension of persons with an elevated body temperature and signs of an infectious disease in the workplace.

3.1.1 Road construction works

109. Construction work carried out by the Contractor continued despite the current situation in the Kyrgyz Republic with COVID-19.

110. The Contractor's personnel and the local Consultant's personnel are provided with the necessary protective equipment (protective masks, sanitizers in the office, constant cleaning and disinfection of the office premises). Based on the recommendations of the Republican Headquarters for Combating COVID-19, the Consultant recommended, if possible, to limit meetings with a large presence of people. If possible, to conduct discussion "online" or by e-mails.

111. The main impact on the environment during excavation work in the previous periods was dust formation. In the reporting period, there were only single cases of dust formation, about which the Contractor was immediately warned. Watering of the road, including shoulders, in the construction sites was carried out from 7 am to 8 pm without a lunch break. The contractor has drawn up a schedule for watering the road with an indication of the interval between watering of 30 minutes. Considering the small amount of work on the road and the fact that several watering machines were operating on the construction sites, which managed to water the road in time, the facts of increased dust formation were rarely observed at the construction sites. No complaints were received from the local population and local self-government bodies during the reporting period.

112. On the previously constructed sections of the road, the installation of culvert chutes was carried out.

Figure 33 Violation of safety precautions during installation of culvert chutes.

113. During the work on the installation of culvert chutes, the facts of safety violations were noted (absence of helmets) when moving load by cranes. The contractor was notified on the need for constant monitoring of safety measures and explanatory work among workers.

114. Previously installed culvert chutes in many places are overgrown with grass, filled with construction waste. The contractor was warned about the elimination of the detected violations, but the situation remained unchanged.

Figure 34 Condition of previously installed chutes

Figure 35 Previously excavated and abandoned trench for culvert chutes

115. In the village of Alexandrovka, culverts have not yet been installed in the trenches excavated in 2019, there are no passages through the trench, which creates difficulties for local residents.

116. During the reporting period, work was also carried out on the installation, cleaning and strengthening of parapets.

117. During the monitoring, it was found that the soil accumulated near the parapets in the winter period was cleaned out and taken to the road shoulder, which is unacceptable, since in case of rains, in wet condition, it will turn into mud, which will contribute to public dissatisfaction. A letter was sent to the contractor about the need to immediately remove soil waste from the road to places specially designated by the local administration. This violation was eliminated by the Contractor in due time.

Figure 36 Cleaning parapets from accumulated soil

118. Subsequently, the soil accumulated near the parapets was cleaned out and removed in a timely manner.

119. Also, during the reporting period work was carried out on the construction of bus stops. This produced a large amount of asphalt scraps. The contractor was repeatedly warned about the need for timely removal of waste from the road.

Figure 37 Cleaning of bus stops from asphalt scraps

120. On the road section (south side) km 41 + 90, sidewalk was covered with the removed asphalt. The locals were forced to walk on the carriageway, which posed a threat to life. A letter was sent to the contractor with the established deadlines for the elimination of this violation. In due time, the removed asphalt was taken out, the sidewalk was cleared.

121. At km 26 + 500 (north side), a retaining wall was built up. During the work, violations by the workers of Safety and Health precautions were noted (work at height without personal protective equipment, lack of protective helmets). There were no special devices for work at height - ladders. The contractor was recommended to check the knowledge of occupational health and safety requirements of workers and, if necessary, to re-instruct on occupational health and safety.

Figure 38 Violation of safety precautions when working at height

122. Currently, the construction of five underground passages is almost completed. Considering that during the construction of underground passages, the presence of a close occurrence of the groundwater level was noted, the Consultant constantly monitors these objects to identify flooding and the possibility of timely elimination.

Figure 39 Underground passage flooding at km 57 + 420 during the rainy season in March 2021

3.1.2 Borrow pits

123. To date, the development of Jelamysh, Ak-Suu1, Kara-Balta borrow pits has been completed.

124. According to the regulation on reclamation of lands disturbed in the process of subsoil use, it is necessary to conduct the handover of reclaimed lands. This handover is performed by the Commission for the handover of reclaimed lands, appointed by the local state administration, on the territory of which these lands are located.

125. The planned reclamation works in the borrow pits for 2020 began in the winter of 2021. The initial plans for reclamation work were disrupted due to the situation with COVID-19 in the Kyrgyz Republic. The Contractor started reclamation work at the Jelamysh borrow pit in the winter period of 2021.

126. ***Jelamysh borrow pit.*** Currently, work on the reclamation of the borrow pit has been completed.

Figure 40 Jelamysh borrow pit after reclamation

127. The work was carried out in accordance with the Borrow-pit Reclamation Plan.

128. The hand-over Commission worked in June 2021. As a result of the work, some shortcomings were found, which are currently being eliminated by the Contractor. The second visit is scheduled for July 23, 2021. At present, the Ak-Suu1 and Kara-Balta borrow pits have been prepared for hand over to the reclamation Commission. The district commission for the acceptance of the Kara-Balta borrow pit plans to conduct visit on July 15, 2021 for inspection and acceptance.

129. ***Ak-Suu 2 borrow pit.*** To date, there are large areas of lands disturbed in the process of subsoil use. The levelling of these areas has started.

Figure 41 Areas disturbed in the process of subsoil use in Ak-Suu 2 borrow pit

Figure 42 Reclamation works at the Ak-Suu 2 borrow pit

3.1.3 Production sites

130. The territory of the plant is located in the bed of the Ak-Suu river on a pebble foundation, which is characterized by a high value of the filtration coefficient. To exclude soil contamination on the production site with bitumen and other chemical reagents that can get into the underground aquifer, the contractor was given clear instructions on the need to immediately clear the areas of bitumen and other chemical reagents leaks. This issue is under constant control by the Consultant.

131. During the operation of the plant, all soil around the containers with chemicals should be protected from leaks and spills of hazardous materials with an impervious protective coating.

132. The contractor was recommended to protect the soil around the tanks with chemical reagents from spills and leaks of hazardous materials with an impenetrable protective coating. These recommendations were taken into account and implemented by the Contractor.

Before	After

Figure 43 Impermeable protective coating around chemical containers

Plants

133. At the production site for the plant's placement, work was carried out on crushing sand and gravel raw materials and preparing stocks of materials.

Fidure 44 Operation of stone crushing plant

134. Considering that the material at the beginning of the year was wet due to atmospheric precipitation, there was no dusting when crushing the raw material. With the onset of the hot season, there were facts of dusting during the operation of the stone crushing plant. A letter was sent to the contractor to eliminate this violation. The contractor explains that dusting occurs when the plant is started up and that this is inevitable. The contractor has arranged water sprinkling around the stone crushing plant. Workers were provided with respirators.

135. At the production site, manufacture of welded reinforcing meshes, frames for the production of reinforced concrete structures, pouring of various reinforced concrete products for the road needs

(concrete rings, trays, curbs, New Jersey-type fences, etc.) was also carried out. Workers are not provided with sufficient personal protective equipment.

Figure 45 Work of the reinforcement-welding section

136. Concrete mix is prepared at a concrete mixing plant and delivered in finished form for the construction. Concrete production involves mixing cement, sand, gravel and water in the right proportions. Transportation of concrete mix from the place of preparation to the place of unloading or directly to the concreting unit is carried out by concrete mixer trucks.

Figure 46 Refueling of concrete mixer trucks

137. Washing of concrete mixers is carried out on a specially designated area. The flushing water is discharged into a special three-section sump. Further, the flushing water, after settling, is used for water-sprinkling the area of the production site.

Figure 47 Washing of concrete mixer trucks

Figure 48 Watering of the production site with flushing water

138. During the reporting period, the concrete mix was mainly used for the manufacture of reinforced concrete structures. Technological process for the manufacture of reinforced concrete structures, includes the preparation of a concrete mixture and its transportation to the object under construction, its supply, distribution, laying and compaction in the structure, curing of concrete.

139. Various reinforced concrete products are manufactured for usage on the road (concrete rings, chutes, curbs, New Jersey type fences, etc.)

Figure 49 Polygon for the production of reinforced concrete products

140. For the preparation of the asphalt mixture, a large number of barrels with bitumen were delivered to the production site, which were partially placed on a specially prepared site. A large number of barrels were installed on the ground, without the use of an anti-filtration coating. Bitumen leaks have been detected. A letter was sent to the contractor to eliminate this environmental violation.

Figure 50 Bitumen leaks

141. The bitumen was collected, and remaining barrels were relocated to the site with an anti-filtration coating.

Camps for workers residence

142. Due to the proximity to the main gas pipeline, in 2018 the relevant services have repeatedly issued orders to relocate the residential sector outside the sanitary protection zone. Once the land plot owner's (Emergency Control Ministry) permission was obtained, in 2019 the residential area was relocated to a safe distance and placed on the east side of the industrial zone in accordance with safety requirements and hygiene standards.

Figure 51 Workers ' accommodation camp on the territory of the production site

143. The worker's camp accommodates 50 people. Each room is designed to accommodate two workers. There are kitchen room, equipped place for eating, shower rooms, washbasins, toilets at the camp.

144. In the new camp sewage water is discharged into an existing septic tank by pipelines.

145. 2 fire shields were installed in the camp.

Figure 52 Fire shields on the territory of the camp

Figure 53 Dining and kitchen area

146. Water supply at the production site is carried out from an existing well on the basis of the Agreement No.38 “On the provision of the well for temporary use” dated October 10, 2017. The well was restored to supply the plant with water. The contractor laid a pipeline to the plant. Currently there are no problems with water on the territory of the production site.

147. During monitoring in the workers ' camp, it was found that the fire extinguishers had become unusable, it was necessary to recharge or purchase new ones. It is necessary to fill the sand into the sand box on the fire panel.

148. Also, fire extinguishers are fixed on the sunny side of the living room, which is also unacceptable. Contractor was instructed that the fire extinguishers should be placed in an area protected from the sun in such a way that they are protected from direct sunlight. They can be installed on the floor, with mandatory fixation from a possible fall in case of accidental exposure. A letter was sent to the contractor with the specified deadlines for eliminating the detected violation. The contractor replaced unusable fire extinguishers, the box on the fire shield is filled with sand.

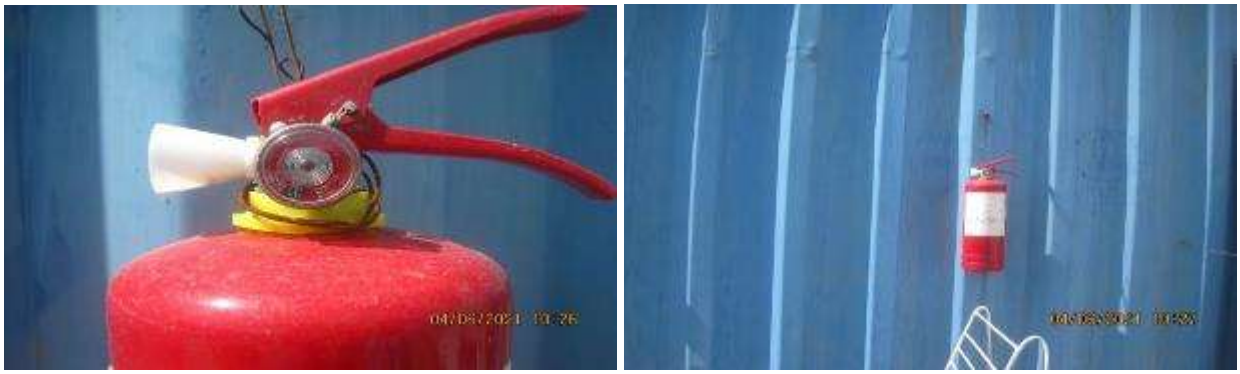


Figure 54 Fire extinguishers installed with violations on the territory of the production site

3.1.4 Workers' camp in the Sokuluk and Belovodsk

149. During inspections over compliance with environmental requirements in the workers camps in Sokuluk and Belovodsk, it was found that on the territory of the base in Belovodsk a kitchen and dining room are in an unsatisfactory condition. The walls are covered with mildew, grease and dust. A letter was sent to the Contractor about the need to wash and whitewash the walls.

Figure 55 The unsatisfactory state of the kitchen block on the territory of Belovodsk

150. The kitchen unit was put in order in due time. The walls are washed and whitewashed.

151. It was also established that at the base Sokuluk fire extinguishers are in unfixed position and in the open sun, which is unacceptable.

Figure 56 Fire extinguishers installed with violations on the territory of the base in Sokuluk

152. The contractor was warned about this violation, the fire extinguishers were removed to the premises.

153. In the residential camps of Sokuluk and Belovodsk, household waste and waste water from septic tanks are removed in a timely manner, all protective measures for sanitary hygiene are observed.

154. In order to prevent the risks of COVID-19 disease, first-aid kits equipped with non-contact thermometers, sanitizers, and necessary medicines were organized in the camps for the specialists and workers of the Contractor.

155. All Chinese specialists have been vaccinated. Local specialists due to the limited amount of vaccine in Kyrgyzstan, not all were vaccinated.

156. The Contractor's personnel were provided with the necessary equipment: protective masks, sanitizers. Constant cleaning and disinfection of living premises was carried out.

157. The staff was warned about the mandatory isolation of persons with fever and signs of an infectious disease.

158. During the reporting period, no health and safety problems were registered for the Contractor's specialists and workers.

3.1.5 Tree management

159. The total number of trees that fell under the forced cutting amounted to 5812 pieces

160. It was planned to start planting seedlings to replace the cut down trees in the fall of 2018, but given that the installation of culverts and construction of sidewalks has not been completed at any construction site, the planting of seedlings was not carried out.

161. The Consultant's environmental expert, together with the Contractor's environmental expert, examined the seedlings in several nurseries located in the Chui oblast. The best quality and most suitable seedlings turned out to be the seedlings of the Peasant Farm "Pitomnik Zherdevykh".

162. To date, in total, 2,245 seedlings have been planted.

Figure 57 Planting of seedlings in the spring of 2021

163. Including in the autumn of 2019 - 300 pieces, in the spring of 2020 - 300 pieces, have taken root and are in a satisfactory condition.

164. In the autumn of 2020, 625 seedlings were planted.

165. In March 2021, 315 seedlings were planted, in April - 680 seedlings were planted.

166. Saplings of birch, willow of 4 varieties, catalpa, honey locust, poplar were planted.

Figure 58 Seedlings planted in 2020

167. Visual monitoring allows us to conclude that the planted seedlings have taken root and are in a satisfactory condition. We would like to note that there are facts of "damage" of the planted seedlings, this is the scrapping of the planted seedlings, some facts of theft by unidentified persons, uncontrolled grazing of domestic animals that eat young shoots. On this issue, MoTC applied to the Local Self-Government Bodies in order to carry out explanatory work among the local residents, since it will be impossible to restore the number of green spaces without the support of local self-government bodies

168. In addition to domestic animals, the threat to the planted seedlings is also posed by unscrupulous local residents who break and dig up seedlings for incomprehensible intentions. More than 15 birches and willows were broken and torn out of the ground, 5 birches were dug.

Figure 59 Seedlings eaten by domestic animals and broken seedlings

169. During the reporting period, given the high air temperature, regular and abundant watering of seedlings is necessary. For watering seedlings, the Contractor has allocated a watering machine which will be used for seedlings watering only.

Figure 60 Watering of seedlings

3.2 Site audits

170. Regular monitoring over compliance with the requirements of environmental legislation during construction work on the Bishkek-Karabalta road started in March 2021. During the reporting period, 46 site visits to the project road were conducted.

Table 9 Monitoring of construction sites in March 2021

No.	Date	Auditors name	Propose of audit	Summary of any significant findings
1	02.03	Volkova T.	Monitoring of construction sites	The problem of non-removed waste at 7.4 km section. An oral warning was given to the Contractor about the detected violation.
2	04.03	Volkova T.	Monitoring of construction sites	The territory of the asphalt plant is in an unsatisfactory condition. A letter was sent to the Contractor about the detected violation.
3	09.03	Volkova T.	Monitoring of construction sites	Site visit to the Jelamysh borrow pit. Monitoring of reclamation results
4	11.03	Volkova T.	Monitoring of construction sites	Site visit to the Ak-Suu2 borrow pit. Meeting with the Contractor. Discussion of environmental problems.
5	15.03	Volkova T.	Monitoring of construction sites	Monitoring of the production site territory. Meeting with candidates for the position of environmental specialist of Contractor
6	17.03	Volkova T. Uzbekov K.	Monitoring of construction sites. Together with	Monitoring of construction sites. Familiarization trip with the new environmental specialist of the Contractor

			Contractor's environmental specialist	The problem of not removed waste from construction sites on the road. A letter was sent to the Contractor about the detected violation.
7	19.03	Volkova T. Uzbekov K.	Visit of the "Pitomnik Zherdev " seedling nursery	Choosing seedlings for planting
8	23.03	Volkova T.	Monitoring of construction sites	Monitoring of construction sites. Visit to the proposed areas for storing unsuitable soil at 7.4 km section
9	24.03	Volkova T. Uzbekov K.	Monitoring of construction sites. Together with Contractor's environmental specialist	Monitoring of the production site territory. Familiarization trip with the new environmental expert of the Contractor
10	29.03	Volkova T. Uzbekov K.	Monitoring of construction sites	Monitoring of construction sites. Familiarization trip with the new environmental specialist of the Contractor
11	31.03	Volkova T. Uzbekov K.	Monitoring of construction sites	Monitoring of construction sites together with the Contractor's environmental expert

Table 10 Monitoring of construction sites in April 2021

No.	Date	Auditors name	Propose of audit	Summary of any significant findings
1	05.04	Volkova T. Uzbekov K.	Monitoring of construction sites. Together with Contractor's environmental specialist	Monitoring of construction sites. Together with the Contractor's environmental expert Participation in the web-seminar on COVID-19 risk management at construction sites
2	08.04	Volkova T. Uzbekov K.	Monitoring of construction sites. Together with Contractor's environmental specialist	Site visit to the asphalt plant and Ak-Suu2 borrow pit together with the Contractor's environmental expert
3	09.04	Volkova T. Uzbekov K.	Monitoring of construction sites. Together with Contractor's environmental specialist	Monitoring of proposed borrow pit for 7.4 km section
4	12.04	Volkova T.	Monitoring of construction sites	Monitoring of the condition of previously constructed pipes and chutes. Violations were detected. A letter was sent to the Contractor about the detected violation.
5	14.04	Volkova T.	Monitoring of construction sites	Seedlings are poorly watered. It is necessary to make regular watering of seedlings every 3 days. A letter was sent to the Contractor about the detected violation.
6	15.04	Volkova T. Uzbekov K.	Monitoring of construction sites	Planting seedlings in Voenno Antonovka
7	16.04	Volkova T.	Monitoring of construction sites. Together with	Installation of culvert chutes. Violation of safety regulations during installation

		Uzbekov K.	Contractor's environmental specialist	
8	20.04	Volkova T.	Monitoring of construction sites	Monitoring of storage sites of old asphalt and unsuitable soil
9	22.04	Volkova T.	Monitoring of construction sites	Planting seedlings in the village of Petrovka
10	26.04	Volkova T.	Monitoring of construction sites	Monitoring of construction sites. The problem with planted seedlings. A letter was sent to the Contractor about the detected violation.
11	28.04	Volkova T.	Joint visit with Profilab laboratory	Participation in laboratory monitoring of noise and vibration
12	30.04	Volkova T.	Monitoring of construction sites	Monitoring of construction sites. The problem of not removed waste from construction sites on the road. A letter was sent to the Contractor about the detected violation.

Table 11 Monitoring of construction sites in May 2021

No.	Date	Auditors name	Propose of audit	Summary of any significant findings
1	03.05	Volkova T. Uzbekov K.	Monitoring of construction sites. Together with Contractor's environmental specialist	Site visit to the asphalt plant and Ak-Suu2 borrow pit together with the Contractor's environmental expert
2	07.05	Volkova T.	Monitoring of construction sites	Monitoring of storage sites of old asphalt and unsuitable soil
3	10.05	Volkova T.	Monitoring of construction sites	Monitoring of the production site territory. Polygon of reinforced concrete structures. Storage area for barrels with bitumen.
4	12.05	Volkova T.	Monitoring of construction sites	Cleaning of parapets from accumulated dirt.
5	14.05	Volkova T. Uzbekov K.	Joint visit with SAEP	Participation in the monitoring of atmospheric air
6	17.05	Volkova T.	Monitoring of construction sites	Monitoring of construction sites. A letter was sent to the Contractor about the detected violation.
7	19.05	Volkova T.	Monitoring of construction sites	Monitoring of the construction of culvert chutes
8	21.05	Volkova T. Uzbekov K.	Monitoring of construction sites. Together with Contractor's environmental specialist	Monitoring of construction sites. Meeting with the Contractor. Discussion of environmental problems.
9	24.05	Volkova T. Uzbekov K.	Monitoring of construction sites. Together with Contractor's environmental specialist	Monitoring of all construction sites. The problem of watering seedlings

10	26.05	Volkova T.	Monitoring of construction sites	Monitoring of construction sites.
11	28.05	Volkova T.	Joint visit with Profilab laboratory	Measurement of noise and vibration levels
12	31.05	Volkova T.	Monitoring of construction sites	Monitoring of all construction sites. The problem of watering seedlings

Table 12 Monitoring of construction sites in June 2021

No.	Date	Auditors name	Propose of audit	Summary of any significant findings
1	03.06	Volkova T. Uzbekov K.	Monitoring of construction sites. Together with Contractor's environmental specialist	Monitoring of construction sites. Meeting with the Contractor. Discussion of problems with watering seedlings.
2	04.06	Volkova T.	Monitoring of construction sites	Monitoring of all construction sites. Collecting information for the semi-annual report
3	07.06	Volkova T.	Monitoring of construction sites	Monitoring of all construction sites. Meeting with the locals at 7.4 km section
4	08.06	Volkova T.	Monitoring of construction sites	Monitoring of all construction sites. The problem of construction waste on the road.
5	11.06	Volkova T.	Monitoring of construction sites	Monitoring of all construction sites. The problem of watering seedlings
6	16.06	Volkova T.	Monitoring of construction sites	Monitoring of old asphalt storage sites at 7.4 km section.
7	17.06	Volkova T.	Monitoring of construction sites	Monitoring of all construction sites. Installation of culvert chutes
8	22.06	Volkova T.	Monitoring of construction sites	Monitoring of all construction sites. Visit to the production site.
9	24.06	Volkova T.	Monitoring of construction sites	Monitoring of all construction sites. Collecting information for the semi-annual report
10	28.06	Volkova T.	Monitoring of construction sites	Monitoring of construction sites. A letter was sent to the Contractor about the detected violation.
11	30.06	Volkova T.	Monitoring of construction sites	Monitoring of the production site territory. A camp for workers ' accommodation. Storage area for barrels with bitumen.

3.3 Issues tracking (based on the list of non-compliance)

171. During the reporting period, if environmental issues were identified, a warning was initially issued to the Contractor with a specified deadline. If the Contractor did not eliminate the identified environmental issue, a letter was sent. Basically, all problems were resolved in a timely manner.

Table 13 Report on non-compliance with environmental requirements (January - June 2021)

No	The issue of non-compliance, defined by Temelsu	CEMWP Number and date of notification Temelsu	Applicable Guide on Best Practices (No.)	Specific issue and location	Actions taken by the Contractor (specify)	Results of Temelsu Inspection	Status as of June 2021 (Date and Detail)
1	**Seedling planting issue**	**CEMWP № 2.5.1** 0541BOC3 55/3350-00211 dd 05.03.21	Annex 10 Tree Management Plan	On the road section in the village of Poltavka, km 53-54, where the last number of seedlings were planted in the autumn of 2020, there is a large amount of removed and not used soil formed during the preparation of pits for planting seedlings. In sections where seedlings were planted in the spring of 2020, weeds that grew over the summer and dried up create a fire hazardous situation, which poses a threat not only to seedlings, but also to the population	Contractor's letter CAREC-G0590 dated 19.03.2021 on the elimination of these comments	Given comments have been eliminated **completed**	Given comments have been eliminated
2	**Seedling planting issue**	**CEMWP № 2.5.1** 0541BOC3 55/3350-00220 dd 18.03.21	Annex 10 Tree Management Plan	On the road section where work was carried out to prepare pits for planting seedlings, the depth of some pits is not sufficient for planting seedlings (km 46+500). It was also found that the soil in some pits is rocky and will not be able to provide conditions for the normal	Given comments were eliminated within the established time frame	During monitoring, it was found that these comments were eliminated. **completed**	Given comments have been eliminated

No	The issue of non-compliance, defined by Temelsu	CEMWP Number and date of notification Temelsu	Applicable Guide on Best Practices (No.)	Specific issue and location	Actions taken by the Contractor (specify)	Results of Temelsu Inspection	Status as of June 2021 (Date and Detail)
				development of the root system of seedlings.			
3	**Unsatisfactory condition of the sites**	**CEMWP № 2.9.4** 0541BOC3 55/3350-00223 dd 23.03.21	Приложение 4 Безопасность, здоровье и гигиена	The territory of the production site is in poor condition. Snow and rain washed away the ground in some areas of the site. The surface of the earth was a mess. It is necessary to fill the problem areas with a gravel mixture. Fire extinguishers in the workers' camp at the production site have become unusable, it is necessary to recharge or purchase new ones. It is necessary to fill the sand into the sand box on the fire panel. On the territory of the base in the Belovodskoye village, kitchen and dining room are in an unsatisfactory condition. The walls are covered with mildew, grease and dust.	Contractor's letter CAREC-G0598 dated 30.03.2021 Request to extend the deadline until 7.04.21, due to prolonged rains	**completed**	Given comments have been eliminated
4	**The problem of caring for seedlings**	**CEMWP № 2.5.1** 0541BOC3 55/3350-00236 dd 14.04.21	Annex 10 Tree Management Plan	Currently, with the hot weather, seedlings need systematic regular watering. To provide the seedlings with the sufficient amount of moisture, watering should be done regularly every 3 days.	In due time, noncompliance was eliminated Contractor's letter CAREC – G0627 dd 23.04.2021	**completed**	Seedlings are being watered

No	The issue of non-compliance, defined by Temelsu	CEMWP Number and date of notification Temelsu	Applicable Guide on Best Practices (No.)	Specific issue and location	Actions taken by the Contractor (specify)	Results of Temelsu Inspection	Status as of June 2021 (Date and Detail)
				It is necessary to allocate a permanent watering machine for watering seedlings, which will only be engaged in watering seedlings, and appoint a driver responsible for carrying out watering. Conduct an explanatory conversation with him about the fact that watering should be abundant and regular			
5	**The problem of construction waste**	**CEMWP № 2.6.2** **0541BOC3 55/3350-00255** **dd 26.04.21**	Annex 5 Waste Management Plan	At the section km 46+500, during the construction of the culvert, seedlings planted in the autumn of 2020 were filled with stones; - on the road section (south side) km 41+90, the sidewalk is covered with removed asphalt. The population is forced to walk along the carriageway, which poses a threat to life. - on the road sections where the parapets were cleaned, soil waste is collected in carts and taken to the road shoulder, which is unacceptable, since in wet conditions, in case of rain, it will turn into mud, which will contribute to the discontent of the population. It is	In due time, noncompliance was eliminated Contractor's letter CAREC – G0638 dd 03.05.2021	**completed**	Given comments have been eliminated

No	The issue of non-compliance, defined by Temelsu	CEMWP Number and date of notification Temelsu	Applicable Guide on Best Practices (No.)	Specific issue and location	Actions taken by the Contractor (specify)	Results of Temelsu Inspection	Status as of June 2021 (Date and Detail)
				necessary to immediately remove these soil waste from the road to places specially designated by the local administration			
6	**Bitumen leaks**	**CEMWP № 2.4.1** **0541BOC3 55/3350-00265** **dd 07.05.21**	Annex 12. Land Protection Management Plan	A large number of barrels with bitumen were delivered to the territory of the production site. The barrels are installed on the ground without the use of an anti-filtration coating. Bitumen leaks are noted	In due time, noncompliance was not fully eliminated Contractor's letter CAREC – G0650 dd 12.05.2021	As of the inspection on 14.05.21, it was found that not all the bitumen was removed. Later, the site was cleared of bitumen. **completed**	As a result of the inspection on 31.05.21, it was found that all the bitumen was removed. The barrels were relocated to a concrete platform
7	**Bitumen leaks**	**CEMWP № 2.4.1** **0541BOC3 55/3350-00274** **dd 19.05.21**	Annex 12. Land Protection Management Plan	A large number of barrels with bitumen were delivered to the territory of the production site. Bitumen leaks are noted	In due time, noncompliance was eliminated Contractor's letter CAREC – G0670 dd 22.05.2021	As of the inspection on 24.05.21, it was found that all the bitumen was removed. The site has been cleared of bitumen. **completed**	As a result of the inspection on 31.05.21, it was found that all the bitumen was removed. The barrels were relocated to a concrete platform

No	The issue of non-compliance, defined by Temelsu	CEMWP Number and date of notification Temelsu	Applicable Guide on Best Practices (No.)	Specific issue and location	Actions taken by the Contractor (specify)	Results of Temelsu Inspection	Status as of June 2021 (Date and Detail)
8	**The problem of construction waste**	**CEMWP № 2.6.2** **0541BOC3 55/3350-00337** **dd 29.06.21**	Annex 5 Waste Management Plan	A large number of empty bitumen barrels have been accumulated on the territory of the production site. A large number of used tires have been accumulated on the territory of the base in the village of Belovodskoye	In due time, noncompliance was eliminated Contractor's letter CAREC – G0733 dd 06 .07.21	The site has been cleared of waste **completed**	During the inspection, it was found that all the waste was removed
9	**Atmospheric air pollution**	**CEMWP № 2.2.1** 0541BOC3 55/3350-00337 dd 30.06.21	Annex 9 Air Quality Management Plan	The stone crushing plant worked without water sprinkling. In the camp where the workers live, the fire extinguishers have become unusable, it is necessary to recharge or buy new ones	In due time, noncompliance was eliminated Contractor's letter CAREC – G0734 dd 07.07.21	**completed**	During the inspection, it was found that the specified comments were eliminated

3.3.1 Overview and description of issues tracking during the current period

172. During the reporting period, Temelsu's national environmental specialist conducted regular monitoring over compliance with the requirements of the EMP and CEMWP during construction work on the Bishkek-Kara-Balta road section. The specialist visited the site more than 46 times. Given the epidemiological situation in the country, site visits were limited. Some of the visits were combined with the Contractor's environmental specialist. The CEMWP prepared by the contractor was used as a checklist.

173. Environmental specialists of IPIG MoTC conducted separate inspections focusing on specific issues, such as safety during construction work, local complaints, and seedling planting.

3.3.2 Issues tracking

174. During the reporting period, the main focus was on the following issues:

- Disposal of construction waste;
- The violation of safety precautions, occupational safety and health;
- Planting and caring of seedlings;
- Borrow-pit mining and management;
- Material's manufacturing plant (bitumen leakages);
- Disposal of old asphalt;

3.3.3 Summary of issues tracking

175. During the same period in 2019, 21 non-compliance issues were recorded and 17 of them were resolved during the reporting period. During the same period in 2020, 11 non-compliance issues were recorded and 10 of them were resolved during the reporting period. In this reporting period, 10 non-compliance issues were reported and all were resolved. In the reporting period, if environmental problems were found, the Contractor was initially warned orally, the completion date was discussed, and if the problem was not resolved within the established time frame, letters were sent, including the definition of mitigation measures that should be applied to resolve the identified problem.

176. The issues noted in the non-compliance letters are mostly repeated in each reporting period. The contractor must take into account the shortcomings in the management of these issues in the subsequent work. The reason for the large number of non-compliance issues is that, although a specific problem was resolved within a specified period, the same non-compliance was repeated in the future, such as in relation to waste management, safety violations during construction work.

Table 14 Summary of problem monitoring activities in the current period

Non-compliance	January - June 2021	Total
Total	10	**10**
Significant & Resolved	10	**10**
Unresolved	0	**0**
Pending	0	**0**
Chronic and unaddressed	0	**0**
Minor issues	0	**0**

4. RESULTS OF ENVIRONMENTAL MONITORING

4.1 Overview of Monitoring Conducted During Current Period

177. In 2019, the consultant transferred the environmental monitoring functions to the Contractor. To monitor environmental components such as atmospheric air quality, surface water quality, noise impact, vibration impact during the construction period at the Bishkek –Kara-Balta road section. In 2021, the Contractor concluded contracts with the following laboratories:

- **Air Quality:** Environmental Monitoring Department of SAEPF (State Agency for Environment Protection and Forestry of the Kyrgyz Republic) under the GKR;
- **Surface Water Quality:** Environmental Monitoring Department of SAEPF (State Agency for Environment Protection and Forestry of the Kyrgyz Republic) under the GKR;
- **Noise impact:** Private laboratory LLC «ProfiLab»;
- **Vibration impact:** Private laboratory LLC «ProfiLab».

178. After the conclusion of agreements, applications were submitted for the measurement of vibration, noise and air sampling at the sites where construction equipment operates. Monitoring of surface water quality was impractical, since construction work on the rivers was not carried out.

179. On May 14, 2021, the specialists of the SAEPF (State Agency for Environment Protection and Forestry of the Kyrgyz Republic) laboratory in the presence of the Contractor's environmental expert and the Consultant's environmental expert took samples to determine pollutants in the atmospheric air. Sampling points were determined at the sites where construction equipment is operating on the road section from km 15.9 to km 61.

180. Samples were taken in accordance with 1). RD 52.04.186-89 "Guidelines for the control of air pollution", 2). GOST 33007-2014 “Gas-cleaning and dust-collecting equipment. Methods for determining the dust content of gas streams. General technical requirements and control methods. ".

181. Methods of analysis using: gas analyzers: 310A; K-100; H-320; Gamma-ET; Dust analyzer DUSTTRAK 8533. GN "MPC of pollutants in the atmospheric air of settlements".

Table 15 Air quality measurement protocol on the road section km 15.9 - km 61

Name of components	**UoM**	**Analysis data by points**						**MPC Max. mg / m3**
		Bishkek – Kara-Balta section						
		Sokuluk, KM24+360, Latitude: 42˚51′45″; Longitude: 74˚18′57″.	**Exceeding MPC Max.**	**Sokuluk, KM23+760, Latitude: 42˚51′48″; Longitude: 74˚19′22″.**	**Exceeding MPC Max..**	**Solukuk, KM20+500, Latitude: 42˚52′02″; Longitude: 74˚21′45″.**	**Exceeding MPC Max.**	
sulphur dioxide	mg / m3	0,003± 0,0008	-	0,007± 0,0018		0,004± 0,001		**0,5**
nitrogen dioxide	mg / m3	0,01± 0,0025	-	0,063± 0,016		0,113± 0,028	**1,3**	**0,085**
carbon monoxide	mg / m3	0,2± 0,04	-	0,8± 0,16		0,5±0,1		**5,0**

amount of hydrocarbons	mg / m3	1,8± 0,36	-	2,0± 0,4		1,6±0,32		**5,0**
Suspended substances	mg / m3	0,088± 0,018	-	0,487± 0,097		0,065± 0,013		**0,5**

182. **Conclusion**: According to the test results, in the selected atmospheric air samples, the maximum permissible concentration of nitrogen dioxide exceeded by 1.2-1.3 times.

Sampling points of atmospheric air quality in the village of Sokuluk, 20+500 km

Atmospheric air quality sampling points in Sokuluk village, 23+760 km, 24+360 km

Figure 61 Sampling points of atmospheric air quality in the places of work of construction equipment at the road section km 15.9 by km 61.

Figure 62 Atmospheric air sampling

183. On April 28, 2021, the specialists of the ProfiLab private operational laboratory, in the presence of the Contractor's environmental expert and the Consultant's environmental expert, measured the noise and vibration levels at the road construction sites at the section from km 15.9 to km 61.

Measuring instrument name	Number	Verification certificate		Tested before
		Number	Date	
Ecophisica – 110A	AB 130044	1086	08.05.2020 г.	08.05.2021

184. Regulatory documentation on measurement methods, according to which measurements were conducted: GOST 313119-2006 " Vibration. Measurement of the total vibration and assessment of its impact on a person. Requirements for conducting measurements at the workplace".

185. Regulatory documentation for standards: Sanitary standards 2.2.4. / 2.1.8.566-96 "Production vibration in premises, residential and public buildings".

186. Sources of physical factors and their characteristics: Traffic flow and the work of the Contractor's equipment.

187. Environmental conditions during the measurement period: temperature: 28C, humidity: 50%, atmospheric pressure: 690 mm Hg.

Table 16 Protocol for measuring the vibration level at a road section km 15.9 by km 61

№	Location. Mode of operation.	Vibration type		Vibration type	Sound level (DBA)
		Transport	Transport		
	Shopokov 22+500 km ., north side of the road Latitude: 42˚52´23´´; longitude: 74˚25´49´´.				
1	In operation mode		+	X	88
	Vibration			Y	87
				Z	83
2	Grader is not operating	+		X	84
				Y	92
				Z	80
	Sokuluk, near the market,25+935 км., south side of the road Latitude:42˚52´23´´; longitude: 74˚25´49´´.				
3	in the mode of operation of the grader and bulldozer		+	X	88

				Y	86
				Z	96
4	Grader is not operating	+		X	87
				Y	85
				Z	75
	Belovodsk, near Maksat market, Frunze Street crosses Kalinina Street, north side of the road Latitude:42˚50′3; longitude: 74˚5′8″.				
5	Roller is operating		+	X	87
				Y	85
				Z	81
6	Roller is not operating	+		X	83
				Y	80
				Z	82

188. Conclusion based on the results of measurements: According to the results of instrumental measurements, the vibration level during operation of the Contractor's equipment is from 81dB to 96 dB, and when the equipment is turned off, it is from 75 to 92 dB. The background vibration is 92 dB.

189. Regulatory documentation, in accordance with which measurements were carried out GOST 23337-2014 Noise. Methods for measuring noise in residential areas and in the premises of residential and public buildings.

190. Regulatory documentation for standards: Sanitary standards 2.2.4/2.1.8.562-96 g. "noise at workplaces, in premises, in residential public buildings and on the territory of residential developments".

191. Environmental conditions during the measurement period: temperature: 28C; humidity: 50%; atmospheric pressure: 690 mm Hg.

192. Sources of physical factors: traffic flow and the work of the Contractor's equipment.

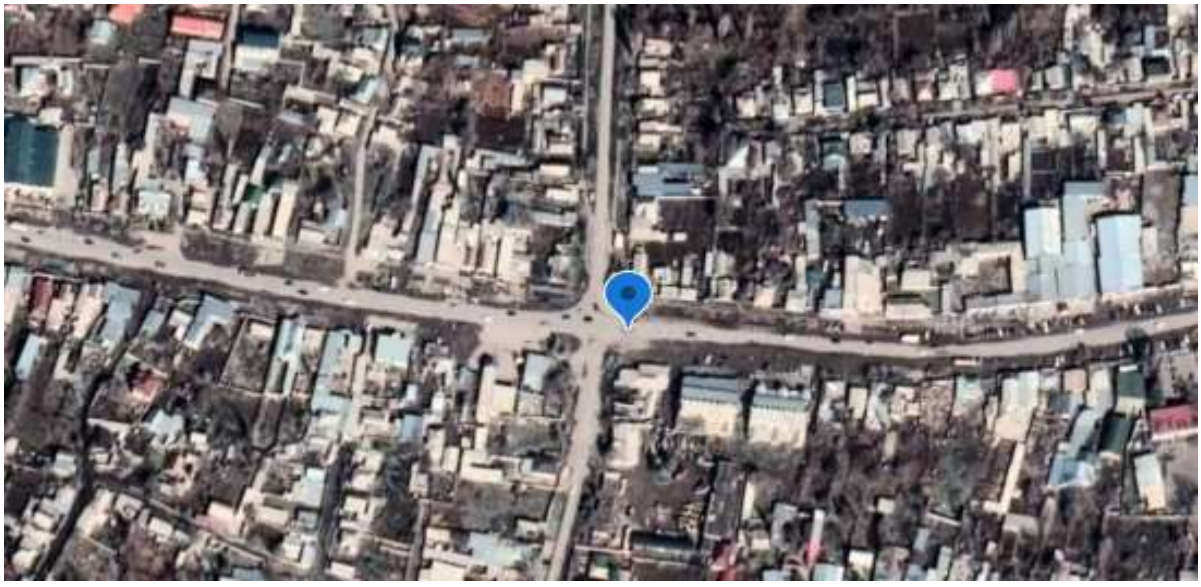
Table 17 Protocol for measuring the noise level on a road section km 15.9 by km 61

№	Location. Mode of operation.	Sound level (dBA)
	Shopokov 22+500 km., north side of the road, Latitude: 42˚52´23´´; longitude: 74˚25´49´´.	
1	Grader is operating	68 actual
		70 MPL
2	Grader is not operating	64 actual
		70 MPL
	Sokuluk, near the market,25+935 km., south side of the road Latitude:42˚52´23´´; longitude: 74˚25´49´´.	
3	Grader and bulldozer are operating	77 actual
		70 MPL
		7 dBA
4	Grader and bulldozer are not operating	71 actual
		70 MPL
	Exceed	1 dBA
	Belovodsk 43,380 km, near Maksat market, Frunze Street crosses Kalinina Street, north side of the road, Latitude:42˚50′3; longitude: 74˚5′8″.	
5	Roller is operating	71 actual
		70 MPL
	Exceed	1 dBA

6	Roller is not operating	70 actual
		70 MPL

193. Conclusion based on the results of the measurements: at the time of the measurements, the background noise level at the measured points when moving vehicles near the road was 70 dBa in the daytime. In the operating mode of the Contractor's equipment, the noise level exceeded the sanitary norm from 1 dBa to 7 dBa, when the equipment was turned off, the noise level exceeded the sanitary norm to 1 dBa, in the Sokuluk, near the market 25+935 km, south side of the road.

Noise and vibration measurement points in Shopokov and Sokuluk (22+500 km, 25+935 km)



Noise and vibration measurement points in the Belovodsk 43+380 km

Figure 63 Noise and vibration measurement points on the road section km 15.9 by km 61

Figure 64 Conducting noise and vibration measurements

194. Conclusions: Analyzing the data results of environmental components monitoring, it is necessary to take into account that the road project section is located in a densely populated area with a large traffic flow. Therefore, when analyzing the impact of construction work on the environment, it is necessary to take into account the indicators of background levels.

195. After analyzing the data of the results of the monitoring, it can be noted that, taking into account the data of background levels, construction works do not have a significant impact on the environment.

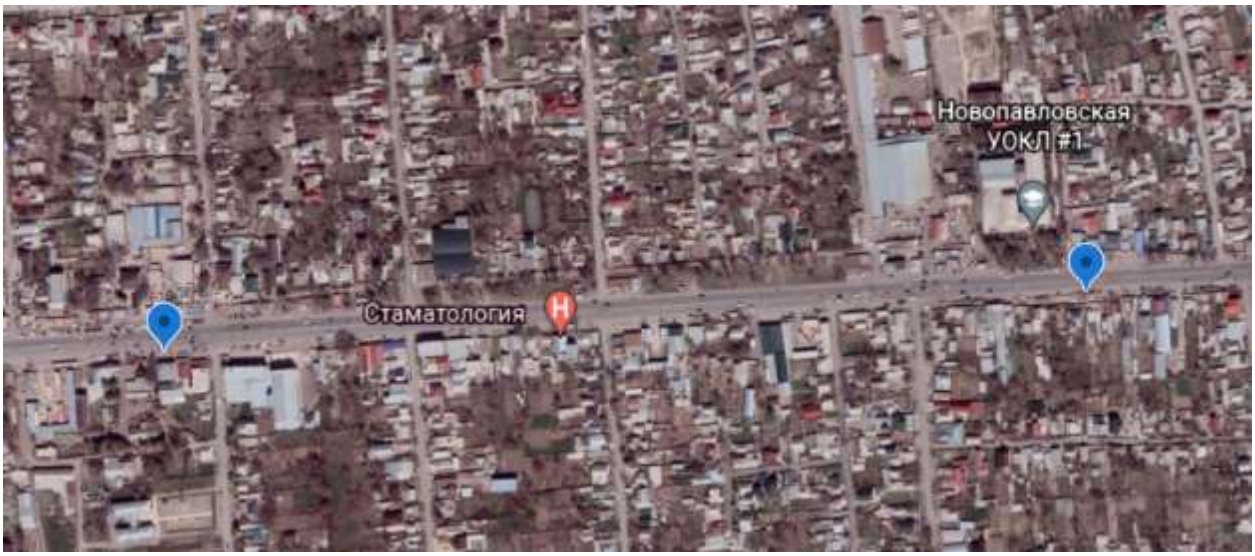
7.4 km section (km 8.5 – km 15.9)

196. Laboratory monitoring of background levels of environmental components on the project road section was conducted in the period 2013 - 2018. Considering that at present, due to the increase in traffic intensity, the background levels of the environmental components have changed, therefore, in the spring of 2021, with the improvement of weather conditions, before the start of construction work, laboratory monitoring of the background levels of environmental components in sensitive areas was conducted. The sensitive areas at 7.4 km section are: school and market in the Novopavlovka, a mosque in the Voenno-Antonovka.

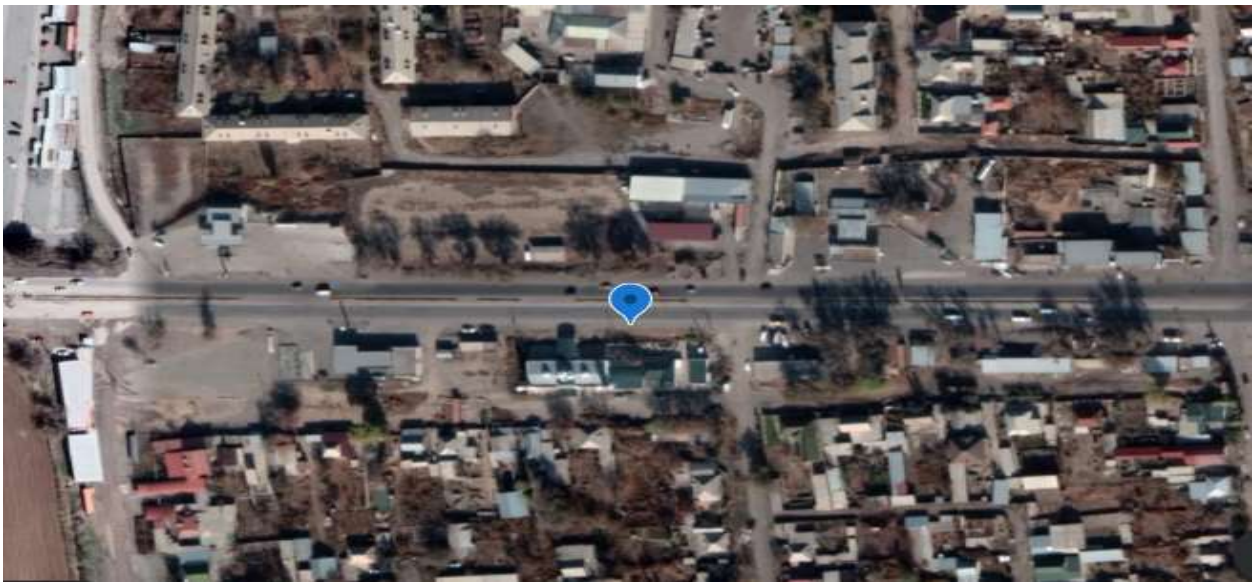
Table 18 The protocol for measuring the quality of atmospheric air in the section km 8.5 - 15.9 (background levels)

Name of component	UoM	Analysis data by points Bishkek – Kara-Balta section						MPC max mg/m3
		Voenno-Antonovka, 14+820km, Latitude: 42˚52′21″; Longitude: 74˚25′53″.	**Exceeding of MPC max**	**Novopavlovka, 10+960km, Latitude: 42˚52′27″; Longitude: 74˚28′43″.**	**Exceeding of MPC max**	**Novopavlovka, 10+060km, Latitude: 42˚52′31″; Longitude: 74˚29′25″.**	**Exceeding of MPC max**	
sulphur dioxide	mg/m3	0,006± 0,0015	-	0,004± 0,001		0,003± 0,0008		**0,5**
nitrogen dioxide	mg/m3	0,085± 0,021	-	0,102± 0,026	**1,2**	0,016± 0,004		**0,085**
carbon monoxide	mg/m3	0,6± 0,12	-	0,5± 0,01		0,3±0,06		**5,0**

amount of hydrocarbons	mg/m3	2,2± 0,4	-	1,7± 0,34		1,9±0,38		**5,0**
Suspended substances	mg/m3	0,202± 0,04	-	0,121± 0,024		0,094± 0,019		**0,5**



Sampling points of atmospheric air in the Novopavlovka, 10 + 060 km, 10 + 960 km



Sampling points of atmospheric air in the Voenno-Antonovka, 14 + 820 km

Figure 65 Sampling points (background concentrations) along the road section km 8.5 - 15.9

197. Background measurements of noise and vibration levels on the road section km 8.5 - 15.9 were carried out before the start of road construction works on April 28, 2021 by specialists of the private operational laboratory "ProfiLab" in the presence of the Contractor's environmental expert and the Consultant's environmental expert. Measurements were conducted three times during the day.

Table 19 Noise level measurement protocol km 8.5 - 15.9 (background levels)

№	Location. Mode of operation	Sound level. (dBA)
	Novopavlovka village 9.9 km, near the school, north side of the road time 9: 00 Latitude: 42˚52´29´´; longitude: 74˚29´24´´.	
1	background level	67 actual
	Novopavlovka village 11,8 km near the Nurlan market 172 Frunze str., south side of the road time 9: 40. Latitude: 42˚52´28´´; longitude: 74˚28´43´´.	
2	background level	69 actual
	Voenno-Antonovka village 14,840 km near the mosque, south side of the road time 10: 20. Latitude: 42˚52´24´´; longitude: 74˚25´45´´.	
3	background level	68 actual
	Novopavlovka village 9.9 km, near the school, north side of the road time 12: 00 Latitude: 42˚52´29; longitude:74˚29´24´´.	
4	background level	66 actual
	Novopavlovka village 11.8 km near the Nurlan market 172 Frunze str., south side of the road time 12: 35 Latitude:42˚52´28; longitude:74˚28´43″.	
5	background level	68 actual
	Voenno-Antonovka village 14,840 km near the mosque, south side of the road time 13:20 Latitude:42˚52′24; longitude:74˚25′45″.	
6	background level	67 actual
	Voenno-Antonovka village 14,840 km near the mosque, south side of the road time 16:20 Latitude:42˚52′24; longitude:74˚25′45″.	
7	background level	62 actual
	Novopavlovka village 11.8 km near the Nurlan market 172 Frunze str., south side of the road time 16:50 Latitude: 42˚52′28; longitude:74˚28′43″.	
8	background level	68 actual
	Novopavlovka village 9.9 km, near the school, north side of the road time 17:20 Latitude: 42˚52′29; longitude:74˚29′24″.	
9	background level	70 actual

198. Conclusion on the results of measurements: at the time of the measurements, the background noise level at the measured points when vehicles were moving near the road in the daytime did not exceed the MPL 70 dBa.

Table 20 Vibration level measurement protocol km 8.5 - 15.9 (background levels)

№	Location. Mode of operation	Type of vibration		Axis	Sound level (dBA)
		Transport	Transport-technological		
	Novopavlovka village 9.9 km, near the school, north side of the road time 9:00 Latitude: 42˚52´29´´; longitude: 74˚29´24´´.				
1	background vibration	+		X	88
				Y	83
				Z	84
	Novopavlovka village 11.8 km near the Nurlan market 172 Frunze str., south side of the road time 9:40. Latitude: 42˚52´28´´; longitude: 74˚28´43´´.				
2	background vibration	+		X	86
				Y	85
				Z	83
	Voenno-Antonovka village near the mosque, south side of the road time 10:20. Latitude: 42˚52´24´´; longitude: 74˚25´45´´.				
3	background vibration	+		X	86

				Y	84
				Z	76
	Novopavlovka village 9.9 km, near the school, north side of the road time 12:00 Latitude: 42˚52´29; longitude:74˚29´24´´.				
4	background vibration	**+**		X	92
				Y	84
				Z	82
	Novopavlovka village 11.8 km near the Nurlan market 172 Frunze str., south side of the road time 12:35 Latitude:42˚52´28; longitude:74˚28´43″.				
5	background vibration	**+**		X	85
				Y	84
				Z	75
	Voenno-Antonovka village near the mosque, south side of the road time 13:20 Latitude:42˚52′24; longitude:74˚25′45″.				
6	background vibration	**+**		X	80
				Y	81
				Z	72
	Voenno-Antonovka village near the mosque, south side of the road time 16:20 Latitude:42˚52′24; longitude:74˚25′45″.				
7	background vibration	**+**		X	85
				Y	84
				Z	73
	Novopavlovka village 11.8 km near the Nurlan market 172 Frunze str., south side of the road time 16:50 Latitude: 42˚52′28; longitude:74˚28′43″.				
8	background vibration	**+**		X	86
				Y	86
				Z	74
	Novopavlovka village 9.9 km, near the school, north side of the road time 17:20 Latitude: 42˚52′29; longitude:74˚29′24″.				
9	background vibration	**+**		X	80
				Y	77
				Z	73

Noise and vibration level measurement location in Voenno-Antonovka and Novopavlovka (9+900 km, 11+800 km, 14+840 km)

Figure 66 Noise and vibration measurement points (background concentrations) km 8.5-15.9

199. On May 28, 2021, specialists of the operational laboratory "Profilab" in the presence of the environmental experts of the Consultant and the Contractor carried out measurements of the noise level from passing vehicles on the Bishkek-Karabalta road in places where a noise-reducing layer of asphalt was laid.

200. Environmental conditions during the measurement period: temperature: 30˚C; humidity: 48%; atmospheric pressure: 694 mm Hg.

201. Sources of physical factors: traffic flow.

Table 21 Noise measurement protocol with noise-reducing asphalt layer

№	Location. Mode of operation	Sound level (dBA)	
		2015	2021
1	**Novonikolaevka village, near the school 59+550 km., south side of the road, time 10:20 Latitude: 42˚50´16´´; longitude: 73˚55´19´´.**		
	background noise	71.3	62 actual
2	**Petropavlovka village, near the school 57+460 km., south side of the road, time 10:50 Latitude: 42˚52´17´´; longitude: 73˚55´21´´.**		
	background noise	72	65 actual
3	**Poltavka village, near the school 55+380 km., south side of the road, time 11:15. Latitude: 42˚50´16´´; longitude: 73˚55´19´´.**		
	background noise	72	64 actual
4	**Petrovka village, near the house No. 504 51+500 km., south side of the road, time 11:40 Latitude: 42˚50´39´´; longitude: 73˚57´18´´.**		
	background noise	72	62 actual
5	**c. Belovodskoe, near the house No. 201 42+450 km., north side of the road, time 12:20 Latitude:42˚50´6´´; longitude: 73˚6´7´´.**		
	background noise	74	66 actual
6	**Sadovoye village, near the school 37+460 km., south side of the road, time 12:20 Latitude: 42˚50´5; longitude:73˚9´31´´.**		
	background noise	81	65 actual
7	**Alexandrovka village 30 km., north side of the road time 12: 40Latitude:42˚51´17; longitude:73˚55´19".**		

	background noise	60	64 actual

202. Conclusion on the results of measurements: at the time of measurements in the daytime, the background noise level arising from the movement of traffic flows of various types on the road is from 62 to 66 dBa.

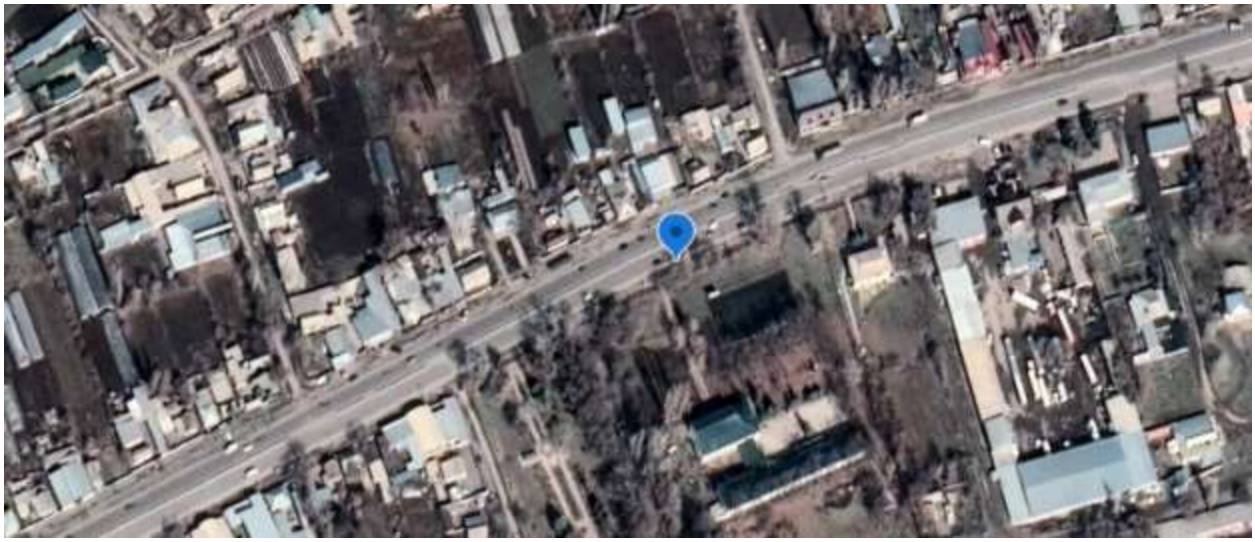
203. Compared to the 2015 noise measurements, the figures for 2021 are mostly lower. The noise level increased only in some areas. It should be taken into account that one-time measurements were considered, both in 2015 and in 2021. At the same time, over the past 6 years, the traffic flow has increased.

Noise level measurement location in Novonikolaevka and Petropavlovka villages (59+550km, 57+460km)

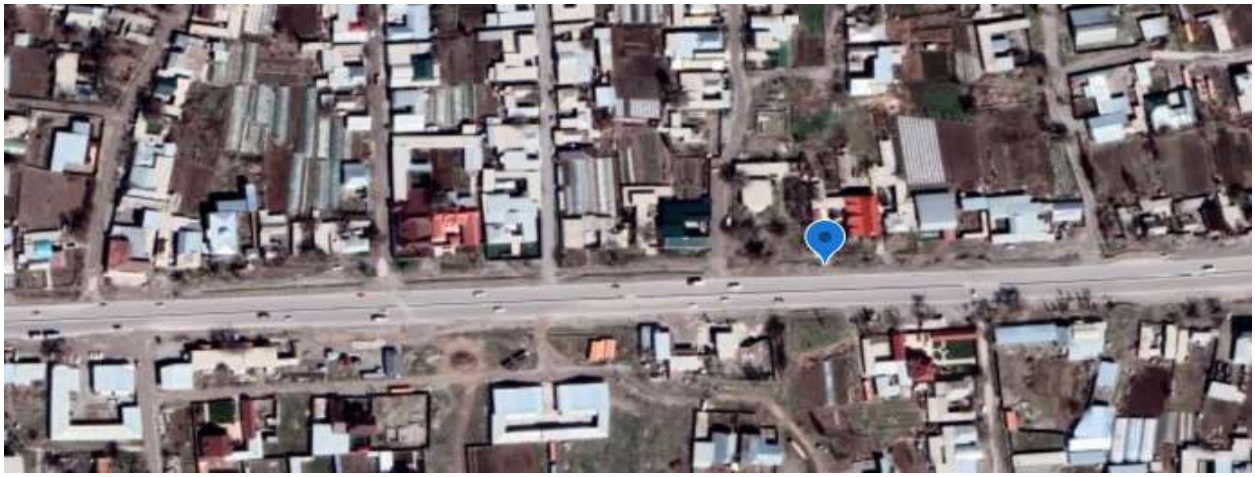
Noise level measurement location in the village of Poltavka (55+380km)

Noise level measurement location in Petrovka village (51+500km)

Noise level measurement location in the village of Belovodsk (42+450km)



Noise level measurement location in Sadovoye village (37+460km)



Noise level measurement location in the village of Alexandrovka (30+000 km)

Figure 67 Points for measuring the noise level in areas with a noise-reducing asphalt layer

Figure 68 Noise level measurements in areas with a noise-reducing asphalt layer

4.2 Trends

204. During the second half of 2021 it is planned to monitor the quality of atmospheric air, noise impact and, if necessary, vibration in the areas where construction work will take place. Construction work on the bridges has been completed, therefore monitoring of surface water quality is not necessary. It is also necessary to conduct regular monitoring of atmospheric air quality, noise and vibration with the start of construction work at 7.4 km section.

4.3 Grievances of local residents

205. During the reporting period, 34 appeals and complaints were received. Basically, the appeals concerned installation of parapets, opening of additional junctions, requests were received for the provision of conclusions on the project impact on land plots, installation of new pavilions. There were also requests from local self-government bodies to assist in solving various issues. All complaints were duly registered in the GRM Log Book and were considered in a timely manner. There were no environmental complaints.

Table 22 Complaints from the local population received in the first half of 2021

#	Date Received	Name & contact of Complainant	Complaint Category	Complaint Description	Resolution Description	Resolution	Resolution Date
1	18.01.2021	State Administration of the Moskovsky District	Road Upgrading	1. Request for the installation of metal fences 1.5 m high and 250 m long to ensure road safety. 2. Request for traffic light repair	Dividing parapets are installed. The installation of additional fences will be discussed later. The traffic light is being repaired.	accepted	29.01.2021
2	10.02.2021	IE Raiymbaeva A.S. Novopavlovka, NURLAN market, km 2 + 500	Restriction or loss of access	An appeal about the impossibility of obtaining specification requirements for the installation of new pavilions on private land within 32 m from the road axis.	The answer was given that the Order of the Government of the Kyrgyz Republic dated May 26, 2014 No. 182-r is valid until the completion of the road construction period.	rejected	19.02.2021
3	11.02.2021	IE Egorova N.V., Sokuluk km25 + 800	Restriction or loss of access	An appeal to establish the boundaries of the project impact to the "FLOWERS" pavilion and about the impossibility of obtaining specification requirements for the installation of new pavilions on private land within 32 m from the road axis	The answer was provided that the FLOWERS pavilion is not affected by the road project, but the Order of the Government of the Kyrgyz Republic dated May 26, 2014 No. 182-r is valid until the completion of the road construction period.	rejected	15.02.2021
4	11.02.2021	Novopavlovka village residents, Sverdlov st.no. 34, 36, 38. km 2 + 500	Restriction or loss of access	Complaint against the director of the NURLAN market about the unauthorized expansion of the market territory	The answer was provided that Sverdlov Street is not affected by the road project. Residents are recommended to contact the ayil okmotu of Novopavlovka village	rejected	17.02.2021
5	11.02.2021	Novopavlovka village residents,	Restriction or loss of access	Complaint against the director of the NURLAN market regarding	The answer was provided that the land plots on the Frunze street No. 287, 289, 291 is not affected by the road project.	rejected	17.02.2021

#	Date Received	Name & contact of Complainant	Complaint Category	Complaint Description	Resolution Description	Resolution	Resolution Date
		st. Frunze, no. 287, 289, 291. km 2 + 550		the restriction of passage through the market territory	Residents are recommended to contact the ayil okmotu of Novopavlovka village.		
6	12.02.2021	IE Saypidinov K.Zh.; Novopavlovka, NURLAN market km 2 + 500	Road Upgrading	Appeal to establish the boundaries of project impact on "PhotoServices" pavilion and on the provision of technical conditions for the installation of the pavilion	The answer was provided that the "PhotoServices" pavilion is not affected by the road project. It is recommended to contact the architecture of the Sokuluk district.	rejected	17.02.2021
7	11.02.2021	Head of the Moscovskiy District State Administration	Restriction or loss of access	Appeal regarding the dismantling of the parapet in the village of Aleksandrovka at the intersection of Lugovaya str	The answer was provided that there is an underground passage nearby and the design provides for breaks at a distance of 120 m from the east side and - 250 m from the west side	rejected	25.02.2021
8	23.02.2021	IE Babanova M.T., Novopavlovka, km 1 + 740	Restriction or loss of access	An appeal about the impossibility of obtaining technical conditions for the installation of new pavilions on private land within 32 m from the road axis.	The answer was provided that the Order of the Government of the Kyrgyz Republic dated May 26, 2014 No. 182-r is valid until the completion of the road construction period.	rejected	26.02.2021
9	01.03.2021	Appeal of the Sokuluk district State Administration and residents of Saz and Konush villages	Road Upgrading	Appeal on the issue of filling up with crushed stone and leveling internal streets in Saz and Konush villages	The response is provided that the request is forwarded to the Contractor	Re-forwarded	04.03.2021

#	Date Received	Name & contact of Complainant	Complaint Category	Complaint Description	Resolution Description	Resolution	Resolution Date
10	03.03.2021	Osmonova G., Novopavlovka village, Frunze str., 32	Restriction or loss of access	Request to provide a conclusion on the boundaries of project impact and the impact on the construction of canopies in the village of Novopavlovka, 32 Frunze str.	Response is provided that the construction of canopies does not interfere with the construction of the road.	accepted	04.03.2021
11	09.03.2021	Sokuluk District Department of Urban Planning and Architecture	Restriction or loss of access	Request to provide a conclusion on the boundaries of project impact on a land plot of 96.0 m2 in the village of Voenno-Antonovka, Frunze and Sovetskaya str..	Response is provided that the land plot is located 17.15 m from the axis of the project road and is partially affected by the project	rejected	12.03.2021
12	12.03.2021	LLC “Auto Yirist KR”	Health, safety and environmental issues	Request to provide information about the width of the road in the village of Voenno-Antonovka near the house 152.	In a response, drawing of section is sent with an indication of the carriage width dimensions	accepted	20.03.2021
13	16.03.2021	Business Ombudsman of the Kyrgyz Republic	Restriction or loss of access	Request for copies of documents stating that it is impossible to obtain technical specifications for the installation of new pavilions on private land within 32 m from the road axis.	Copies of documents on this issue are provided.	accepted	20.03.2021
14	31.03.2021	Administration of the Moscovskiy district regarding the discontent of residents of	Hiring / Employment	Dissatisfaction with the work of the Contractor (garbage and dust) and not providing jobs to local residents.	The contractor provided an explanation for the hiring of workers	Partially accepted	07.04.2021

#	Date Received	Name & contact of Complainant	Complaint Category	Complaint Description	Resolution Description	Resolution	Resolution Date
		Ak-Suu aiyl aimag					
15	01.04.2021	Raiymbaeva A.S. Entrepreneur of the Sokuluk district, Novopavlovka village, 283a Frunze str., 283b	Restriction or loss of access	Request for clarification of the project boundaries and no impact on the property	The answer was provided that the owner's property has no impact to road construction	rejected	02.04.2021
16	02.04.2021	Rajapov S.L. Entrepreneur of the Sokuluk district, Novopavlovka village, Frunze street 215	Restriction or loss of access	Request for clarification of the project boundaries and no impact on the property	The answer was provided that the owner's property has no impact to road construction	rejected	05.04.2021
17	15.04.2021	Administration of the Moskovsky district	Road Upgrading	Request for the construction of sidewalks, crossings, traffic lights and other construction work	An answer was provided that the works are carried out in accordance with the design	rejected	24.04.2021
18	19.04.2021	T. Konushbaev, deputy of the JK KR (Government) and Voenno-Antonovskiy ayil okmotu of Sokuluk district	Road Upgrading	Request for relocation of bus stop and provide technical assistance to ayil okmotu	Relocation of bus stop was agreed. The technical assistance issue was forwarded to the Contractor	Partially Accepted and forwarded	26.04.2021
19	29.04.2021	Shparagina O.D. Entrepreneur of the Belovodskoye village, Moskovskiy district	Restriction or loss of access	Request for permission to build a pavilion and a complaint about the inability to obtain technical conditions for the implementation of activities in the right-of-way 32 m from the axis of the road	The answer was provided that the owner's property has no impact to road construction	rejected	03.05.2021
20	29.04.2021	Sokuluk ayil okmotu of Sokuluk district	HSE Concerns	Request for the organization of water-sprinkling of streets in the village of Sokuluk, along which a	Measures were taken to organize water-sprinkling of streets in the village of Sokuluk, along which a bypass was	accepted	30.04.2021

#	Date Received	Name & contact of Complainant	Complaint Category	Complaint Description	Resolution Description	Resolution	Resolution Date
				bypass was organized during the construction of the road	organized during the construction of the road		
21	03.05.2021	Residents of the village of Sadovoe, Moskovsky district	Road Upgrading	Request to provide gaps (breaks) and dismantle parapets	A justification for refusal based on the traffic safety requirements was provided	rejected	07.05.2021
22	06.05.2021	Residents of the village of Gavrilovka, Sokuluk district	Road Upgrading	Request to provide gaps (breaks) and dismantle parapets	A justification for refusal based on the traffic safety requirements was provided	rejected	10.05.2021
23	14.05.2021	OJSC SEVERELEKTRO	Road Upgrading	Request for changing the location of power transmission line poles in Sokuluk	The answer was provided that the change in the location of power transmission lines will be considered after the completion of the main construction works in November 2021	Partially Accepted	19.05.2021
24	14.05.2021	Ak-Suu ayil okmotu and the Administration of the Moskovskiy district	Other	Appeal regarding only partial provision of technical assistance for aiyl okmotu by the Contractor	The contractor provided a written response on the full implementation of the agreements	rejected	17.05.2021
25	31.05.2021	Entrepreneur R. Shamurzaev, Sokuluk district Novopavlovka village, st. Frunze 176	Road Upgrading	Appeal regarding the relocation of designed bus stop	The answer provided that it is possible to shorten the length of the bus stop, but it is impossible to relocate to another place	Partially Accepted	07.06.2021

#	Date Received	Name & contact of Complainant	Complaint Category	Complaint Description	Resolution Description	Resolution	Resolution Date
26	02.06.2021	Entrepreneur Nazhiev, s. Belovodskoe Moskovsky district	Road Upgrading	Reports that the chutes were constructed not correctly	The answer provided is that the chutes were constructed according to the design	rejected	09.06.2021
27	09.06.2021	Entrepreneur Mamatov, Sokuluk district, Novopavlovka village, st. Frunze	Road Upgrading	Appeal regarding the relocation of designed bus stop	The answer provided that it is possible to shorten the length of the bus stop, but it is impossible to relocate to another place	Partially Accepted	16.06.2021
28	10.06.2021	Entrepreneur Kimsanov, Zhayil district, Novonikolaevka village, 3 Engels street	Road Upgrading	Appeal regarding the relocation of designed bus stop	The answer was provided that the bus stop is constructed according to the design	rejected	16.06.2021
29	15.06.2021	Entrepreneur Bulekbaeva, Belovodskoe village, Moskovsky district	Damage to Infrastructure / Assets	Complaint about the flooding of the basement of "LIZA" beauty salon due to which furniture was damaged	Measures have been taken to arrange temporary water discharge	accepted	21.06.2021
30	16.06.2021	Residents of Bishkek (km 8,500 - km 9,020) st. Deng Xiaoping	Utilities Relocation	Residents request to replace the old pipe	The request was forwarded for consultation by with Employer (IPIG)	Partially Accepted and forwarded	16.06.2021
31	16.06.2021	Administration of Sokuluk district	Road Upgrading	Request for the dismantling of parapets in Shopokov at the intersection of Frunze-Mashinostroitelnaya Streets	The justification of the refusal is given based on the requirements of road safety.	rejected	21.06.2021
32	17.06.2021	Main Highway Traffic Directorate under the Ministry of Internal Affairs of	Other	Request for the provision of technical specifications for the stationary traffic police station in the village of Voenno-Antonovka	The answer is that the provision of technical specifications is not within the competence of the consultant.	rejected	22.06.2021

#	Date Received	Name & contact of Complainant	Complaint Category	Complaint Description	Resolution Description	Resolution	Resolution Date
		the Kyrgyz Republic					
33	20.06.2021	Burul Kadyrkulova, a resident of the village of Poltavka, Zhayyl district	Damage to Infrastructure / Assets	A complaint was received in the media about cracks in the house and the foundation. https://www.turmush.kg/ru/news:1711263/?from=portal&place=nowread&b=1	The answer is provided through the media. The appearance of cracks on the house and the foundation was recorded by the survey before the start of construction work. The residential building was not built in accordance with building codes. https://www.turmush.kg/ru/news:1711583?from=portal&place=last&b=2	rejected	21.06.2021
34	24.06.2021	Naamatov B., a resident of the village of Gavrilovka, Sokuluksky district	Damage to Infrastructure / Assets	Request to clarify the location of the design ditch and sidewalk	The construction of a sidewalk and a chute at the specified place does not affect the applicant's territory.	rejected	05.07.2021

206. An example of working with incoming complaints is the description of actions on complaint No. 33.

207. On June 9, 2021, the website of "AKIpress.kg" news agency published an article entitled “Cracks on the walls and foundations of houses - the consequences of the construction of the Bishkek-Kara-Balta road”. In this article, a resident of the village of Poltavka, Mrs. Burul Kadyrkulova complained that the walls began to collapse from the repair and construction work of the Bishkek-Kara-Balta road. Within the GRG at the local level, the information was reviewed and studied, the response was provided through the AKIpress.kg news agency.

208. Initially, when considering the information reflected in the article of the "AKIpress.kg" news agency, the acts of the survey in the village of Poltavka, drawn up by the district commission, were studied. Before the start of construction work, a commission survey of all buildings located in the immediate vicinity of the project road, along the entire site, is carried out. The survey is carried out by visual inspection, photographing and drawing up an act of inspection of buildings, which is signed by all members of the commission, including the owner (owner or representative). This commission is created by order of the state district administration, which includes representatives of territorial departments of Ministries and departments of the Kyrgyz Republic (State Ecological and Technical Inspection, Gostroy, Ministry of Emergency Situations), representatives of the state district administration, ayil okmotu, as well as the contractor.

209. Taking into account that the article did not indicate the house number, but only the name "Burul Kadyrkulova" was indicated, the "search" for the inspection act was carried out using surname. There was an act of commission inspection of a residential house and buildings at the address: Poltavka, 250 Centralnaya st. belonging to R. Kadyrkulov, dated September 25, 2017, drawn up before the start of construction work on the section in Poltavka village. According to this act, it follows that during the construction of a dwelling house, building material "adobe" (clay material mixed with straw) was used, the year of construction of the house was 1962, cracks up to 0.6 mm in size were recorded on the outer walls of the dwelling house and outbuildings. There were no cracks inside the house, since at the time of the survey, the inner walls of the house were covered with wallpaper.

210. However, when the information was clarified again in the Poltavka ayil okmotu using name “Burul Kadyrkulova”, the exact address of the residential building was 33 Centralnaya street, (Poltavka village). When conducting a commission survey, it was found that this residential building is located 32 meters from the old road shoulder, and after widening the road on this section, this residential building will be located at a distance of 25 meters. Due to the remoteness of the residential building from the existing old and new road under construction, a commission survey of this building was not carried out.

211. In addition, there is a Form for control of embankment and pavement constriction which was developed at the end of 2018 by the EPTISA Consulting Company, after a decision was made to change the compaction method of pavement, without the use of vibration. The specialists of the construction supervision consultant EPTISA (site inspector) were constantly on the site where the contractor carried out construction work and carried out monitoring / control, the results of which are reflected in the control form. The control form indicates: date; contractor's working hours; place of work (mileage is indicated); material type (SG / SB / GB / ATB / BND); operating mode (confirmation that the contractor did not use vibration and what type of roller was used); thickness of the material to be compacted; the degree of compaction; the number of passes of the road roller. This circumstance is irrefutable confirmation that during the compaction of the road pavement, vibration from the contractor's side was not applied.

212. In addition, on the recommendation of ADB by IPIG side, the report “Structural Assessment for Compliance with Social and Environmental Safeguards” prepared by “CUFA Ltd.” was studied for clarification. The team of the company "CUFA Ltd." at the beginning of 2019, conducted a survey of residential building located at the Poltavka village, 33 Centralnaya st., In Appendix 6 of this report, in the Housing Structural Condition table, this house is categorized as Category 3, which means there are small cracks in the walls of the house

213. Also, when clarifying that there were any oral or written complaints regarding cracks in the Poltavka ayil okmotu, a response was received that no complaints / appeals from the local population through the local GRG level were received. This clearly shows that the GRG system at the local level works, and local residents could contact and receive answers to all questions of interest as soon as possible.

214. Taking into account the above, the Ministry of Transport and Communications of the Kyrgyz Republic believes that all necessary measures within the GRG and GRM to review and provide all comprehensive information have been implemented.

4.4 Summary of project outcome

215. Regular monitoring over compliance with environmental legislation requirements during construction work on the Bishkek-Karabalta road within this reporting period highlighted the reality that the Contractor's response to environmental mitigation and monitoring is remedial, that is, corrective actions are taken only when a letter of non-compliance has already been received or the IPIG instructs the Contractor to take immediate action.

216. Although the total number of non-compliance issues is not increasing, the Contractor has been very slow in addressing major issues that have remained since the start of construction in March 2021. For example, most of the 10 significant issues raised during this reporting period are recurrences from the previous period. Major current non-compliance issues:

- Timely disposal of construction waste;
- Violation of safety and health precautions;
- Planting and caring for seedlings;
- Reclamation of borrow pits;
- Materials production plant (bitumen leakage, dusting at a stone crusher)
- Disposal of old asphalt

217. The Consultant's environmental expert will continue to conduct visual monitoring of construction sites in the next six months.

218. When analyzing the results of the monitoring, it is necessary to consider that the project road section is located in a densely populated area with a large flow of vehicles. Therefore, when analyzing the environmental impact of construction work, it is necessary to consider background levels.

219. Having analyzed the data of the monitoring results, it can be noted that, given the data of the background levels, construction work does not have a significant impact on the environment.

220. The issue of arranging and conducting monitoring is the insufficient number of laboratories in the region. To conclude agreements for monitoring environmental components, the same state laboratories are offered, which carry out both private and state orders, with an insufficient number of personnel. At present, only one laboratory can monitor the quality of atmospheric air in Kyrgyzstan. In this regard, each visit to the site for sampling must be agreed in advance and sometimes wait several weeks. When monitoring noise and vibration, it was easier to work with the private laboratory of

Profilab LLC, whose employees were available when necessary. During the reporting period, the laboratory twice conducted monitoring of noise and vibration at the project road section.

221. An agreement was signed with the laboratory of the Environmental Monitoring Department of the Chui-Bishkek Territorial Administration of the State Agency for Environmental Protection and Forestry under the Government of the Kyrgyz Republic to monitor the quality of atmospheric air and the quality of surface water. Considering that construction works on the rivers were not carried out, as well as the lack of water in the rivers, monitoring of surface water quality was not carried out.

4.5 Materials/Recourses utilization

222. The utilization of electricity, water and any other materials were not included in the CEMWP for monitoring.

4.6 Waste management

223. During construction works, a large amount of waste is generated, including construction waste, production waste, household waste. The Environmental Expert of the Consultant constantly supervises timely removal and disposal of waste.

4.6.1 Construction waste

224. During construction work, waste of asphalt, unsuitable soil, reinforced concrete waste is generated on the road. Previously, on the road section km 15.9 - km 61, old asphalt was placed on rural roads without crushing. With the start of road works, there were problems with crushing old asphalt to a size of 20x20 during excavation. Considering that in the villages there is no equipment for leveling large pieces of old asphalt, the problem arose of taking out of uncrushed old asphalt for backfilling rural streets proposed by the local authorities. However, given that the asphalt was taken out to the road in large pieces, some local administrations refused to accept the removed asphalt to rural streets. The removed asphalt during the reporting period was mainly taken to dumps. For the storage of the removed asphalt, places were allocated in the village of Romanovka and Sokuluk.

225. There were no complaints from the local residents regarding the disposal of the removed asphalt. Currently, the removed asphalt, in agreement with local administrations, is transported and stacked in dumps at the indicated sites.

Figure 69 Transportation of removed asphalt in the Alexandrovka

Figure 70 Dumping of old asphalt on designated sites for further use in the Romanovka

226. During the construction work on the project road, km 8.5 **-** km 61, **4000 m3** of old asphalt was removed. **18,000 m3** of unusable soil and **480 cubic meters** of construction waste in the form of reinforced concrete, etc. were taken out.

227. With the start of road works on the **7.4 km section**, according to a letter from the head of the Novopavlovsk ayil okmotu and local residents, it was decided to take out the old asphalt for patching the roads inside the village of Novopavlovka, as well as backfilling of internal and field roads.

Table 23 List of streets bakfilled with old asphalt in 2021 inside the village of Novopavlovka

Location	**Name of district, a/o**	**Name of person responsible**	**Approval date**	**Road width**	**Road length**
Name of road				**m**	km
Profsoyuznaya	Sokuluk district	Zh. Borisovich	15.06.2021	4	0,95
Manasa				4	0,3
Talaskaya				4	0.5
Ak niet				4	0,5

Also, the removed asphalt was taken out to improve the internal roads of the entire residential area "Altyn Ordo".

Figure 71 Removal of old asphalt to the territory of the "Altyn Ordo" residential area at the request of residents and representatives of local government

228. The problem of crushing old asphalt remains unresolved. Since the villages do not have equipment for leveling large pieces of old asphalt, the Contractor level it with its own equipment. The issues of disposal of old asphalt at the 7.4 km section are handled by the Contractor's specialist Koichumanov Adilet.

229. Asphalt was not taken out to wetlands. A letter was received from ADB stating that in order to avoid harm to the health of local residents, it is prohibited to take out old asphalt to local residents for their own use. This requirement has been met and will be monitored in the next construction season.

230. Soil unsuitable for the construction of the road is also removed to the sites provided by the local authorities.

Figure 72 Storage of unsuitable soil for further use

4.6.2 Production waste

231. Production waste is also generated during road construction. This is used engine oil, old tires, empty bitumen barrels. According to the Contractor’s information, the used oil is reused in the operation of some types of equipment, the rest is handed over to a local company for further processing. On the territory of asphalt plant, waste is generated during the production of asphalt. These are mostly empty barrels of used bitumen. In June 2021, a large number of used barrels and metal lids from barrels that need to be disposed of were accumulated on the territory of asphalt plant. According to the Contractor, empty barrels, not crumpled during use, are partially used during construction works on the road, part of the barrels will be used for the needs of the Contractor, mostly barrels are disposed of for scrap metal. A letter was sent to the contractor indicating the terms of disposal of empty barrels and lids. The barrels were removed on time.

Figure 73 Empty barrels and lids from bitumen

Figure 74 Old car tires in the Belovodskoe

232. On the territory of the base in the Belovodskoe, a large number of old car tires are stored. Contractor took measures to remove and dispose of them. Currently, the base area is cleared of all waste.

4.6.3 Household waste

233. Household waste is mainly generated in workers' camps. Both solid and liquid household waste is generated.

234. Household solid waste consists of packaging materials made of paper and cardboard, dry waste, plastic and glass, as well as food waste, which is pre-collected in plastic bags. Household liquid waste is waste water from living premises and kitchens.

235. Solid household waste is collected unsorted in garbage containers with a capacity of 1m3 and is taken out weekly by Sokuluk and Moscovskiy utility plants, with which service contracts have been concluded. During the reporting period, about 163 m3 of solid waste was removed. Liquid household waste water accumulates in septic tanks, is pumped out to 3.5 m3 tankers owned by district waste transportation companies, and is taken to district wastewater treatment plants. During the reporting period, 86 trips of the cesspool age truck were made, 301 m3 of wastewater were removed.

Table 24 Volumes of solid waste and wastewater removal from the territories of Sokuluk, Belovodsk bases and production site in 2021

Locality	Month, date	Quantity of garbage bins, trips of cesspool age truck	Amount, som
Sokuluk	March	33 garbage bins,28 trips of cesspool age truck	**37000**
Belovodsk	March	26 garbage bins	**8580**
		Total:	**45580**
Sokuluk	April	26 garbage bins, 29 trips of cesspool age truck	**35050**
Belovodsk	April	26 garbage bins	**8580**
Belovodsk	April	14 trips of cesspool age truck	**9800**
		Total:	**53430**
Sokuluk	May	35 garbage bins, 15 trips of cesspool age truck	26750
Belovodsk	May	17 garbage bins	5610
Total:		**163 garbage bins 86 trips of cesspool age truck**	**32360**

4.7 Health and Safety

4.7.1 Workers health and safety

236. In March 2019, a health and safety specialist was hired by the Contractor. This specialist regularly carried out work to check the state of labor protection and to improve the working conditions of employees of the "Chinese Railway Engineering Group Company No. 5 in the Kyrgyz Republic".

237. The company's workers were regularly trained, instructed and tested their knowledge. Inspection detours were conducted on an ongoing basis. Introductory training was regularly conducted for newly hired workers. Repeated training is carried out every 3 months. To avoid injuries, seminars were held with workers at workplaces.

238. In April 2021, a health and safety specialist was dismissed from his job. The consultant has repeatedly warned the Contractor orally and in writing about the need to hire a new specialist, but so far, the specialist has not been hired.

239. The contractor works with violation. There is no introductory briefing for newly hired workers.

240. The construction supervision consultant regularly notes safety precaution violations, especially when working at height, laying culvert chutes. Also, violations were noted when moving loads by a crane. The workers were in the working area of the crane without personal protective equipment. These violations were noted both at the polygon for the manufacture of reinforced concrete structures, and when laying culvert chutes. Verbal and written warnings were repeatedly issued to the Contractor, but violations continue.

241. The Contractor was recommended to regularly check the knowledge of workers on occupational health and safety requirements and, if necessary, to re-instruct them, but due to the lack of Health and safety specialist in the Contractor's staff, this instruction was not implemented.

4.7.2 Community health and safety

242. In order to prevent the risks of disease at the base in the village of Sokuluk an "inlet filter" was arranged:

- measurement of the body temperature of employees with a non-contact thermometer by responsible persons at the entrance;
- mandatory suspension from the workplace of persons with fever and signs of an infectious disease.
- interviewing employees about the presence or absence of respiratory symptoms in family members, checking employees (cough, fever, weakness, headache, etc.);

243. First-aid kits equipped with contactless thermometers, sanitizers, and necessary medicines were organized in the camps for specialists and workers of the Contractor.

244. Chinese specialists have been vaccinated. Local specialists, due to the limited amount of vaccine in Kyrgyzstan, have not all been vaccinated. Currently, the Chinese Sinopharm vaccine has been imported to Kyrgyzstan, everyone will be able to get vaccinated.

245. The Contractor's staff was provided with the necessary means: protective masks, sanitizers. Constant cleaning and disinfection of residential premises is carried out.

246. Prior to the dismissal, the health and safety specialist conducted regular instructions before the start of the shift for employees with a special focus on COVID-19, including cough etiquette, hand hygiene and distancing measures.

247. During the reporting period, there were no problems with the health and safety of the Contractor's specialists and workers.

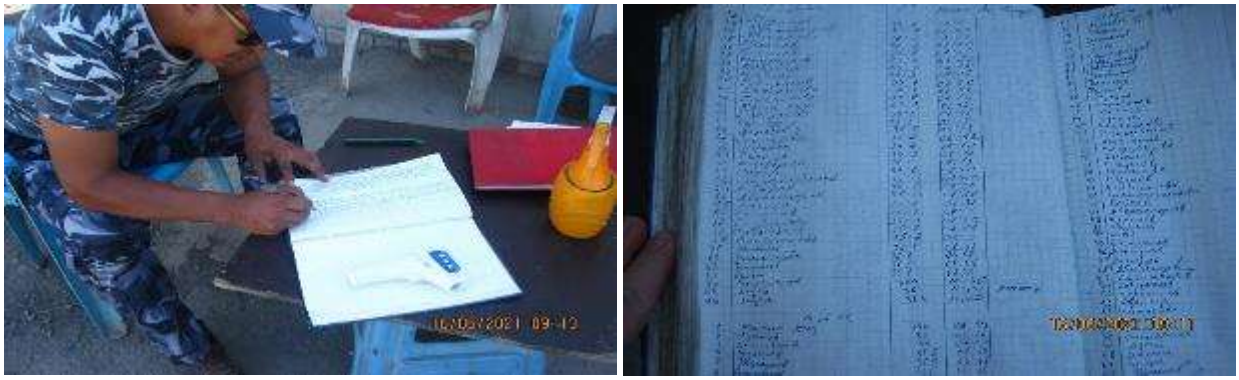


Figure 75 Temperature measurement and registration in the log at the entrance to the base in Sokuluk

4.8 Ensuring of road safety at the project site:

248. The Consultant's road safety specialist monitors the Contractor's road safety on a regular basis. There are constant site visits, monitoring of the state of the carriageway, bypass roads, pedestrian crossings, underground passages etc. are carried out.

249. A road safety specialist has given a written instruction to the Contractor on the installation of road signs according to the approved locations, in areas where asphalt laying and installation of fences on the dividing strip have been completed. The contractor was instructed to replace the old traffic lights with new ones and to complete the construction work on the installation of new traffic lights provided by the design. There are 11 traffic lights installed. The contractor has started work on replacing non-standard and worn-out road signs.

250. In addition, constant monitoring of the status of relevant road signs, road markings, and fences installed to fence work sites and oncoming traffic areas is carried out.

251. Consultant registries road accidents occurred at the project site only if the accident occurred due to the fault of the Contractor, namely insufficient implementation of road safety measures (lack of fences, signs, pits, etc.).

252. During the reporting period, no accidents occurred due to the fault of the contractor or construction work. The consultant constantly monitors the situation and sends a written notification to the contractor in case of noncompliance with a request for immediate elimination. In order to ensure the safety of pedestrians, especially schoolchildren, the project provides for the repair of 4 existing and construction of 6 new underground passages on the road. Underground pedestrian passages are the safest option for pedestrian traffic. Currently, the construction of five underground passages is almost completed. Adults and schoolchildren are currently crossing the road through underground passages. Currently, work has begun on the completion of the underground passages.

5. FUNCTIONING OF THE CEMWP

5.1 CEMWP review.

253. The Construction Environmental Management Work Plan (CEMWP) is a form prepared by the Contractor based on the EMP and designed to encourage the Contractor to read the EMP and rethink the requirements that need to be met. The EMP describes the various activities proposed under this Project that are designed to prevent, minimize, or compensate environmental impacts that occur as a result of the Project. The mitigation measures provided in the CEMWP are sufficient, effective and acceptable. The CSC has prepared 14 annexes to the CEMP that address all major specific potential environmental impacts.

254. The Contractor's Environmental Specialist – Uzbekov Kanatbek, implements the construction mitigation measures. The Contractor's compliance with environmental requirements is supervised by Consultant's environmental specialist, Tatyana Volkova. If any violations are detected, Consultant notify the Contractor verbally or in writing on the need to eliminate this violation within the specified time frame.

255. During the reporting period, the main focus was on the following issue:

- Disposal of construction waste;
- Disposal of old asphalt;
- The violation of safety precautions, occupational safety and health requirements;
- Planting and watering seedlings;
- Violations in the construction of bridges and culvert chutes;
- Borrow-pit mining and management;
- Materials manufacturing plant (bitumen and chemical leakages).

256. Currently, the main issue of CEMWP implementation remains planting seedlings instead of cut trees and its care. Considering climatic conditions, it is better to plant seedlings in the autumn, in October - November. But by the scheduled time, the Contractor had not completed construction of sidewalks, culvert chutes and replacement of utilities on the site planned for planting seedlings. To date, about 2,245 seedlings have been planted. Since the project section of the road passes through settlements, where, given the expansion of the road, there is little space for planting new seedlings, it is necessary to decide where and when the remaining seedlings will be planted. But currently, given the situation with COVID-19, construction work in 2020 was not carried out in full and the completion of construction has been postponed to the autumn of 2021.

6. GOOD PRACTICE AND OPPORTUNITY FOR IMPROVEMENT

6.1 Good practice

257. The mitigation measures provided in the CEMWP are sufficient, effective and acceptable.

6.2 Opportunities for Improvement

258. The contractor should be more responsible for environmental issues. Without constant reminders, to remove construction waste in a timely manner, carry out water sprinkling in construction sites, as well as in borrow-pits and stone crushing plants, take more responsible attitude to the safety and health of workers. The contractor should also not forget about the responsibility for planting seedlings, instead of cut down trees and regular maintenance of them.

7. SUMMARY AND RECOMMENDATIONS

7.1 Summary

259. The problem of crushing old asphalt to a size of 20x20 remains unresolved. During the reporting period, old asphalt was not removed for backfilling rural streets. Old asphalt and unsuitable soil were taken to dumps for the further use.

260. The contractor does not monitor the already constructed structures. Previously constructed side drains are overgrown with grass and covered with construction waste. According to the explanation of the contractor, the construction and installation of the side drains has not been completed; upon completion of the construction and installation of the side drains, it will be cleaned and, if necessary, additional levelling of the area will be carried out.

261. Dust control measures during the reporting period have been improved compared to previous reporting periods. This is probably due to the fact that there were fewer construction sites on the road compared to last year and watering machines managed to water construction sites in a timely manner.

262. Currently, planting seedlings instead of cut down trees remains a problem. The contractor underestimates the importance of this activity. Currently, 2,245 seedlings have been planted, while the contractor will have to accelerate the work on planting seedlings in the autumn of 2021 (approximately in October - November 2021).

263. The riverbed of Ak-Suu river, where the bridges are constructed on the northern side has been cleared of construction waste, and the southern side after completion of remaining bank protection works the Contractor will need to clear the riverbed from excess soil.

264. In April 2021, a health and safety specialist was dismissed from his job. The consultant has repeatedly warned the Contractor orally and in writing about the need to hire a new specialist, but so far, the specialist has not been hired.

265. The contractor works with violations. There is no introductory briefing for newly hired workers.

266. In the course of the supervision of construction works, non-observance of the Safety and Health Measures by the workers were noted. These include: work at height without personal protective equipment and appropriate equipment, work under the boom of a crane, lack of protective helmets, insufficient number of special shoes when welding and others.

267. There were leaks of bitumen from metal barrels on the asphalt plant. The contractor collected all the bitumen only after receiving the letter about non-compliance.

7.2 Recommendations

268. Given the fact that during the construction period, the Contractor does not always eliminate the violations in the specified time, and the Consultant is unable to apply any measures other than the suspension of work, it is necessary to take into account this experience and "include" additional impact mechanisms in the preparation of the contractor's draft contract in future projects in order to have more effective "leverage" to influence the Contractor to take the necessary environmental measures without repeated warnings and prevent negative consequences in advance.

269. Currently, the Contractor is working with violations. There is no introductory briefing for newly hired workers. In the second half of 2021, it is urgently necessary to hire Health and Safety Specialist.

270. The Contractor will need to conduct additional trainings on the non-spreading of COVID-19, HIV / AIDS for the newly hired workers.

271. At present, it is necessary to bring into proper condition and establish constant monitor over previously constructed culvert chutes and pipe heads, regularly clean them from stones and plants.

272. The contractor needs to take a more responsible attitude to the care of seedlings.

273. By the end of 2021, it is necessary to hand over the to the Commission the following borrow pits: Jelamysh, Kara Balta, Ak-Suu1 and Ak-Suu2.

274. It is necessary to clean the Ak-Suu riverbed from excess soil.

275. The Contractor's environmental specialist should regularly monitor the condition of planted seedlings, the condition of constructed structures such as culvert chutes, pipes. Do not allow filling the trunks of growing trees with unsuitable soils or old asphalt.