

# Semi-annual environmental monitoring report

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July - December 2021

The Kyrgyz Republic

Central Asian Regional Economic Cooperation Corridor 3 Improvement Project (Bishkek-Osh road), Phase 4, Bishkek-Kara-Balta section (km 8.5 - km 61).

**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

**Prepared for:**

Ministry of Transport and Communications of the Kyrgyz Republic.

**Endorsed by:** [Full name and signature of Executive Agency employees]

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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
PIU	-	Project Implementation Unit
km	-	kilometer
KR	-	Kyrgyz Republic
MPC	-	Maximum permissible concentration
MPL	-	Maximum permissible level
MoTC	-	Ministry of Transport and Communications of the Kyrgyz Republic
MTACC	-	Ministry of Transport, Architecture, Construction 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
DDPTSSSES	-	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 **ninth** semi-annual environmental monitoring report covering the period from July to December 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 July to December 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, 52.5 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.

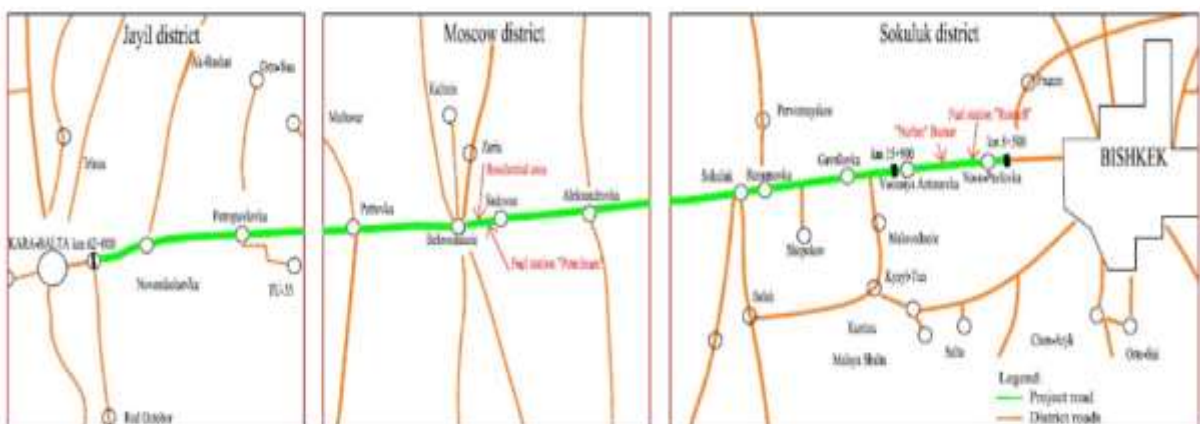


Figure 1 Administrative districts of project road.



Figure 2 Bishkek Kara-Balta project road section from km 8.5 - km 61.

## **2. PROJECT DESCRIPTION AND CURRENT ACTIVITIES.**

### **2.1 Project Description.**

#### **2.1.1 Location of the project site and design. 15.9 -61 km section of the Bishkek Kara-Balta project road.**

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:

- 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.
- Impact to the air;
- Impact to water courses and rivers;
- Impact resulting from sourcing of aggregates in borrow-pits;
- Impact on soil and vegetation, including tree stands near the Project road, due to site clearing work;
- Impact resulting after bridge rehabilitation works;
- Impact of asphalt production plants and aggregates crushing plants;

- 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

Table 3 km 8.5-km 15.9 road section where construction was started in the period from 2020

Section No.	Start of the section, km	End of the section, km	Length of the section, km
1	8.500	15.900	7.400

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 4 Project Contracts and Management.

Project	<b>Central Asia Regional Corridor 3 (Bishkek-Osh Road) Improvement Project Phase 4</b>
Contractor	<b>: China Railway No.5 for Component 1 implementation</b>
Road Section:	<b>: 15.9 km – 61 km, the overall length is 45.1 8.5 km – 15.9 km, the overall length is 7.4</b>
Donor:	<b>Asian Development Bank.</b>
Contract Sign Date	<b>28/03/2017</b>
Executive Agency	<b>: Ministry Transport and Communications of the Kyrgyz Republic</b>
Notice to Commence	<b>03/04/2017</b>
Completion Date	<b>: 18 March, 2020; October 16, 2020 (VO 9); 16 July, 2021 (VO 11) New date: 18<sup>th</sup> November 2021 (VO 17)</b>
Time for Completion – Days	<b>: 1080 days, 1292 days (VO 9); 1565 days (VO 11) New: 1690 days (VO 17)</b>
Extension of Time – Days	<b>: 212 (VO 9) + 273 (VO 11) + New: 125 (VO 17)</b>
Defect Liability Period – Days	<b>: 365</b>
Contract Amount	<b>: USD 70,239,899.29</b>
Minimum Amount of Interim Payment USD (2%Addendum N0.1 dated on 30.04.2020)	<b>: USD 1,404,797.99</b>
Total Amount of Advance Payment	<b>: 15% Percentage of the Accepted Contract Amount</b>
Amount of Performance Security	<b>: %20 of Accepted Contract Price</b>
Amount of Third-Party Insurance	<b>: 500,000 USD per occurrence with the number of occurrence unlimited</b>
Periods for submission of insurance	<b>28 days</b>
a) evidence of Insurance	<b>28 days</b>
b) relevant policies	<b>28 days</b>
Delay damages for the Works	<b>0.05% of the Accepted Contract Amount for each lot, which is in delay, per day in USD</b>
Maximum amount of delay damages	<b>10% of the Accepted Contract Amount</b>
Repayment Amortization of Advance payment	<b>22%</b>
Limit of Retention Money	<b>10% of Accepted Contract Amount</b>
Percentage of Retention	<b>5% of Value of Works certified for Payment</b>

Table 5 List of Consultant's staff.

<b>INTERNATIONAL STAFF</b>	
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
<b>NATIONAL STAFF</b>	

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 – 3,75m
- 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 – 46,692m<sup>3</sup>;
- The same in junctions 5cm thick – 4,169m<sup>3</sup>;
- Binder course 9cm thick – 84,046m<sup>3</sup>;
- The same on junctions 9cm thick – 7,505m<sup>3</sup>;
- Asphalt treated base course 9cm thick – 86,906m<sup>3</sup>;
- Base 15cm thick – 157,257m<sup>3</sup>;
- Sub-base 28cm thick – 448,920m<sup>3</sup>;
- Asphalt-concrete course on sidewalks 4cm – 9,754m<sup>3</sup>;

#### **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 31.12.2021, on the project road 3145 seedlings have been planted.

### **Land Acquisition and Resettlement 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);
- Project Implementation Unit (PIU) MoTC KR;
- Ministry of natural resources, ecology and technical supervision of the Kyrgyz Republic (MNRETS);
- Department of Disease Prevention and State Sanitary and Epidemiological Surveillance under the Ministry of Health of the Kyrgyz Republic (DDPSSSES)
- *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. PIU 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.
- Ministry of natural resources, ecology and technical supervision of the Kyrgyz Republic – 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 6 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	<a href="mailto:npajarillaga@adb.org">npajarillaga@adb.org</a>
2	ADB's Kyrgyz Republic Resident Mission (KYRM)	Environment Consultant	Sultan Bakirov	<a href="mailto:Sbakirov.consultant@adb.org">Sbakirov.consultant@adb.org</a>
3	PIU under MoTC	Executive Agency	Asylbek Abdygulov	<a href="mailto:asylbeka@piumotc.kg">asylbeka@piumotc.kg</a>
4	Temelsu	Consultant	Tatiana Volkova	<a href="mailto:volkova_ti55@mail.ru">volkova_ti55@mail.ru</a>
5	The limited liability company "China Railway Engineering Group No. 5»	Contractor	Uzbekov Kanatbek	<a href="mailto:kanatbek.uzbekov.88@mail.ru">kanatbek.uzbekov.88@mail.ru</a>
6	Aiser Torg LLC	Installation of traffic lights	Uzbekov Kanatbek	<a href="mailto:kanatbek.uzbekov.88@mail.ru">kanatbek.uzbekov.88@mail.ru</a>
7	Flame Engineering LLC	Construction of ditches and sidewalks	Uzbekov Kanatbek	<a href="mailto:kanatbek.uzbekov.88@mail.ru">kanatbek.uzbekov.88@mail.ru</a>
8	LLC Vneshtorgpromstroy	Finishing of the underpass	Uzbekov Kanatbek	<a href="mailto:kanatbek.uzbekov.88@mail.ru">kanatbek.uzbekov.88@mail.ru</a>
9	Sinda-Service Company	Finishing of the underpass	Uzbekov Kanatbek	<a href="mailto:kanatbek.uzbekov.88@mail.ru">kanatbek.uzbekov.88@mail.ru</a>
10	Mostdor Stroy	Mechanical thermoplastic road markings	Uzbekov Kanatbek	<a href="mailto:kanatbek.uzbekov.88@mail.ru">kanatbek.uzbekov.88@mail.ru</a>



## 2.3 Project activities during the current reporting period.

Table 7 Work Progress. Main Section (KM 15,9 – KM 61)

No	Bill 3 (Earth Works)	Unit	Scope per design	Actually completed	Nov	% of completion
1	Clearing and grubbing	ha	76	75		99%
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		85%
6	Scarifying of existing asphalt concrete pavement	m3	84340	84340		100%

No	Bill 4 (Drainage Works)	Unit	Scope per design	Actually completed	Nov	% 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 m	pcs.	240	235		97,9%
4	Box culverts - 2.0x2.0 m	pcs.	1	1		100%
5	Provision and mounting of reinforced concrete chutes B-3.	pcs.	21600	17450	550	81%

No	Bill 5 (Pavement Works)	Unit	Scope per design	Actually completed	Nov	% of completion
1	Sub-base – 28cm	m3	448 920	448 920		100%
2	Base course - 15cm	m3	157 257	157 257		100%
3	Black crushed stone – 9cm (asphalt treated base)	m3	86 906	86 906		100%
4	Binder course – 9cm	m3	84 046	84 046		100%
5	Wearing course - 5cm	m3	46 692	46692,5		100%

No	Bill 6 (Bridges)	Unit	Length per design	Actually completed	Nov	% 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%

No	Bill 9 (Miscellaneous Works)	Unit	Scope per design	Actually completed	Nov	% of completion
1	Underground passage KM30+481	m	25			45%
2	Underground passage KM32+194	m	25	18,2	18,2	73%
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			90%
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	14 882		100%
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	82	50		60,98%
13	Relocation of the cable communication line	m		8500		
14	Relocation of waterpipe line	m		1250		
15	Lighting	pcs	2 190	235		
16	Anchor lighting	pcs	190	10		

### 2.3.1 Road construction works

26. 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. According to the ADB's instructions, the soil compaction works were carried out without vibration;
- works on construction of road pavement, laying of subbase and asphalt;
- installation of parapets (small concrete fence/dividing fence),
- installation of reinforced concrete ditches;
- construction of underpasses;
- construction of culvert pipes;
- construction of bus stops and sidewalks.

27. These works were carried out at road sections from Gavrilovka to Novo-Nikolaevka villages.



Figure 3 Removal of asphalt in the Sokuluk village.





Figure 4 Leveling and compacting of roadbed in the Sokuluk village.

28. 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.

29. Also, asphalt laying works were carried out on all road sections from Gavrilovka to Novonikolaevka village.



Figure 5 Laying asphalt from km 15.9 to km 61.

30. On October 1, asphalt laying works were completed on the main road section from km 15.9 to km 61.



Figure 6 Completion of asphalt pavement works on the main road from km 15.9 to km 61.

31. Work continued on the preparation and laying of asphalt at the junctions to the streets adjacent to the road.



Figure 7 Laying asphalt at the junctions to the streets adjacent to the road in the Alexandrovka village.



Figure 8 Laying asphalt at the junctions to the streets adjacent to the road in the Petrovka village.

32. Sidewalk construction works were continued, which included installation of curbs and preparing them for asphaltting.



Figure 9 Construction of sidewalks.

33. Subcontractor carried out work on the installation of roadside culvert ditches.

34. Precast reinforced concrete or metal pipes were used at junctions to the adjacent streets. The use of asbestos cement pipes has not been noted.

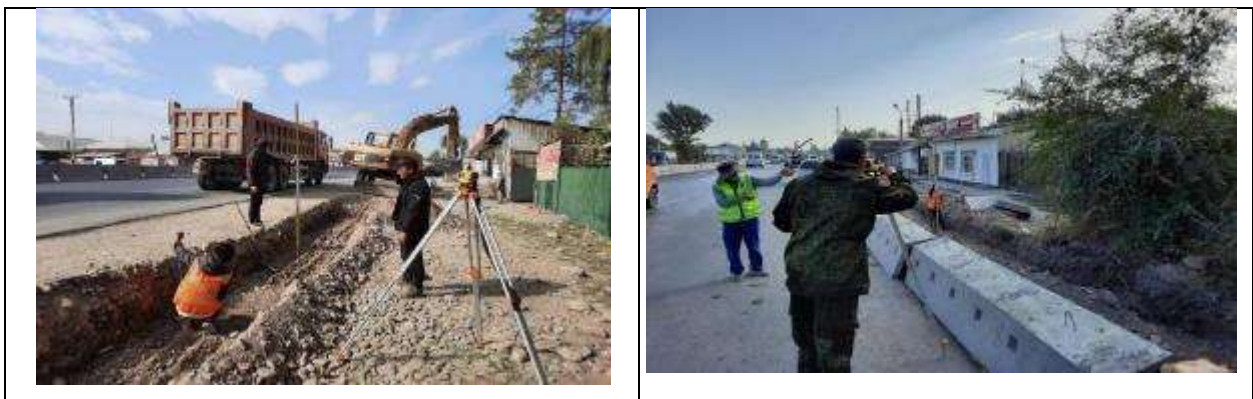




Figure 10 Installation of roadside ditches and crossings to private houses and streets adjacent to the road in the Alexandrovka village.

35. In the villages of Sadovoye, Belovodskoye, and Petrovka, construction of sidewalks continued, which included installation of curbs, preparation and asphaltting.





Figure 11 Construction of sidewalks in the Petrovka village.

36. During the reporting period, work was also carried out on asphaltting areas for bus stops and installation of bus shelters. These works were carried out in the villages of Petrovka, Poltavka, Petropavlovka, and Novonikolaevka.



Figure 12 Construction of bus stops.

37. During the reporting period, work was also carried out on the installation, cleaning and strengthening of "New Jersey" type parapets. Welding works, work on concreting of ditches on the carriageway between parapets were carried out.

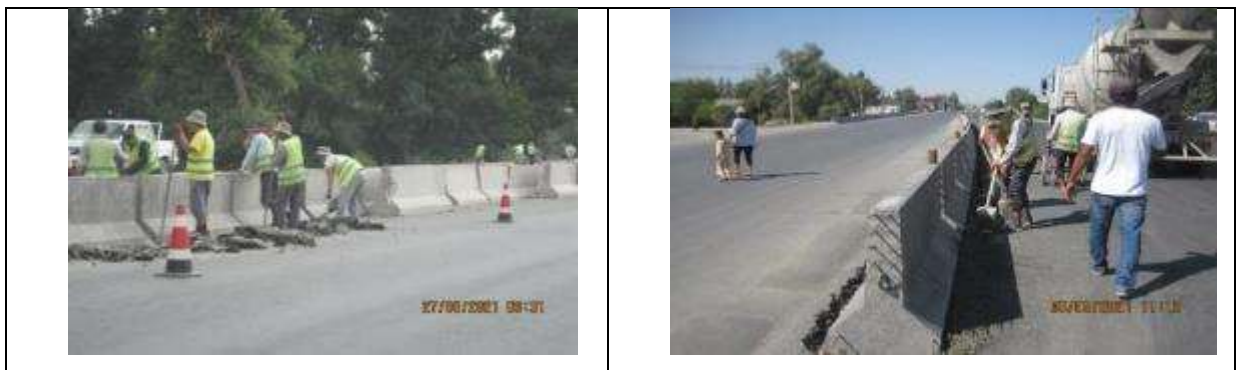




Figure 13 Works on concreting of ditches on the carriageway between the parapets.

38. During the reporting period, work was carried out on the completion of underpasses. The facing of walls and stairs with finishing tiles is carried out.



Figure 14 : Completion works on underpasses.

39. Adults and children are currently crossing the road through some underpasses.



Figure 15 Underpass in the Novonikolayevka village.

40. During the reporting period, traffic lights were installed on the road section from km 15.9 to km 61. Work on the installation of 18 traffic lights was completed, work continued on the application of road markings and installation of road signs and lighting poles.





Figure 16: Installation of new traffic lights on the project road.



Figure 17. Application of horizontal markings.



Figure 18 Preparation of pits and installation of lighting poles on the project road.

41. On the Jelamysh River (km 18+360 LHS), wheel-safety parapet barriers of BO2 type were constructed.



Figure 19 Construction wheel-safety parapet barrier on the Jelamysh river

#### 7.4 km section.

42. Given that in this road section traffic is overloaded and there are no bypasses, it was decided to divide the road into 3 lanes and alternately remove the old asphalt and prepare for asphalt. Work was started in the village of Novopavlovka at km 8+511-8+800 section (south side) the asphalt on the first lane was removed, the excess unsuitable soil and old asphalt were removed, the soil was rolled and compacted. Asphalt has been laid. Further work was carried out on the eastern side of the road. At km 8+500-km 9+500 section, the second layer of asphalt was laid (from Novopavlovka).

43. The local administration has allocated places where to transport construction waste such as unsuitable soil and removed asphalt.



Figure 20 Leveling of the roadbed and removal of unsuitable soil.

44. At km 8+500 - km9+500 (7.4 km section), "New Jersey" type fences were installed



Figure 21 Rolling and compaction of the soil at 7.4 km section.

45. While weather conditions allowed, work was carried out on the installation of reinforced concrete ditches. The rest of the work was suspended in November.



Figure 22 : Installation of roadside culvert ditches at 7.4 km section.

#### **Dust control at construction sites.**

46. On all sections of the project road where construction work was carried out, dust suppression (water sprinkling) works were regularly carried out. Dust control works were carried out according to an agreed schedule to eliminate dusting. There were no complaints from the local population about dust formation to date. Dust control was also regularly carried out on the access road to the Ak-Suu2 borrow pit and on the territory of the production sites.



Figure 23 Water sprinkling works. Road to the Ak- Suu 2 borrow pit and at the construction site in the Sokuluk village.

### 2.3.2 Borrow pits.

47. 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 <sup>3</sup> )	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

48. 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.

49. 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.

50. 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.

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

52. During the reporting period, sourcing of inert materials was carried out at the Saz and Ak-Suu 2 borrow-pits as well as at the Belek borrow pit at km 8.5 – km 15.9 section (7.4 km).

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



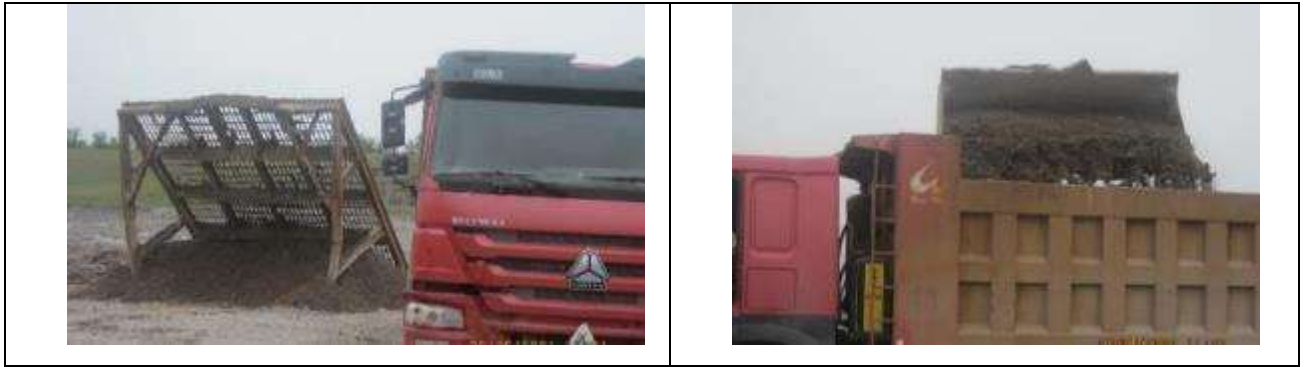


Figure 24 Development of Ak- Suu 2 borrow pit

54. During the reporting period, work was carried out on the leveling of used areas at the Ak-Suu 2 borrow pit.



Figure 25 Leveling of used areas at the Ak-Suu 2 borrow pit

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



Figure 26 Water sprinkling on the road to Ak-Suu 2 borrowpit to avoid dusting.

56. **Saz borrow pit.** Currently, a large volume of inert materials has been accumulated at the borrow-pit, they were transported for road construction in the Sokuluksiy district.



Figure 27 Development of Saz borrow pit.

57. **Belek borrow pit.** On the road section from km 8.5 to km 15.9, a permit for temporary use (2 construction years) of a land plot with an area of 10 hectares for the development of a sand-gravel mixture in the village of Belek was obtained. Currently, the borrow pit is being developed.



Figure 28 Development of Belek borrow pit

58. **Jelamysh borrow pit.** Currently, the reclamation of the borrow pit has been completed. The work was carried out in accordance with the Borrow-pit Reclamation Plan.

59. Handover of the reclaimed borrow pit to the Commission was conducted in June 2021. The Commission specified some shortcomings that for the date were eliminated. It was needed to additionally level the road to the borrow pit. The main reason for the delay in the Commission's work was some replacements in the commission membership. Currently, the new membership of the Commission has been approved and it is planned that the commission will continue its work

in January 2022. The contractor plans to complete the handover of Jelamysh borrow pit by mid-February 2022.



Figure 29 . Jelamysh borrow pit before development



Figure 30 Jelamysh borrow pit after development.



Figure 31 . Jelamysh borrow pit after the completion of reclamation works.

60. **Kara-Balta borrow pit.** On August 24, the handover of the reclaimed land of Kara-Balta borrow pit to the Reclamation Commission was conducted. Reclaimed lands were handed over to the local administration.



### 2.3.3 Plants.

61. Production site is located in 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.

62. 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.



Figure 32 Production site. Concrete mixing plant. Asphalt Concrete Plant

#### **Concrete Batch Plant.**

63. 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.

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



Figure 33 Production of reinforced concrete structures.

### **Stone-crushing plant.**

65. 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 34 Stone crushing plant.



Figure 35 Preparation of gravel material for the production of concrete and asphalt

### **Concrete mixing plant.**

66. 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 36 Filling the concrete mixing machine with concrete

**Asphalt bitumen plant.**

67. 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 37 Loading of asphalt mixture into dump trucks and unloading into asphalt pavers.

68. 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, partially covered with waterproofing material.





Figure 38 Barrels of bitumen on a special prepared site. Empty barrels after use and a storage area after the removal of used barrels

**Camps for workers residence.**

69. 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 39 Workers ' accommodation camp on the territory of the production site

70. 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.

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

#### **2.3.4 Workers accommodation camp in the villages of Sokuluk and Belovodskoe.**

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

73. The Contractor's staff was provided with the necessary means: protective masks, sanitizers. Constant cleaning and disinfection of residential premises were carried out. All Chinese specialists have been vaccinated. Currently, several types of vaccines have been received in Kyrgyzstan, which is available in polyclinics and mobile vaccination points for everyone. Considering that vaccination is carried out on a voluntary basis, almost all local specialists have been vaccinated. There was no organized vaccination campaign among the contractor's local workers.

74. The staff was warned about the mandatory isolation of persons with fever and signs of an infectious disease. During the reporting period, there were cases of positive Covid-19 among the contractor's personnel, but given the vaccination, the disease passed in a mild form. In the residential camps in the Sokuluk and Belovodskoye villages, household waste and sewage from septic tanks are removed in a timely manner, all protective measures for sanitary hygiene are observed. On the territory of the accommodation camps, all necessary maintenance measures are observed. Environmental compliance checks are carried out periodically. The Consultant gave additional instructions on the need for regular cleaning of the territory.

#### **2.3.5 Tree management.**

75. 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.

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

77. 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.

78. Work on tree cutting 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.

79. 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.

80. Starting 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 ditches have been completed.

81. To date, 3145 young seedlings have been planted:

- autumn 2019 - 300 pcs.;
- spring 2020 – 300 pcs.; autumn 2020 - 625 pcs.;
- March 2021 - 315 pcs.; April 2021 - 680 pcs.
- Autumn 2021 – 900 pcs.

Seedlings of birch, willow, catalpa, honey locust, poplar were planted.

82. The total number of trees that fell under forced cutting at km 15.9 - km 61 section amounted to 5812 pcs., and as compensatory measures, restoring planting of new tree seedlings is provided for the restoration of the number of green spaces.

83. Autumn planting of new seedlings, taking into account the climatic conditions of the region, is possible in October - November. But, given the early frosts, the planned number of seedlings was not planted.

84. Control and monitoring over the planting of seedlings, watering of seedlings, as well as monitoring of the survival rate of seedlings on an ongoing basis is carried out by the environmental safeguard specialists of the Construction Supervision Company, Contractor company, and representatives of MoTC KR.

#### **2.3.6 7.4 km section (km 8,5 – 15,9).**

85. At the road section from km 8.5 to km 15.9, initially 1000 trees were determined for demolition, located on the areas where road will be widened and areas where the construction/restoration of the sidewalks and drainage system will be carried out. However, this number will be updated as the road axis is completed.

86. As of the end of 2021, 504 trees were cut down on this section of the road.

#### **2.3.7 Road maintenance in winter period of 2021.**

87. The winter period of the year is the most difficult for the operation of roads and organization of traffic.

88. Winter maintenance is a complex of measures that should ensure uninterrupted and safe movement of cars and includes the following:

- protection of road from snow drifts;
- clearing roads of snow; control of winter slipperiness;
- control of ice.

89. These works are aimed at ensuring uninterrupted and safe movement of vehicles.





Figure 40 Deicing measures.

### 2.3.8 Information about personnel.

90. 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:

#### Composition of administrative and engineering personnel:

-60% - foreign personnel,

-40% - local personnel;

#### Non-qualified working staff:

-20% - foreign working staff,

-80% - local working staff.

91. In July, 537 people were involved in the Bishkek-Karabalta road rehabilitation project, including 58 people from China and 479 local staff.

92. In November 2021, 309 personnel were involved in the construction of the road, including 59 people from China and 250 local personnel.

### 2.4 Description of any project changes.

93. 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.

94. 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.

95. 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.

96. 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.**

97. 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.

98. PIU 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.

99. 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.

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

101. 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.

102. During the reporting period, earthworks on the road sections were carried out without 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.

103. 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 the wearing course on the roadbed using a mix design continued and was completed on October 1.



### **3. ENVIRONMENTAL SAFEGUARD ACTIVITIES.**

#### **3.1 General description of environmental safeguard activities.**

104. 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 Projects Implementation Unit, an environmental specialist of the Contractor.

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

106. With the outbreak of the pandemic in March 2020, the Contractor took additional measures based on the recommendation of the Republican Headquarters for Combating COVID-19 and the Action Plan for the Prevention of the Spread of COVID-19 approved by the Contractor, in particular, the requirements for the mandatory wearing of masks by specialists of the consultant and contractor in offices, the presence of a sanitizer, measurement by the responsible person at the entrance of the body temperature of employees with a contactless thermometer and a survey of the well-being of workers before work, mandatory removal from the workplace of persons with elevated body temperature and signs of an infectious disease.

##### **3.1.1 Road construction works.**

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

108. 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.

109. 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. Water sprinkling on 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.



Figure 41 . Water sprinkling works. The road to the Ak-Suu 2 borrow pit and the road construction site in the village of Sokuluk.

110. On the previously constructed sections of the road, the installation of culvert ditches, bus stops and sidewalks were carried out, work was carried out to strengthen the parapets of "New Jersey" type, leveling of shoulders, and installation of traffic lights, lighting poles, and application of road marking.

111. Work on the installation, cleaning and strengthening of parapets of the "New Jersey" type included welding work, work on concreting ditches on the carriage way between the parapets. During the monitoring, it was found that on the road shoulders, where work was carried out to strengthen the parapets, there were not removed soil waste, stored in the form of small piles. Under the impact of atmospheric precipitation, the waste was eroded and polluted the surrounding area. A letter was sent to the contractor indicating the timing of the elimination of this violation. In due time, the soil waste was collected from the shoulders and removed. In the future, the soil accumulated near the parapets was cleaned and removed in a timely manner.





Figure 42. Works on concreting of ditches on the carriage way between the parapets.

112. During the construction of bus stops and sidewalks, a large number of asphalt scraps was accumulated. The contractor did not always remove waste from the road in a timely manner. In the village of Sokuluk, at km 26+820 section, the sidewalk was littered with large pieces of asphalt scraps, which made it difficult for pedestrians to walk on it. A letter was sent to the contractor about the elimination of this violation. In due time, the waste of the old asphalt was removed.



Figure 43. Asphalt scraps on the road.

113. During the construction of bus stops, a large number of asphalt scraps were accumulated. The contractor promptly removed waste from the road.



Figure 44 Remnants of asphalt scraps at bus stops.

114. After the installation of culvert ditches, the excess soil formed was removed in a timely manner.



Figure 45 Removal of excess soil formed during the construction of culvert ditches.

115. During the environmental monitoring of construction sites, it was also found that during the construction of retaining walls on the Ak-Suu River, a trench was not backfilled, and is littered with plastic bags and bottles. The construction of retaining walls remains unfinished to date, which may cause flooding of the adjacent territory when water to flow into riverbed. Also, to date, the soil which used to regulate the flow of water in the river during construction has not been removed from the riverbed. A letter was sent to the contractor about the elimination of these violations.



Figure 46. Ak-Suu River after unfinished construction.



Figure 47 Ak-Suu River after completion of construction.

116. Previously installed culvert ditches in many places are overgrown with grass, filled with construction waste. The contractor was warned about the elimination of the detected violations. In November, after the completion of the main works on the road, the Contractor started cleaning the ditches.



Figure 48 Condition of previously installed ditches before and after cleaning.

117. During the reporting period, work was carried out on the completion of underpasses. The facing of walls and stairs with finishing tiles was carried out.

118. In the center of the village of Sokuluk, construction waste in large quantities remained uncollected near the underpass under construction.



Figure 49 Construction waste near the underpass under construction in the center of the village of Sokuluk.

119. Also, construction waste was not removed, and the territory was not leveled near the underpass located opposite the school in the village of Novonikolaevka.



Figure 50 Construction waste near the underpass located opposite the school in the village of Novonikolaevka.

120. It was difficult for schoolchildren to descend to this underpass, especially in conditions of ice, which could cause a fall and injury. A letter was sent to the contractor about the elimination of these violations. The violations were eliminated within the established time frame.

### 3.1.2 Borrow pits.

121. During the reporting period, extraction of inert materials was carried out at the Saz and Ak-Suu 2 borrow pits, and Belek borrow pit at km 8.5 - 15.9 section (7.4 km).

122. Currently, the development of the Jelamysh, Ak-Suu1, Kara-Balt borrow pits has been completed. 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.

123. 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.

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



Figure 51 Jelamysh borrow pit after reclamation.

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

126. The Commission for the handover of the reclaimed borrow pit worked in June 2021. As a result of the work, some shortcomings were identified, which were eliminated by the Contractor. It was needed to additionally level the road to the borrow pit. The main reason for the delay in the Commission's work was some replacements in the commission membership. Currently, the new membership of the Commission has been approved and it is planned that the commission will continue its work in January 2022. The contractor plans to complete the handover of Jelamysh borrow pit by mid-February 2022.

127. **Kara-Balta borrow pit.** On August 24, the handover of the reclaimed land of Kara-Balta borrow pit to the Reclamation Commission was conducted.

128. Currently, Ak-Suu 1 borrow pit have been prepared for the hand over to the Reclamation Commission.

129. **Ak-Suu 2 borrow-pit.** Currently, a large volume of inert materials has been accumulated at the borrow-pit, they were transported to the territory of production site for crushing and stockpiling. The borrow pit has large areas of land disturbed in the process of subsoil use. These areas are being leveled.

130. **Belek borrow pit.** On the road section km 8.5 - 15.9, a permit for temporary use (2 construction years) of a land plot with an area of 10 hectares for the development of a sand-gravel mixture in the village of Belek was obtained. Currently, the borrow pit is being developed.



Figure 52. Development of Belek borrow pit.

131. **Saz borrow pit.** Currently, a large volume of inert materials has been accumulated at the borrow-pit, they were transported for road construction in the Sokuluksiy district.

### 3.1.3 Production sites.

132. 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.

133. 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.

134. 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.







Figure 53 Impermeable protective coating around chemical containers.

## Plants

135. 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. 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.



Figure 54 Operation of the stone crushing plant without watering the raw materials.



Figure 55 Operation of the stone crushing plant with moistened raw materials.



Figure 56 Prepared gravel material for the production of concrete and asphalt.

136. 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, ditches, curbs, New Jersey-type fences, etc.) was also carried out. Workers are not provided with sufficient personal protective equipment.



Figure 57 Prepared gravel material for the production of concrete and asphalt

137. Concrete mix is prepared at a concrete mixing plant and delivered in finished form for the construction. 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 58 Refueling of concrete mixer trucks

138. 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 59 Washing of concrete mixer trucks.



Figure 60 Watering of the production site with flushing water.

139. 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.

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



Figure 61 Polygon for the production of reinforced concrete products.

141. Earlier, for the preparation of the asphalt mixture, a large number of barrels with bitumen were delivered to the production site. After using bitumen, the empty barrels were stacked on the territory. Later the empty barrels were removed.



Figure 62 The area occupied by empty barrels before and after the removal of barrels.

### **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 63 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. 2 fire shields were installed in the camp.



Figure 64 Fire shields on the territory of the camp



Figure 65 Dining and kitchen area.

145. 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.

146. 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.

147. 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 violations were not eliminated by the Contractor within the established time frame. A repeated letter was sent. Only after that, the Contractor replaced the unsuitable fire extinguishers. The fire extinguishers were removed from the sunny side of the living permits.



Figure 66 Fire extinguishers installed with violations on the territory of the production site.

### 3.1.4 Workers' camp in the Sokuluk and Belovodsk.

148. 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.

149. 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.

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

151. All Chinese specialists have been vaccinated. Currently, several types of vaccines have been received in Kyrgyzstan, which is available in polyclinics and mobile vaccination points for everyone. Considering that vaccination is carried out on a voluntary basis, almost all local specialists have been vaccinated. There was no organized vaccination campaign among the contractor's local workers.

152. The staff was warned about the mandatory isolation of persons with fever and signs of an infectious disease. During the reporting period, there were cases of positive Covid-19 among the contractor's personnel, but given the vaccination, the disease passed in a mild form.

### **3.1.5 Tree management.**

153. The total number of trees that fell under forced cutting amounted to 5812 pcs.

154. 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".

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

156. From 2019, the China Railway No. 5 contracting company has started a phased planting of tree seedlings at selected sites in the villages of Petrovka and Poltavka, where the main road works related to the construction of sidewalks and installation of drainage ditches have been completed.

157. To date, 3145 young seedlings have been planted:

- autumn 2019 - 300 pcs.;
- spring 2020 – 300 pcs.; autumn 2020 - 625 pcs.;
- March 2021 - 315 pcs.; April 2021 - 680 pcs.
- Autumn 2021 – 900 pcs.

Seedlings of birch, willow, catalpa, honey locust, poplar were planted.

158. Autumn planting of new seedlings, taking into account the climatic conditions of the region, is possible in October - November. But, given the early frosts, the scheduled number of seedlings was not planted.

159. Control and monitoring over the planting of seedlings, watering of seedlings, as well as monitoring of the survival rate of seedlings on an ongoing basis is carried out by the environmental safeguard specialists of the Construction Supervision Company, Contractor company, and representatives of MoTC KR.

160. To date, there are practically no places left on the project road for planting new seedlings. Local administration (ayil okmotu) suggested places for planting seedlings located at a distance of 1-2 km from the project road. It was two places near water intakes in the Poltavka village. This is the area of the rural stadium in the village of Sadovoe. Watering of seedlings will be carried out by residents of local ayil okmotu. Also, some ayil okmotus and the mayor's office of Kara-Balta receive requests to provide them with seedlings for planting in organized park areas that are located on their territory, while they will undertake further work on planting and care.



Figure 67 Preparation of areas for planting seedlings in October 2021.



Figure 68 Planting seedlings in November 2021.

161. 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.



Figure 69 Seedlings eaten by domestic animals and broken seedlings.

162. 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 operated for seedlings watering only.

#### 7.4 km section.

163. At the road section from km 8.5 to km 15.9, initially 1000 trees were determined for demolition, located on the areas where road will be widened and areas where the construction/restoration of the sidewalks and drainage system will be carried out. However, this number will be updated as the road axis is completed.

164. In December 2020, on this section of the road 321 trees have been cut down. The trees were cut down out near the “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.

165. In September 2021, trees at 7-4 km section (Voenno-Anonovka and Novopavloka villages) were recorded and marked. 183 trees were cut down, the documents for cutting down trees were approved by the environmental authorities. The trees cut down has been started in December 2021.

166. According to the terms of the current contract between MoTC KR and China Railway No. 5, the contractor will carry out the planting of new seedlings to replace the cut down trees, and will also carry out maintenance (watering, replacement of dried seedlings with new ones) until the end of the defective period.



Figure 70 Tree cutting on the road section km 8.5 - 15.9.

### 3.2 Site audits.

167. 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 July 2021.

No.	Date	Auditors name	Propose of audit	Summary of any significant findings
1	15.07	T. Volkova	Monitoring of construction sites	Site visit to the Jelamysh borrow pit. Monitoring of reclamation results
2	16.07	T. Volkova. K. Uzbekov	Monitoring of construction sites	Site visit to the Ak-Suu 2 borrow pit. Meeting with the Contractor. Discussion of environmental issues.
3	29.07	T. Volkova	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.
4	30.07	T. Volkova	Monitoring of construction sites	Monitoring of construction sites. Site visit to the proposed areas for storage of unsuitable soil at 7.4 km section.

Table 10 . Monitoring of construction sites in August 2021

No.	Date	Auditors name	Propose of audit	Summary of any significant findings
1	02.08	T. Volkova. K. Uzbekov	Monitoring of construction site together with Contractor's environmental specialist	Monitoring of construction sites together with the Contractor's environmental specialist  Installation of culvert ditches. Checking compliance with safety regulations during installation of ditches
2	04.08	T. Volkova. K. Uzbekov	Monitoring of construction site together with Contractor's environmental specialist	Site visit to the asphalt plant and Ak-Suu 2 borrow pit together with the Contractor's environmental specialist
3	06.08	T. Volkova. K. Uzbekov	Monitoring of construction site together with Contractor's environmental specialist	Monitoring of all construction sites. The problem of watering seedlings
4	09.08	T. Volkova	Monitoring of construction sites	Monitoring the condition of previously constructed cuvert pipes and ditches. Violations have been identified. Meeting with the Contractor. Discussion of environmental issues.
5	10.08	T. Volkova	Monitoring of construction sites	Seedlings are poorly watered. It is necessary to make regular watering of seedlings every 3 days.  An oral warning was given to the Contractor
6	13.08	T. Volkova. K. Uzbekov	Monitoring of construction sites	Monitoring of construction sites. Visit of the areas for the storage of unsuitable soil on 7.4 km section.
7	18.08	T. Volkova. K. Uzbekov	Joint visit with ProfiLab LLC laboratory	Participation in laboratory monitoring of noise and vibration
8	23.08	T. Volkova	Monitoring of construction sites	Monitoring of places for storage of old asphalt and unsuitable soil on 7.4 km section  A letter was sent to the Contractor about the detected violation
9	24.08	T. Volkova	Monitoring of construction sites	Site visit to the asphalt plant and Ak-Suu2 borrow pit together with the Contractor's environmental specialist  A letter was sent to the Contractor about the detected violation
10	25.08	T. Volkova	Monitoring of construction sites	Monitoring of all construction sites. The problem of watering seedlings. An oral warning was given to the Contractor
11	27.08	T. Volkova	Monitoring of construction sites	Site visit to the production site; monitoring of the stone crushing plant, asphalt plant, concrete mixing station.

Таблица 11. Monitoring of construction sites in September 2021.

No.	Date	Auditors name	Propose of audit	Summary of any significant findings
1	01.09	T. Volkova. K. Uzbekov	Monitoring of construction site together with Contractor's environmental specialist	Monitoring of all construction sites. The problem of watering seedlings.
2	03.09	T. Volkova	Monitoring of construction sites	Monitoring of places for storage of old asphalt and unsuitable soil
3	06.09	T. Volkova	Monitoring of construction sites	Monitoring of the production site territory. Storage area of reinforced concrete structures. Storage area for barrels with bitumen
4	09.09	T. Volkova. K. Uzbekov	Monitoring of construction sites	Site visit to the Belek borrow pit together with the Contractor's environmental specialist
5	15.09	T. Volkova	Monitoring of construction sites	Monitoring of construction sites. Visit of the areas for the storage of unsuitable soil on 7.4 km section.
6	17.09	T. Volkova	Monitoring of construction sites	Site visit to the asphalt plant and Ak-Suu2 borrow pit together with the Contractor's environmental expert
7	20.09	T. Volkova	Monitoring of construction sites	Monitoring of the production site territory. Meeting with candidates for the position of OHS specialist
8	22.09	T. Volkova. K. Uzbekov	Monitoring of construction site together with Contractor's environmental specialist	Monitoring of construction sites. Meeting with the Contractor. Discussion of environmental issues.
9	23.09	T. Volkova. K. Uzbekov	Monitoring of construction site together with Contractor's environmental specialist	Monitoring of all construction sites. The problem of watering seedlings.
10	28.09	T. Volkova	Monitoring of construction sites	Monitoring of construction sites. Violations during the construction of the bridge on the Ak-Suu river A letter was sent to the Contractor about the detected violation
11	30.09	T. Volkova	Joint visit with ProfiLab LLC laboratory	Working with the laboratory. Measurement of noise and vibration levels

Table 12 . Monitoring of construction sites in October 2021

No.	Date	Auditors name	Propose of audit	Summary of any significant findings
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1	04.10	T. Volkova. K. Uzbekov	Monitoring of construction site together with Contractor's environmental specialist	Monitoring of construction sites. Meeting with the Contractor. Discussion of problems with planting seedlings.
2	06.10	T. Volkova	Monitoring of construction sites	Monitoring of construction sites
3	08.10	T. Volkova	Monitoring of construction sites	Monitoring of all construction sites. Meeting with a businesswoman at 7.4 km section
4	13.10	T. Volkova	Monitoring of construction sites	Monitoring of all construction sites. The problem of construction waste on the road.
5	15.10	T. Volkova	Monitoring of construction sites	Monitoring of all construction sites. Problems with planting seedlings
6	18.10	T. Volkova	Monitoring of construction sites	Monitoring of old asphalt storage sites at 7.4 km section
7	19.10	T. Volkova	Monitoring of construction sites	Monitoring of all construction sites. Installation of ditches
8	22.10	T. Volkova	Monitoring of construction sites	Monitoring of all construction sites. Site visit to the production site.
9	25.10	T. Volkova	Monitoring of construction sites	Monitoring of all construction sites. Collecting information for the semi-annual report
10	27.10	T. Volkova	Monitoring of construction sites	Monitoring of the production site territory. The camp of workers' accommodation. Storage area for barrels with bitumen.

Table 13 . Monitoring of construction sites in November 2021

No.	Date	Auditors name	Propose of audit	Summary of any significant findings
1	02.11	T. Volkova K. Uzbekov Muktar uulu Aziz	Monitoring of construction site together with Contractor's environmental specialist and OHS specialist	Monitoring of construction sites together with the Contractor's environmental expert and OHS specialist.  Participation in COVID-19 Risk Management seminars on construction sites
2	04.11	T. Volkova. K. Uzbekov	Monitoring of construction site 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	10.11	T. Volkova. K. Uzbekov	Monitoring of construction site together with Contractor's environmental specialist	Monitoring of proposed borrow pit at 7.4 km section
4	12.11	T. Volkova	Monitoring of construction sites	Monitoring the condition of previously constructed culverts and ditches. Violations have been identified.

5	16.11	T. Volkova. K. Uzbekov.	Совместный выезд с лабораторией ГАООС	Participation in the monitoring of atmospheric air
6	18.11	T. Volkova K. Uzbekov Muktar uulu Aziz	Monitoring of construction site together with Contractor's environmental specialist and OHS specialist	Monitoring of construction sites together with the Contractor's environmental expert and OHS specialist.  Participation in COVID-19 Risk Management seminars on construction sites
7	22.11	T. Volkova. K. Uzbekov.	Monitoring of construction site together with Contractor's environmental specialist	Installation of culevrt ditches. Violation of safety regulations during installation
8	24.11	T. Volkova	Monitoring of construction sites	Monitoring of places for storing old asphalt and unsuitable soil.  A letter was sent to the Contractor about the detected violation.
9	29.11	T. Volkova	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 14 . Monitoring of construction sites in December 2021

No.	Date	Auditors name	Propose of audit	Summary of any significant findings
1	01.12	T. Volkova. K. Uzbekov	Joint visit with ProfiLab LLC laboratory	Participation in laboratory noise monitoring
2	06.12	T. Volkova. K. Uzbekov	Monitoring of construction site together with Contractor's environmental specialist	Site visit to the asphalt plant and Ak-Suu 2 borrow pit together with the Contractor's environmental specialist
3	08.12	T. Volkova	Monitoring of construction site together with Contractor's environmental specialist	Monitoring of all construction sites. Collecting information for the semi-annual report
4	10.12	T. Volkova. K. Uzbekov	Monitoring of construction sites	Monitoring of construction sites together with the Contractor's environmental expert and OHS specialist.
5	16.12	T. Volkova. K. Uzbekov	Monitoring of construction sites	Monitoring of all construction sites. Collecting information for the semi-annual report
6	21.12	T. Volkova. K. Uzbekov	Monitoring of construction sites	Site visit to the production site together with contractor's environmental specialist; monitoring

				of the stone crushing plant, asphalt plant, concrete mixing station.
7	23.12	T. Volkova. K. Uzbekov	Monitoring of construction site together with Contractor's environmental specialist	Monitoring of all construction sites. Meeting with the Contractor. Collecting information for the semi-annual report
8	27.12	T. Volkova	Monitoring of construction sites	Monitoring of all construction sites. Meeting with the Contractor. Collecting information for the semi-annual report

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

168. 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 15 Report on non-compliance with environmental requirements (July- December 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 December 2021 (Date and Detail)
1	<b>Construction waste problem</b>	CEMWP № 2.6.2 0541BOC3 55/3351-00017 dd 29.07.21	Annex 5. Waste Management Plan	The removed old asphalt in the village of Novopavlovka was taken out to the Profsoyuznaya street. In many places on the road shoulders asphalt is not levelled, there are large pieces of asphalt, the road itself is in poor condition is not levelled and there are a lot of holes	The Contractor should level and remove large pieces of asphalt by 12.08.21	Specified non-compliances were addressed	<b>Completed</b>
2	<b>Construction waste problem</b>	CEMWP № 2.6.2 0541BOC3 55/3351-0000404 dd 25.08.21	Annex 5. Waste Management Plan	The removed asphalt in the village of Petrovka and Poltava is stored on the road shoulders, and is not taken out on time. In the village of Sokuluk, large pieces of asphalt are on the sidewalk, which creates problems for passers-by	Contractor's letter no. CAREC - G0793 dated 29.08.2021 on the elimination of the non-compliances	Specified non-compliances were addressed	<b>Completed</b>
3	The problem of water quality in the Ak-Suu river	CEMWP № 2.4.2 0541BOC3 55/3350-00441 dd 29.09.21	Приложение 7. План управления качеством воды	During the environmental monitoring of construction sites, it was also found that during the construction of retaining walls on the Ak-Suu River, a trench was not backfilled, and is littered with plastic bags and bottles. The construction of retaining walls remains unfinished to date, which may cause flooding of the adjacent territory when water to flow into riverbed. Also, to date, the	Contractor's letter no CAREC – G0838 dated 13.10.2021 on the elimination of the non-compliances	Specified non-compliances were addressed	<b>Completed</b>



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 December 2021 (Date and Detail)
				soil which used to regulate the flow of water in the river during construction has not been removed from the riverbed.			
4	<b>Construction waste problem</b>	<b>CEMWP № 2.6.2 0541BOC3 55/3350-00481 dd 30.11.21</b>	Annex 5. Waste Management Plan	In the center of Sokuluk village, near the underpass under construction, construction waste in large quantities remained uncollected.  Also, construction waste has not been removed and the territory has not been leveled near the underpass opposite the school in the village of Novonikolaevka.	Contractor's letter to CAREC - G0867 dated 09.12.2021 on the elimination of these non-compliances	Specified non-compliances were addressed	<b>Completed</b>

**3.3.1 Overview and description of issues tracking during the current period.**

169. 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 53 times. Some visits were combined with the Contractor's environmental specialist. The CEMWP prepared by the contractor was used as a checklist.

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

**3.3.2 Issues tracking.**

171. 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;
- Disposal of old asphalt;

**3.3.3 Summary of issues tracking.**

172. 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, 4 non-compliance issues were reported and all were resolved. The number of noncompliance letters is getting smaller every year. This is due to the fact that most of the identified noncompliances were discussed verbally with the Contractor. The date of execution was discussed, including the definition of mitigating measures that should be applied to solve the identified problem and, if the violation was not eliminated on time, a letter was sent.

173. 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 16 Summary of problem monitoring activities in the current period

Non-compliance	Juy – December 2021	Total
Total	4	4
Significant & Resolved	4	4
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

174. 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».

175. 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 and during the reporting period there was no water in the rivers.

176. On November 16, 2021, laboratory specialists of the State Committee for Ecology and Climate of the Kyrgyz Republic, in the presence of Contractor's and Consultant's environmental experts, took samples for the determination of pollutants in the atmospheric air. Due to the reorganization of environmental authorities, monitoring was not carried out during the construction works.

177. Background levels of atmospheric air were determined. 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."

178. 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 17 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						
		Novonikol aevka village, 59+600km Latitude: 42°49'53"; Longitude: 73°53'52".	Exceeding MPC Max.	Sadovoe village, 37+460km Latitude: 42°50'47"; Longitude: 74°09'31".	Exceeding MPC Max.	Shopokov, 22+600km, Latitude: 42°51'52"; Longitude: 74°20'14".	Exceeding MPC Max.	
Sulfur dioxide	mg / m3	<0,05	-	<0,05	-	<0,05	-	
Nitrogen dioxide	mg / m3	0,026 ± 0,005	-	0,067± 0,012	-	<0,02	-	

Suspended substances	mg / m <sup>3</sup>	<0,2	-	0,2± 0,05	-	0,347± 0,087	-
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Table 18 Air quality measurement protocol at 7.4 km road section

Name of components	UoM	Analysis data by points				MPC Max. mg / m <sup>3</sup>
		Bishkek – Kara-Balta section				
		Voенно-Antonovka, 14+840km, Latitude: 42°52'20"; Longitude: 74°25'52".	Exceeding MPC Max.	Novopavlovka, 10+100km, Latitude: 42°52'29"; Longitude: 74°29'22".	Exceeding MPC Max.	
Sulfur dioxide	mg / m <sup>3</sup>	0,105± 0,013	-	0,162± 0,019	-	0,5
Nitrogen dioxide	mg / m <sup>3</sup>	0,186± 0,033	2,2	0,319± 0,057	3,8	0,085
Suspended substances	mg / m <sup>3</sup>	0,209± 0,052	-	0,521± 0,130	1,0	0,5

179. **Conclusion on the results of measurements:** According to the test results, in the selected atmospheric air samples No. 179-183, the maximum permissible concentration was found to exceed 2.2-3.8 times for nitrogen dioxide and 1.0 times for suspended substances.



Figure 71 . Location of air sampling in the village of Novonikolaevka, km 59+600



Figure 72 Location of air sampling in the Sadovoye village, km 37+460



Figure 73 Location of air sampling in the Shopkov km 22+600



Figure 74 Location of air sampling in the village of Voенно-Antonovka km 14+840



Figure 75 Location of air sampling in Novopavlovka village km 10+100



Figure 76 Location of air sampling in the Novopavlovka village km 10+100.

180. On September 1, 2021, a specialist of the ProfiLab operational laboratory, in the presence of Contractor's and Consultant's environmental experts, measured the noise and vibration levels at road construction sites. The measurements were carried out using the Ecophysics - 110A device.

181. 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".

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

183. Sources of physical factors and their characteristics: Traffic flow and the work of the Contractor's equipment. Environmental conditions: temperature: 28C, humidity: 52%, atmospheric pressure: 694 mmHg.

Table 19 . Protocol for measuring the vibration level

№	Location. Mode of operation.	Vibration type		Axis	Sound level (DBA)
		Transport	Transport and technological		
	Novopavlovka village 9.9km, near the school, north side of the road Latitude: 4252'28; longitude:7428'43".				
1	background level	+		X	82
	Vibration			Y	80
				Z	81
	Voенно-Antonovka village near the mosque, south side of the road Latitude: 42522424"; longitude: 7425'45".				
2	background level	+		X	89
	Vibration			Y	91
				Z	88

	Novopavlovka village 9,+200. south side of the road Latitude: 4252'29; longitude:7430'01".				
3	In operation mode		+	X	83
	Of roller			Y	82
				Z	81
4	In switched off mode		+	X	82
	Of roller			Y	86
				Z	77
	Novopavlovka village 9+060km, south side of the road Latitude: 4252'29; longitude:7430'06".				
5	in the mode of operation		+	X	90
	Of Excavator and grader			Y	92
				Z	90
6	In switched off mode		+	X	79
	Of Excavator and grader			Y	81
				Z	71
	Sokuluk village, near the market,26+820 km., south side of the road Latitude:4251'23"; longitude: 7417'14".				
7	background vibration level		+	X	85
				Y	86
				Z	77
	Sokuluk village, near the market,26+360 km.,north side of the road Latitude:4251'85"; longitude: 7417'34".				
8	in the mode of operation of		+	X	87
	Excavator			Y	91
				Z	82
9	In switched off mode		+	X	87
	Excavator			Y	88
				Z	79

184. **Conclusion on the results of measurements:** According to the results of instrumental measurements, the vibration level during operation of the Contractor's equipment ranges from 81dB to 96 dB, and when the equipment is switched off, it ranges from 71 to 88 dB. Background vibration is up to 91 dB.

185. 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.

186. 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".

187. Environmental conditions: temperature: 28C; humidity: 52%; atmospheric pressure: 694 mmHg. Sources of physical factors: traffic flow and the work of the Contractor's equipment.

Table 20 . Protocol for measuring the noise level

№	Location. Mode of operation.	Sound level (dBA)
	Novopavlovka village 9.9km, near the school, north side of the road Latitude: 4252'28; longitude:7428'43".	
1	Noise	66 actual
	background level	



	Voенno-Antonovka village near the mosque, south side of the road Latitude: 42522424"; longitude: 7425'45".	
2	Noise	68 actual
	background level	
	Novopavlovka village 9,+200.,south side of the road Latitude: 4252'29; longitude:7430'01".	
3	In operation mode	70 actual
	Of roller	70 MPL
4	In switched off mode	66 actual
	Of roller	70 MPL
	Novopavlovka village 9+060km, south side of the road Latitude: 4252'29; longitude:7430'06".	
5	in the mode of operation	76 actual
	Of Excavator and grader	70 MPL
		6 dBA
6	In switched off mode	64 actual
	Of Excavator and grader	70 MPL
	Sokuluk, near the market,26+820 km., south side of the road Latitude:4251'23"; longitude: 7417'14".	
7	Noise	68 actual
	background level	
	Sokuluk, near the market,26+360 km.,north side of the road Latitude:4251'85"; longitude: 7417'34".	
8	in the mode of operation of	72 actual
	Excavator	70 MPL
		2 dBA
9	In switched off mode	68 actual
	Excavator	70 MPL
		2 dBA

188. **Conclusion on the results of measurements:** At the time of the measurements, the background noise level at the measurement points during the movement of vehicles on the road was 68 dBA in the daytime. In the operating mode of the Contractor's equipment, the noise level exceeded the sanitary norm from 2 dBA to 6 dBA.



Figure 77 Location of measurement of noise and vibration in the villages of Novopavlovka and Voenno-Antonovka

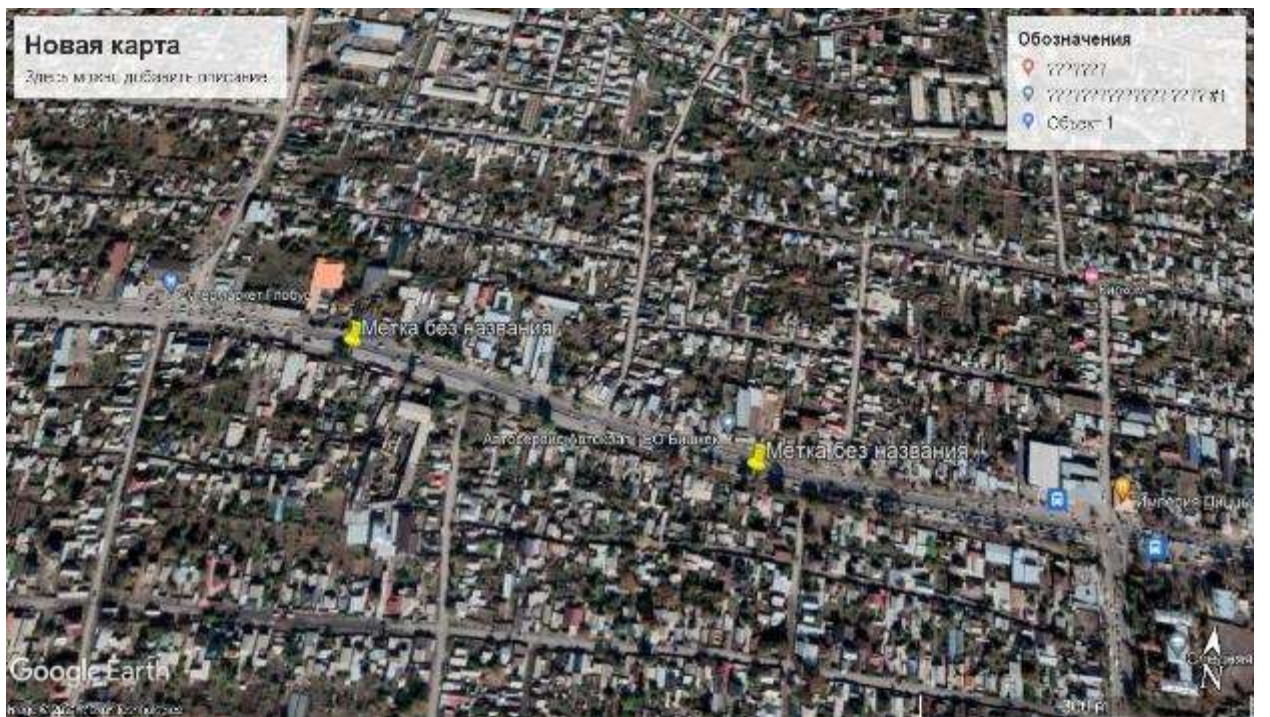


Figure 78 Location of noise and vibration level measurement in Novopavlovka village (km 9+060, km 9+200)



Figure 79 Location of measurement of noise and vibration level win the village of Sokuluk (km 26+360, km 26+820).



Figure 80 Conducting noise and vibration monitoring.

189. Monitoring of background noise exposure levels was additionally carried out on November 29, 2021, by a specialist of the ProfiLab operational laboratory, and in the presence of the

Contractor's and Consultant's environmental experts. At the moment, the road construction works have been suspended. The measurements were conducted using the Ecophysics - 110A device.

190. 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.

191. 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".

192. Environmental conditions: temperature: 20C; humidity: 53%; atmospheric pressure: 686 mmHg. Sources of physical factors: traffic flow.

Table 21 Noise level measurement protocol

№	Location. Mode of operation.	Sound level (dBA)
	Novonikolaevka village, near the school 59+550km., south side of the road, time 10:50 Latitude: 4250'16; longitude:7355'19".	
1	Noise background level	65 actual
	Sadovoye village, near the school 37+460km., south side of the road, time 11:30 Latitude: 4250'5"; longitude: 739'31".	
2	Noise background level	68 actual
	Shopokov village near the school, 22+760km., south side of the road time 11:55 Latitude: 4251'5; longitude:7420'06".	
3	Noise background level	69 actual
	village of Voенnoantonovka near the mosque, south side of the road, time 12:15 Latitude: 4252'24; longitude:7425'45".	
4	Noise background level	66 actual
	Novopavlovka village 9.9km, near the school, north side of the road, time 12:40 Latitude: 4252'28; longitude:7428'43".	
5	Noise background level	71 actual

193. **Conclusion on the results of measurements:** at the time of measurements in the daytime, the background noise level arising from the movement of various types of traffic flows on road ranges from 65 to 71 dBa while the MPL is 75 dBa.



Figure 81 Location of noise level measurement in Novonikolaevka village, km 59+550



Figure 82 Location of noise level measurement in Sadovoye village, km 37+460



Figure 83 Location of noise level measurement in Shopokov km 22+760



Figure 84 Location of noise level measurement in the village of Voенно - Antonovka km 14+840



Figure 85 Location of noise level measurement in Novopavlovka village km 10+100



Figure 86 Monitoring of noise impact on November 29

194. **Conclusions:** When analyzing the results of monitoring the environmental components, it is necessary to take into account that the project road 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. Having analyzed the monitoring results, it can be noted that taking into account the data of background levels, construction works do not have a significant impact on the environment.

## **4.2 Trend.**

196. During the next 2022, it is planned to monitor the quality of atmospheric air, noise exposure and, if necessary, vibration in the areas where construction work will take place. The construction work on the bridges has been completed, so it is not necessary to monitor the quality of surface water. Also, at 7.4 km section. it is necessary to carry out regular laboratory monitoring of atmospheric air quality, noise and vibration.

## **4. Grievances of local residents.**

197. During the reporting period, 36 appeals were received from local residents. Basically, the appeals concerned the installation of parapets, the opening of additional junctions, new traffic lights, requests were received for the provision of conclusions on the boundaries of the project's impact on land plots, the installation of new pavilions. There were also requests from local governments to assist in solving various issues. All appeals were duly registered in the GRM Log and were considered in a timely manner There were no complaints related to environmental issues.

198. During the reporting period, all types of construction work were carried out within the framework of design decisions (without affecting households). All construction works are organized in such a way as to ensure uninterrupted traffic and movement of people.

199. As of December 31, 2021, no unforeseen project impacts on households have been registered.



Table 22 Appeals from the local residents received in the second half of 2021

No.	Date	Section	Name/Address	Complaint Category	Complaint Description	Resolution Description	Resolution	Date
1	02.07.2021	Section 2	Residents of the Sadovoe village, Moskovsky district	Road Upgrading	Request for the dismantling of parapets at the intersection of st. Shevchenko-st. Sovetskaya in the Sadovoe village	The substantiation of the refusal based on the requirements of road safety is given.	Rejected	05.07.2021
2	05.07.2021	Section 2	Ibraimova K.E. Belovodskoe village	Road Upgrading	Request for dismantling of parapets in the center of the Belovodskoye village	The substantiation of the refusal based on the requirements of road safety is given.	Rejected	07.07.2021
3	12.07.2021	Section 1	Lebuza Khuse, Aleksandrovka village of Sokuluk district	others	Request for the issuance of technical specifications for the improvement of the territory	The response is that it is not within the consultant's responsibility to provide technical specifications.	Rejected	14.07.2021
4	12.07.2021	Section 2	Sulaimanov N. Belovodskoe village, Moskovskiy district	Restriction or loss of access	Request for reinforcement of structures and extension of ditches crossing	A response was provided about the work performed in accordance with the design	Rejected	21.07.2021
5	15.07.2021	Section 2	Damir uulu Rustam, Belovodskoe village, Moskovskiy district	Others	Request for the issuance of technical specifications for the installation of an advertising board at the intersection of Frunze - Kolkhoznaya streets	The response provided that it is not within the consultant's responsibility to provide technical specifications.	Rejected	23.07.2021
6	26.07.2021	Section 2	Main Traffic Safety Directorate under Ministry of Internal Affairs of the Kyrgyz Republic	HSE Concerns	Statement of the Main Traffic Safety Directorate of the Ministry of Internal Affairs of the Kyrgyz Republic on shortcomings in ensuring security during the period of construction work	The response was provided that the Subcontractors have started work on ensuring safety and all the activities provided by the design will be completed on time	Accepted	04.08.2021

No.	Date	Section	Name/Address	Complaint Category	Complaint Description	Resolution Description	Resolution	Date
7	02.08.2021	Section 3	Novopavlovskiy ayil okmotu	Road Upgrading	Request for the installation of pipes at 12 intersections of streets under the constructed project road	The response was provided that the design provides only 2 pipes in accordance with the technical conditions from 2015. The rest must be installed at the expense of the Novopavlovskiy ayil okmotu	Rejected	18.08.2021
8	03.08.2021	Section 1	Urmanbetov E. Resident of Novonikolaevka village, 1 Engels street Jayilskiy district	Road Upgrading	Request to change the location of a bus stop	Response was provided that the bus stop will be constructed in accordance with the original design at km 60 + 955	Rejected	06.08.2021
9	04.08.2021	Section 3	Chui regional branch of OJSC "Kyrgyztelecom"	Road Upgrading	Request for relocation of communication lines outside the construction site	The response was provided that the specified sections of communication lines were included in the scope of work	Accepted	13.08.2021
10	11.08.2021	Section 2	B. Asamatov, resident of Novopavlovka village, Sokuluk district	Road Upgrading	Request to revise the location of bus stop at km 9 + 300 RHS	The answer was provided that this project bus stop at km 9 + 000 was redesigned, by reducing the length to 13 meters and relocation to 6 meters towards the city of Kara-Balta. Thus, minimizing the inconvenience for entrance/exit to the production yard of citizen B.K.Asamatov. There are no alternative options for construction bus stop in this place.	Accepted	13.08.2021
11	16.08.2021	Section 2	Maatkabylova A. resident of Petrovka village, 220 Centralnaya st., Moskovskiy district	Road Upgrading	Request for dismantling the project bus stop at km 47 + 442 LHS and clearing debris at the site	The answer was provided that according to the original design the bus stop was located at km 47 + 460. However, in 2019, on the basis of an appeal from A.A. Maatkabylova, the Design Author redesigned the bus stop, moving towards the city of Bishkek to 18 meters at km 47 + 442. Also, there is no gravel and sand debris on site. Entry and exit to the private utility yard are provided.	Rejected	16.08.2021

No.	Date	Section	Name/Address	Complaint Category	Complaint Description	Resolution Description	Resolution	Date
12	16.08.2021	Section 1	Black Carat LLC Petrovka village, Moskovsky district	Road Upgrading	Request for the arrangement of junction at KM51 + 640 of the Bishkek-Kara-Balta road for entrance and exit to the Petroleum gas station	Response was provided that the opening of a new additional junction at the project site is not possible, since the number of conflict points in this place will increase, which can lead to an accident with grave consequences. Safe entry and exit of vehicles should be carried out from the side of Kolkhoznaya Street in the village of Petrovka.	Rejected	26.08.2021
13	17.08.2021	Section 1	Moskovskiy District State Administration	Road Upgrading	Request for permission to install decorative steles "Moskovsky District" and in villages of Aleksandrovka, Sadovoe, Belovodskoe, and Petrovka.	Response was provided that it is possible to approve the installation of decorative steles after clarifying their exact location	Accepted	18.08.2021
14	18.08.2021	Section 3	Novopavlovskiy ayil okmotu of Sokuluk district on the basis of an application from residents	Road Upgrading	Request for information about relocation of bus stop in the Novopavlovka village, at the intersection of Frunze and Zavodskaya streets	Response was provided that, on the recommendation of Design Author, bus stop in the Novopavlovka village, at the intersection of Zavodskaya - Frunze streets, will be constructed in the old place at km 8 + 560	Accepted	19.08.2021
15	18.08.2021	Section 1	B. Alymbekov, resident of Shopokov, Sokuluk district	Road Upgrading	Request for opening parapets to arrange pedestrian crossing at Mashinostroitel'naya street in the Shopokov city	Response was provided that 1. At the junction of Lenina stret (Shopokov city) to the project road "Bishkek - Kara-Balta "(km22 + 537), it was planned to construct a new traffic light with road markings and installation of road signs " Pedestrian crossing". 2. At the intersection of Futbolnaya street (Shopokov city) with the "Bishkek - Kara-Balta " project road (km21 + 949), the construction of an equipped pedestrian	Accepted	26.08.2021
16	19.08.2021	Section 1	Mayor's office of the Shopokov	Road Upgrading	Request for installation of traffic lights at intersections of Futbolnaya and Lenina street			

No.	Date	Section	Name/Address	Complaint Category	Complaint Description	Resolution Description	Resolution	Date
			city, Sokuluk district			crossing with road markings and installation of road signs "Pedestrian crossing" were provided.		
17	23.08.2021	Section	Kyzyl-Tuu ayil okmotu of Sokuluk district	Road Upgrading	Request for the installation of a traffic light at the junction of Bishkek-Kara-Balta road at km 19 + 251 (turn to Malovodnoe village)	Response was provided that the construction of a new traffic light at this junction is not possible, since it was not provided in the design. In order to ensure road safety at this junction, in accordance with the approved design and requirements of SNiP, construction of an equipped pedestrian crossing with the application of "Zebra" type road markings and installation of road signs "Pedestrian crossing" were provided.	Rejected	26.08.2021
18	02.09.2021	Section 1	Alexandrovsky ayil okmotu of Moskovskiy district	Road Upgrading	Request about construction of parking area in front of cafe at 103 Frunze Street, in the village of Alexandrovka	After site visit, the engineers provided explanations and an oral answer that on this issue they need to contact the architecture of the Moscovskiy district	Rejected and forwarded	08.09.2021
19	06.09.2021	Section 2	ayil okmotu named after Krupskoy of Sokuluk district	Road Upgrading	Request for assistance in continuing the asphaltting of junction on Belinsky Street by 20 meters.	Response was provided that the IPIG approves the continuation the asphaltting of the junction at Belinsky Street by 20 meters.	Accepted	07.09.2021
20	09.09.2021	Section 2	Kim V.A. Belovodskoe village, str. Frunze 153	Damage to infrastructure/assets	Request for the restoration of paving stones in front of the ABSOLUTE store	Response was provided that the relevant instruction was sent to the Contractor. The Engineer's specialists will monitor the performance of the work.	Accepted	13.09.2021
21	09.09.2021	Section 1	N. Dzhienbaev Gavrilovka village, Frunze str.	Road Upgrading	Request to install concrete slabs on constructed ditches in front of private households in the village of Gavrilovka	Response was provided that work on the installation of concrete slabs at this site will be carried out in the near future, also sidewalk and curb will also be constructed. Within a month, this site will be brought into proper condition.	Accepted	29.09.2021

No.	Date	Section	Name/Address	Complaint Category	Complaint Description	Resolution Description	Resolution	Date
22	10.09.2021	Section 2	Z. Sagynov Frunze str. No. 178a Sokuluk village, km 27+137	Damage to infrastructure/assets	Request to clarify the location of the land plot on Frunze Street No. 178, in the village of Sokuluk km 27+137 and the boundaries of the project impact	The answer is provided that this object is located 18.0 meters from the axis of the existing road and does not fall under the project impact.	Accepted	17.09.2021
23	13.09.2021	Section 3	BISHKEKVODOK ANAL Management	Damage to infrastructure/assets	Request for clarification of information about the project and boundaries of project impact	Information on the project was provided and the letter was forwarded to the Contractor.	Accepted	17.09.2021
24	21.09.2021	Section 1	Z. Ryskulov Frunze str. No. 75a, Romanovka village	Damage to infrastructure/assets	Request to clarify the location of a light structure along Frunze Street No. 75a in the village of Romanovka km 23+800 and the boundaries of the project impact	Response is provided that this object is located 17.3 meters from the axis of the existing road and does not fall under the project impact.	Accepted	29.09.2021
25	13.10.2021	Section 2	Sokuluk aiyl okmotu Sokuluksky district	Road upgrading	Request to install an additional traffic light and apply road markings at the intersection of Frunze and Kainazarova streets	The answer was provided that during the implementation of the project, on Frunze Street – Kainazarov Street, an opening in the central parapet fence was organized for pedestrians to cross. The appropriate road markings will be applied soon.  at the design stage, the location of the traffic lights was approved by the relevant authorities, including local authorities. At the same time, the project does not provide for the installation of a traffic light at this intersection.	Partially accepted	14.10.2021
26	13.10.2021	Section 3	LLC "Sky Mobile"	Loss of access	Request to check the location of sidewalks and provide access to fiber-optic communication wells.	The answer was given that a joint survey is being conducted and access to the fiber-optic communication wells will be provided.	accepted	14.10.2021

No.	Date	Section	Name/Address	Complaint Category	Complaint Description	Resolution Description	Resolution	Date
27	13.10.2021	Section 2	Sokuluk ayil okmotu Sokuluksky district	others	Request for assistance in filling 4 km of streets of the Ayyl aimag from the borrow pit that is being developed by the Contractor.	A response was provided that the request was forwarded to the contractor.  The contractor will provide assistance to Sokuluk ayil Okmoty in October-November 2021.	accepted	16.10.2021
28	25.10.2021	Section 2	"Zhibek Zholu" Market, Sokuluk village, Frunze str., 15. Sokuluk ayil okmotu Sokuluksky district	Loss of access	Request regarding the provision of junction to the territory of the market in Sokuluk village, Frunze str., 15.	The answer is provided that the junction to the market in the territory of Sokuluk village, Frunze street 15 is provided	accepted	26.10.2021
29	19.11.2021	Section 3	Osmanova L. Sokuluksky district, Novopavlovka village, 223 Sovetskaya str.	Damage to infrastructure/ assets	Request to check the location of the land plot in the village of Voенno-Antonovka - Frunze Street - Toktogul Street and determining the boundaries of the project impact	Response is provided that this object is located 18.0 meters from the axis of the existing road and does not fall under the Bishkek -Kara-Balta project impact.	accepted	24.11.2021
30	25.11.2021	Section 1	B. Alymbekov Novonikolaevka village, Zhayyl district	Road Upgrading	Request about lack of constructed sidewalks at km 59+438 to 59+500	The response was provided that on the right side of the Bishkek-Kara-Balta road km 59+500, the project sidewalk was canceled by the design, since the territory for construction is privately owned. The owner of the land plot is categorically against the construction of a sidewalk on his private territory. In fact, there are no obstacles for pedestrians to pass through its private territory. Upon completion of the road construction, the owner of this land plot plans to improve his own territory and create	accepted	03.12.2021

No.	Date	Section	Name/Address	Complaint Category	Complaint Description	Resolution Description	Resolution	Date
						the most comfortable conditions for pedestrians.		
31	06.12.2021	Section 2	B. Alymbekov G.Shopokovov city Sokuluksky district	Road Upgrading	Request for a parking area in the center of Sokuluk village, at km 13+450 to 13+550	The response was provided that according to the design sidewalks and ditches on the specified site should be constructed.	rejected	08.12.2021
32	06.12.2021	Section 3	Voенно- Antonovsky aiyl okmotuu Sokuluksky district	Road Upgrading	Request to relocate bus stop at Frunze str. - Gorky str. in the Voенно- Antonovka village and install road signs	The response was provided that the road signs will be installed according to the design and the relocation of the bus stop is not provided for by the design	Partially accepted	27.12.2021
33	09.12.2021	Section 1	R.Sh. Arliza Alexandrovka village Sokuluksky district	Loss of access	Appeal regarding the arrangement of access roads to a commercial facility at km 33+220	The response was sent that the design provides a bus stop at km 33+220. At the moment, the work on the construction of the bus stop has not been completed. Access roads to the commercial facility will be arranged upon completion of the construction of the bus stop.	accepted	15.12.2021
34	10.12.2021	Section 2	N.B. Reznikova Sokuluk village Sokuluksky district	Loss of access	Appeal regarding the arrangement of access roads to a commercial facility at km 27+590	The response was provided that at km 27 + 590 on the left side, r/c slabs will be installed on r/c dithces in the amount of 4 pieces, thereby providing passage to this object.	accepted	15.12.2021
35	20.12.2021	Section 2	B. Alymbekov G.Shopokovov city Sokuluksky district	Road Upgrading	Request for the installation of a parking lot, sidewalks and lighting poles in the Sokuluk village	Response sent that it is already provided in the design	accepted	27.12.2021
36	20.12.2029	Section 3	A.Kurmanaliev resident of Bishkek	Road Upgrading	Request to paint the markings in pedestrian crossings in the Voенно-Antonovka and Novopavlovka villages			

#### 4.4 Summary of project outcome

200. 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 PIU instructs the Contractor to take immediate action.

201. 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. For example, 3 of 4 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;
- Materials production plant (bitumen leakage, dusting at a stone crusher)
- Disposal of old asphalt.

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

203. 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.

204. 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.

205. 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. During the reporting period, there were problems with laboratory monitoring of atmospheric air quality on the Bishkek-Kara-Balta project road. The reason was that in May 2021, the reorganization of environmental authorities took place. This laboratory became part of the Department of Environmental Monitoring under the State Committee for Ecology and Climate of the Kyrgyz Republic. During the second half of 2021, the Contractor repeatedly applied to the laboratory with a request to specify the conditions for concluding a contract for laboratory monitoring of atmospheric air quality. In response, the Contractor was informed that the chairman of the State Committee on Ecology and Climate of the laboratory is prohibited from conducting any research and it is necessary to wait. Then in September, the Contractor was informed that the laboratory was allowed to work with road projects. The contractor immediately sent a letter to the Environmental Monitoring Department, but received a response that the terms of the contract had changed. After meeting all the requirements, a contract was signed to monitor the quality of atmospheric air and only on November 16 this monitoring was carried out. Unfortunately, by this time the construction work was stopped and the results of background indicators of atmospheric air quality were obtained.



206. 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.

207. Considering that no construction work was carried out on the rivers, as well as the lack of water in the rivers, monitoring of surface water quality was not conducted.

**4.5 Materials/Recourses utilization.**

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

**4.6 Waste management.**

209. 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.**

210. During construction work, waste of asphalt, unsuitable soil, reinforced concrete waste is accumulated 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. During the reporting period the removed old asphalt on 15.9 km – 61 km section was mainly taken to dumps. For the storage of the removed asphalt, places were allocated in the village of Romanovka and Sokuluk.



Figure 87 Transportation of removed asphalt to Sadovoye and Novopavlovka villages.



Figure 88 Dumping of old asphalt on designated areas in the Sokuluk village



Figure 89 Storage of unsuitable soil for further use in the village of Romanovka.

211. With the start of road works at 7.4 km section, the local residents and representatives of aiyl okmotu, represented by the heads of Novopavlovsky and Voенно-Antonovka aiyl okmotu, sent a letter about the removal of old asphalt on the territory of Aiyl aimags, explaining that they needed the removed old asphalt for patching, as well as for filling the internal and field roads in the villages of Novopavlovka and Voенно-Antonovka. A lot of work has been done to improve the internal roads of residential areas "Altyn Ordo", "Ata Zhurt", "Kelechek" and "Dacha" in the village of Voенно - Antonovka". 1,900 m<sup>3</sup> of old asphalt was backfilled. The total length of the backfilled streets is 3700 m.

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



Figure 90 Dumping of old asphalt on internal roads of Novopavlovka village.

212. The problem of crushing old asphalt remains unresolved. After laying the old asphalt on secondary roads, the contractor compacts it with its equipment. The consultant will continue to monitor the implementation of this work. There were no complaints from the local residents regarding the disposal of the removed asphalt.

213. Soil unsuitable for road construction is also taken to areas provided by local authorities.



Figure 91 Dumping of soil unsuitable for road construction in the Voенно-Antonovka village.

214. Initially unsuitable soil in the Voенно-Antonovka village was stored in dumps. At the site for soil storage, the top layer was removed and stored. Then the unsuitable soil was taken out to the prepared site in the ravine. After completion of all works, the top layer will be evenly spreaded on the surface of dumps.



Figure 92. An area for storing unsuitable soil after removing the top layer. Stored soil.



Figure 93 Transportation of unsuitable soil to a prepared area.



Figure 94 An area for storing unsuitable soil after transportation and levelling the unsuitable soil.

215. During the construction work on the project road km 8.5 – 61 km, 18,500 m<sup>3</sup> of old asphalt was removed. 38628.51 m<sup>3</sup> of unsuitable soil was transported; as well as 480 m<sup>3</sup> of construction waste in the form of reinforced concrete, etc.

216. The requirement of crushing the old asphalt to the size of 20x20 by the contractor is not fulfilled. Taking into account that there is no equipment in the villages for leveling large pieces of old asphalt, the Contractor assumed the obligation to crush large pieces of old asphalt. The contractor crushes large pieces of old asphalt and levels with its own equipment. The specialist of the Contractor Koichumanov Adilet is responsible for the disposal of old asphalt at 7.4 km section.

217. Asphalt was not transported to swampy areas. A letter was received from the ADB stating that in order to avoid harm to the health of local residents, it is prohibited to transfer old asphalt to local residents for their own use. This requirement has been met and will be monitored in the subsequent construction season.

218. Soil unsuitable for road construction is also transported to the areas provided by the local authorities.



Figure 95 Storage of unsuitable soil for further use.

219. In the center of the Sokuluk village, construction waste in large quantities remained uncollected near the underpass under construction.



Figure 96. Construction waste near the underpass under construction in the center of the Sokuluk village.

220. Also, construction waste has not been removed, and the territory has not been levelled near the underpass located opposite the school in the Novonikolaevka village.



Figure 97 Construction waste near the underpass located opposite the school in the Novonikolaevka village.

221. It is difficult for schoolchildren to descend to this crossing, especially in conditions of ice, which can cause a fall and injury. A letter was sent to the contractor about the elimination of these violations. In due time, the waste was removed, the territory was levelled.

#### 4.6.2 Production waste.

222. Production waste is also formed 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. 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, and 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 98 The area occupied by empty barrels before and after the removal of barrels.

223. 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.



Figure 99 An area occupied by old car tires before and after removal.

#### 4.6.3 Household waste.

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

225. 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.

226. Solid household waste is collected unsorted in garbage containers with a capacity of 1m<sup>3</sup> and is taken out weekly by Sokuluk and Moscovskiy utility plants, with which service contracts have been concluded. During the reporting period, 185 containers of solid waste were cleaned, about 185 m<sup>3</sup> of solid waste was removed. Liquid household wastewater accumulates in septic tanks, is pumped into tankers with a capacity of 3.5 m<sup>3</sup> belonging to district waste transportation companies, and is transported to district wastewater treatment plants. During the reporting period, 142 trips of the cesspool age truck were made, 497 m<sup>3</sup> 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	July	25 garbage bins, 20 trips of cesspool age truck	27000
Belovodsk	July	14 garbage bins	4620
As per agreement		10 trips of cesspool age truck	7000
		<b>Total : 39 garbage bins , 30 trips of cesspool age truck</b>	<b>38620</b>
Sokuluk	August	19 garbage bins, 20 trips of cesspool age truck	24600
Belovodsk	August	12 garbage bins	3960
		<b>Total : 31 garbage bins, 20 trips of cesspool age truck</b>	<b>28560</b>
Sokuluk	September	28 garbage bins, 23 trips of cesspool age truck	33550
Belovodsk	September	14 garbage bins	4620
		<b>Total : 42 garbage bins , 23 trips of cesspool age truck</b>	<b>38170</b>

Сокулук	October	17 garbage bins, 24 trips of cesspool age truck	28900
Belovodsk As per agreement	October	10 rips of cesspool age truck	7000
		<b>Total : 17 garbage bins, 34 trips of cesspool age truck</b>	<b>35900</b>
Sokuluk	November	20 garbage bins, 14 trips of cesspool age truck	21900
Belovodsk	November	10 garbage bins	2970
		<b>Total : 30 garbage bins, 14 trips of cesspool age truck</b>	<b>24870</b>
Sokuluk	December	26 garbage bins, 21 trips of cesspool age truck 30850	30850
		<b>Total: 26 garbage bins, 21 trips of cesspool age truck</b>	<b>30850</b>
		<b>Total: 185 garbage bins, 142 trips of cesspool age truck</b>	<b>196970</b>

## 4.7 Health and Safety.

### 4.7.1 Workers health and safety.

227. In March 2019, an occupational 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".

228. 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.

229. In April 2021, OHS 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 for a long time the specialist was not hired for work.

230. The contractor worked with violation. There was no introductory briefing for newly hired workers.

231. The construction supervision consultant regularly notes safety precaution violations, especially when working at height, laying dithces. 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 ditches.

232. 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.

233. At the end of September, the specialist's CV was submitted by the Contractor to the Consultant for consideration. After the interview, it was proposed to accept this specialist with a probationary period. In October, the specialist Muktar uulu Aziz started working.

234. With the arrival of this specialist, training, instruction, and knowledge testing of the company's employees began to be regularly carried out. Inspection visits were carried out on an ongoing basis.



The detected violations were eliminated on the spot. The situation with the constant and timely provision of workers with work clothes and protective means was monitored.

235. The introductory briefing for the newly hired employees was held for 331 workers. The repeated briefing is carried out every 3 months. In order to exclude injuries with workers, seminars were held at the workplace. There no accidents recorded in the production place with the participation of our workers during the half-year.



Figure 100 Logs for registration of briefing conducted at the workplace

236. During the reporting period, several joint visits were conducted by a local environmental specialist of Consultant with a Contractor's OHS specialist. The briefing was conducted at the construction sites.







Figure 101 Briefings and seminars at the workplaces.

237. In order to comply with safety requirements, workers have been issued respiratory protection means (masks). However, there are cases when workers show carelessness when using protective means, especially when wearing protective helmets. The contractor's OHS specialist is constantly monitoring and talking to employees about the need to use helmets.

238. But, despite the regular training of workers, the construction supervision consultant noted non-compliance with safety regulations, especially during work at height and installation of culvert ditches. Also, there were noted non-compliances when moving freights by crane. The workers were in the crane operation area without personal protective means. Cases of non-compliance with safety requirements were noted both at the site for the manufacture of reinforced concrete structures and during installation of culvert ditches. Verbal and written warnings were repeatedly given to the Contractor, but violations continue.

239. The contractor was recommended to regularly check the workers knowledge of the requirements of occupational safety and health and, if necessary, to conduct repeat training on OHS.

#### **4.7.2 Community health and safety.**

240. Newly arrived specialists and workers of the Contractor provided a negative PCR test when entering Kyrgyzstan. All foreign specialists and workers were vaccinated.

241. Based on the recommendations of the Republican Headquarters for the Combat against COVID-19, the Consultant recommended that meetings with a large presence of people be limited as much as possible. If possible, the discussion was held "online" or via electronic correspondence.

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. The local staff of the consultant and contractor are provided with the necessary means: protective masks, sanitizers. Constant cleaning and disinfection of the office premises was carried out.

244. A health and safety specialist conducted regular instruction before the start of the shift and at lunchtime for employees with special attention to COVID-19, including cough etiquette, hand hygiene and landing measures.

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

246. All Chinese specialists have been vaccinated. Currently, several types of vaccines have been imported to Kyrgyzstan. Everyone will be able to get vaccinated.

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

248. During the reporting period, there were no problems with the health and safety of the Contractor's specialists and workers. There were cases of positive COVID-19 among the Contractor's workers, but since all the workers were vaccinated, the disease passed in a mild form.



Figure 102 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:

249. 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, and underpasses are carried out. There is also a constant monitoring of the

condition of the relevant road signs, road markings, fences installed to fence work sites and at the places of oncoming traffic.

250. 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. 18 traffic lights have been installed. The contractor carried out work on the replacement of non-standard and worn-out road signs. 282 road signs were installed. Roadway markings (main lines and pedestrian crossings) were also applied.

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, there were no accidents recorded due to the fault of the Contractor or construction works. On the part of the Consultant, the situation is constantly monitored and, if non-compliances are found, a written notification is sent to the Contractor with a demand for immediate elimination. In order to ensure the safety of pedestrians on the road, especially schoolchildren, the design provides for the repair of 4 existing and the construction of 6 new underpasses. Underpasses are the safest option for pedestrian traffic. The adult population and schoolchildren are currently crossing the road using underpass. Currently, work has begun on the completion of the construction of underpasses. Construction work on 7 underpasses has been completed, 3 underpasses are under completion.



Figure 103 Local people using underpasses.

## **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 issues:

- 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 ditches;
- 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 and in March - April. But by the scheduled time, the Contractor had not completed construction of sidewalks, culvert ditches and replacement of utilities on the site planned for planting seedlings. To date, about 3145 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. To date, there are practically no places left on the project road for planting new seedlings. Local ayil okmoty suggested places for planting seedlings located at a distance of 1-2 km from the project road. It was two places near water intakes in the Poltavka village. This is the area of the rural stadium in the village of Sadovoe. Watering of seedlings will be carried out by residents of local ayil okmoty. Also, some ayil okmotus and the mayor's office of Kara-Balta receive requests to provide them with seedlings for planting in organized park areas that are located on their territory, while they will undertake further work on planting and care.

## **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 transported for backfilling rural streets at 7.4 km section. Unsuitable soil was taken to dumps for the further use.

260. The contractor does not monitor the already constructed structures. Previously constructed side ditches are overgrown with grass and covered with construction waste. According to the explanation of the contractor, the construction and installation of the side ditches has not been completed; upon completion of the construction and installation of the side ditches, it will be cleaned and, if necessary, additional levelling of the area will be carried out. In October 2021, the cleaning of ditches from stones, debris and grass was started

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, planting seedlings instead of cut down trees remains a problem. The contractor underestimates the importance of this activity. Currently, 3 145 seedlings have been planted, while the contractor will have to accelerate the work on planting seedlings in the spring of 2022 (approximately in March - April 2022). To date, there are practically no places left on the project road for planting new seedlings. Local ayil okmoty suggested places for planting seedlings located at a distance of 1-2 km from the project road. It was two places near water intakes in the Poltavka village. This is the area of the rural stadium in the village of Sadovoe. Watering of seedlings will be carried out by residents of local ayil okmotu. It is necessary to start planting seedlings on 7.4 km section.

263. In April 2021, a health and safety specialist dismissed from his job. In the reporting period, the Contractor worked for 3 months without this specialist. There was no introductory briefing for newly hired employees. The Consultant repeatedly verbally and in writing warned the Contractor about the need to hire a new specialist. In October 2021, a new health and safety specialist was hired.

264. Bitumen from metal barrels on the asphalt plant was fully used. Bitumen leaks were not noted. Empty barrels were removed from the production site. The stone crushing plant worked mainly on moistened material, so dusting was almost not observed.

### **7.2 Recommendations.**

265. 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.



266. In the spring of 2022, a large number of seedlings will be planted, so the Contractor needs to be more responsible about planting and caring for seedlings. It will be necessary to allocate 2 watering machines, which will be involved only for watering seedlings.

267. The consultant, together with the PIU, will consider a proposal from local authorities, the Mayor's office of Kara-Balta, to provide them with tree seedlings that will be planted in park areas, while they will provide planting and further watering of trees themselves.

268. Considering that in 2022 the main construction works will be carried out on 7.4 km section, which is located on the territory of densely populated villages, with a large flow of vehicles, in order to avoid complaints from the local population, it is necessary to strengthen dust control measures (water-sprinkling).

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

270. Before the end of the defect's notification period period in 2022, it is necessary to complete all reclamation work on borrow pits, that will not be used and carry out the procedure of handing over to the district commission.

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

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