

# Semi-annual Environmental Monitoring Report

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Loan number: ADB Loan 3056-KGZ (SF)

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July – December 2024

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:** Project Implementation Unit of the Ministry of Transport and Communications of the Kyrgyz Republic and the Asian Development Bank.

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## Abbreviations

ADB	-	Asian Development Bank
CAREC	-	Organization of Central Asian Regional Economic Cooperation
CSC	-	Construction Supervision Consultant
EMP	-	Environmental Management Plan
PIU	-	Project Implementation Unit
Km	-	Kilometer
KR	-	Kyrgyz Republic
MPC	-	Maximum permissible concentration
MPL	-	Maximum permissible level
MOTC KR	-	Ministry of Transport and Communications of the Kyrgyz Republic
MOF KR	-	Ministry of Finance of the Kyrgyz Republic
MNRETS	-	Ministry of Natural Resources, Ecology and Technical Supervision of the Kyrgyz Republic
DDPTSSES	-	Department of Disease Prevention and State Sanitary-Epidemiological Surveillance of the Ministry of Health of the Kyrgyz Republic
TS	-	Technical Specification
CEMWP	-	Construction Environmental Management Work Plan
AP	-	Asphalt Plant
SCP	-	Stone crushing plant
CBP	-	Concrete batch plant
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

## 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 (Bishkek-Osh Road) Improvement Project, Phase 4.
2. The report is the environmental monitoring report covering period from July to December 2024, under the ongoing CAREC Corridor 3 Improvement Project (Bishkek-Osh Road), Phase 4, and provides outcomes of the environmental monitoring undertaken by the MOTC PIU.
3. The road rehabilitation work included the reconstruction of six bridges, replacement of culverts, construction of underground crossings, removal of old asphalt, preparation of new road lanes in the eastern and western directions, construction of sidewalks, installation of culverts, planting of trees, as well as operation of an asphalt and concrete plant, and a stone crushing plant for processing inert materials.
4. The report is the **fifteenth** semi-annual environmental monitoring report. The results are based on site visits conducted by the PIU's environmental specialist from July to December 2024, wherein the main focus was on monitoring over compliance with the environmental and safety requirements during the road construction the final stage, seedling planting, and traffic management.

### 1.2 Headline Information.

5. The Bishkek-Osh Road represents about one-fourth of the 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 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.
6. The CAREC Corridor 3 Improvement project (Bishkek-Osh Road), Phase 4, (Bishkek-Kara-Balta section, 52.5 km long) aims to improve the connectivity and market access in the Kyrgyz Republic. The project's output 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 of the road impact to the environment in terms of noise impact from passing traffic by upgrading asphalt pavement.
7. In 2016 during the bidding process, a China Railway No.5 company was selected for the implementation of project component 1. On March 28, 2017, a Civil Works Contract was signed between the Ministry of Transport and Roads of the Kyrgyz Republic and China Railway No.5. The total contract price is 70,239,899.29 USD. In the course of extensive contract negotiations, the working 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, the Consultant issued a Notification for Commencement of Works. The construction works commenced on 3 April 2017.
8. The cost of the contract between the MoTR of the Kyrgyz Republic and General Contractor China Railway No.5 was 70 239 899,29 US Dollars, i.e., there was spare funds up to 22M USD.

In 2019, the saved funds were planned to use for construction of the remaining road section (8.5 km – 15.9km). By the method of direct contract award, the contract was awarded to China Railway No. 5. Notification for Commencement of Works was issued on November 19, 2020.

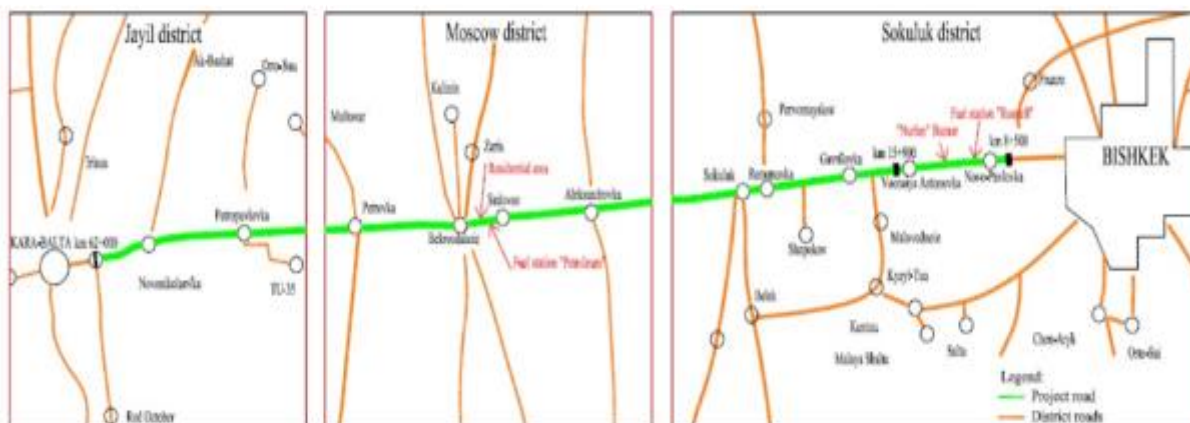
9. On May 31, 2020, a contract with the consulting company Eptisa was completed. Following the bidding process, Temelsu International Engineering Services INC.(Turkey); Desh Upodesh Ltd. (Bangladesh) and e. Gen Consultants Ltd. (Bangladesh) new Joint Venture consulting company was selected. New Consultant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

10. The cost of the contract between the MOTC of the Kyrgyz Republic and General Contractor China Railway No.5 was 70,24 US Dollars, i.e., there was spare funds up to 22M USD. In 2019, the saved funds were planned to use for construction of the remaining road section (8.5 km – 15.9km). 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.

11. In December 2022, all construction works on the project section were completed. On 15 February 2023, the Contractor was issued a certificate of completion of the works and from that moment the defect period began, which has expired on 15 February 2024. At the time of preparation of the report, the Contractor was continuing partial maintenance of the project section to prepare it for “handing over” to the Ministry of Transport and Communications of the Kyrgyz Republic.

12. The Post-Construction Environmental Audit Reports have been developed for both sections of the project road and been disclosed as annexes to SAEMRs for past periods.

13. The areas used for borrow pits, waste dumps and the location of the contractor's camp were reclaimed and handed over to local authorities.



**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 main design. 8.5 km - 61 km section of the Bishkek Kara-Balta project road.**

14. The project improved connectivity between north and south in the Kyrgyz Republic. The project's output is efficient movement of freight and passenger traffic along the Bishkek-Osh Road. According to the classification of the ADB Safeguard Policy Statement, the project was 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.

15. The project provides for the rehabilitation of 52.5 km of the Bishkek-Osh Road. The project site is located between Bishkek and Kara-Balta cities and between 8.5 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.

16. 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.

17. The road reconstruction should meet the laws and legislation of the Kyrgyz Republic. This rehabilitation 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.

18. In order to improve drainage systems, the work includes reconstruction and replacement of majority of degraded culvert system, and addition of new cross-drainage structures. Existing bridges were totally replaced, and it will be constructed more than 64 km of sidewalks and six underpasses.

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

20. The environmental impact included:

- noise impact, as well as vibration, which is particularly important within localities near the Project Road and in the areas where sensitive receptors 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 from bridge rehabilitation works;
- Impact of asphalt production plants and aggregates crushing plants;
- Impact of Contractor's workers camps.



21. According to the Technical specifications, the road pavement was designed for an initial design life of 10 years with structural overlay options for 15 and 20 years of designed operation life.

## 2.2 Project Contracts and Management.

**Table 1. Project Contracts and Management**

Project		Central Asia Regional Corridor 3 (Bishkek-Osh Road) Improvement Project Phase 4
Contractor	:	China Railway No.5 for Component 1 implementation
Road Section:	:	15.9 km – 61 km, the overall length is 45.1 8.5 km – 15.9 km, the overall length is 7.4
Donor:		Asian Development Bank.
Contract Sign Date		28/03/2017 – 45.1 km section 20/07/2020 – 7.4 km section
Executive Agency	:	Ministry Transport and Communications of the Kyrgyz Republic
Notice to Commence		03/04/2017– 45.1 km section 19/11/2020 – 7.4 km section
Completion Date	:	45.1 km section: 18 March, 2020; October 16, 2020 (VO 9); 16 July, 2021 (VO 11), 18 <sup>th</sup> November 2021 (VO 17) 7.4 km section: 19 November 2022
Time for Completion – Days	:	45.1 km section: 1080 days, 1292 days (VO 9); 1565 days (VO 11) 1690 days (VO 17); 7.4 km section: - 730 days
Extension of Time – Days	:	45.1 km section: 212 (VO 9) + 273 (VO 11) + New: 125 (VO 17); 7.4 km section: none
Defect Liability Period – Days	:	365
Contract Amount	:	45.1 km section: USD 73 675 821.86; 7.4 km section: USD 17 763 085,66
Minimum Amount of Interim Payment USD (2%Addendum N0.1 dated on 30.04.2020)	:	USD 1,404,797.99
Total Amount of Advance Payment	:	15% Percentage of the Accepted Contract Amount
Amount of Performance Security	:	%20 of Accepted Contract Price
Amount of Third-Party Insurance	:	500,000 USD per occurrence with the number of occurrence unlimited
Periods for submission of insurance		28 days
a) evidence of Insurance		28 days
b) relevant policies		28 days
Delay damages for the Works		0.05% of the Accepted Contract Amount for each lot, which is in delay, per day in USD
Maximum amount of delay damages		10% of the Accepted Contract Amount
Repayment Amortization of Advance payment		22%
Limit of Retention Money		10% of Accepted Contract Amount

Project	Central Asia Regional Corridor 3 (Bishkek-Osh Road) Improvement Project Phase 4
Contractor	: China Railway No.5 for Component 1 implementation
Road Section:	: 15.9 km – 61 km, the overall length is 45.1 8.5 km – 15.9 km, the overall length is 7.4
Donor:	Asian Development Bank.
Contract Sign Date	28/03/2017 – 45.1 km section 20/07/2020 – 7.4 km section
Percentage of Retention	5% of Value of Works certified for Payment

**Table 2 List of Consultant's staff.**

<b>Consultant's staff</b>	
<b>International staff</b>	
<b>male</b>	
Highway Engineer/Team Leader	Kenan Kose
<b>National staff</b>	
<b>male</b>	
Quantity Surveyor	Turatbek Bokonbaev

The Consultant's National Environmental Specialist was discharged at the end of December 2023 due to the completion of the Consultant's National Environmental Specialist contributions.

### 2.2.1 Scope of work according to contract.

22. This section of the road was designed according to the standards of Technical Category 1-b (main urban arteries) with the following geometrical features:

- Number of lanes – 4 and 6
- Lane width – 3,5 - 3,75m;
- Carriageway width – 2x7,5;
- Shoulder width – 2.5m
- Carriageway shoulder breakpoint stabilization – 1.0m
- Axle design weight – 11,5 tones.

23. Along the entire project site, the two layers of the asphalt-concrete pavement (14 cm thick) laid, the upper one is 5 cm and the lower one is 9 cm thick, with underlying black crushed stone course (9 cm thick).

24. The Right of Way width is 50 - 60 meters. The design provides for construction and repair works in the following engineering structures and the communications as well as scope of the work.

#### **Pavement Construction Quantities at 45.1 km section:**

- 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 ditches – 77661 linear meters;
- Intersections and junctions – 477 units;
- The design provides for parking areas next to market places – 4 units;
- Auto pavilions – 115 units;
- Sidewalks – 81 285 meters;

#### **Road safety features:**

The design provides for repair of 4 existing underpasses and construction of 6 new underpasses;

- Marker posts – 515 units;
- Metallic foot-walk guard rails – 3980 linear m;
- Parapet fencing – 1158 units;
- Median fencing – 14 887 units;
- Retaining walls – 3669 linear m;
- Traffic lights – at 20 intersections.

#### **Reconstruction of the Utilities**

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

#### **Pavement Construction Quantities at 7.4 km section:**

- Tree planting - 1000 Ea.
- Hard shoulder - 10,00 km.
- Concrete border stone/curb BR100.30.18 - 5,54 km.
- Bridge instead of D2X1.5m pipe culvert - 1,00 km.
- Longitudinal ditches - 11,9 km.
- Sidewalk
  - clearance and subbase course - 11,7 km,
  - curbstone - 11,7 km,
  - pavement - 11,7 km.
- Bus Stop - 20 Ea.
- Junction base - 83 Ea.
- Junction binder course - 83 Ea.
- Junction wearing course - 83 Ea.
- Junction shoulder – 83 Ea.
- Traffic lights
  - Pole foundation - 9 pcs.
  - Pole installation - 9 pcs.
  - Lamp installation - 9 pcs.
  - Cable connection - 9 km.
- Road Signs - 384 pcs.
- Road marking - 14,80 km.
- Lights reflecting element of parapet - 7,40 km.
- Protection concrete slope of pipe culvert - 8,00 Ea.

### **Vegetation Planting**

25. At km15,9 – km61 section under forced cutting fell trees located in areas of roadbed widening, construction of sidewalks and drainage ditches. In total, 504 trees were cut down. As compensation measures, to restore the number of green spaces, planting of new seedlings was provided at ratio of 1:2 with 1000 seedlings planted.

26. Since there were no available locations at the project site suitable for planting new seedlings, some of the seedlings were distributed to local government bodies and schools upon their request. The seedlings were planted in park areas and schools, on sections of the road that are located on their territories, while further work on planting and caring for seedlings will be carried out by aiyl okmotu themselves.

### **Land Acquisition and Resettlement Plan.**

27. The project site passes along densely populated areas. A Resettlement Plan was drawn up, based on which compensation was paid to 54 affected persons at 7.4 km section, including owners and users of land, business owners, tenants and employees.

28. The following organizations are involved in the project implementation:

- *Ministry of Finance of the Kyrgyz Republic (MOF)* - the authorized state body responsible for coordinating actions with the ADB and other donors on external assistance issues.
- *Ministry of Transport and Communications of the Kyrgyz Republic (MOTC)*, responsible for the development of the transport sector, and is the Executing Agency (EA) of the project. MOTC is bearing responsibility for the planning, design, implementation and monitoring of the project. PIU works under the MOTC and implements the tasks assigned by MOTC.
- *Ministry of Natural Resources, Ecology and Technical Supervision of the Kyrgyz Republic (MNRETS)*, – ensuring environmental safety, strengthening environmental protection measures and reducing climate risks, it is 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 expertise;
  - issuance of environmental licenses;
  - environmental monitoring;
  - provision of environmental information services.
- *Department of Disease Prevention and State Sanitary and Epidemiological Surveillance of the Ministry of Health of the Kyrgyz Republic* - 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 3. Main Organizations involved in the project and related to the environmental safeguards.**

No	Organization Name	Role in project	Responsible person for the environmental safeguards	Contacts
1	ADB	Environment Specialist	Lizandro C. Racoma	<a href="mailto:lracoma@adb.org">lracoma@adb.org</a>
2	ADB's Kyrgyz Republic Resident Mission (KYRM)	Environment Specialist (Consultant)	Sultan Bakirov	<a href="mailto:sbakirov.consultant@adb.org">sbakirov.consultant@adb.org</a>
3	PIU under MOTC KR	Executive Agency	Asylbek Abdygulov	<a href="mailto:asylbeka@piumotc.kg">asylbeka@piumotc.kg</a>

29. At the end of December 2023, EHS specialists of the Contractor and Consultant were demobilized.

## 2.3 Project activities during the current reporting period.

**Table 4. Work progress. KM 8,5 – KM 15,9 section.**

Section	Activity list		Unit	Total Quantity	Completed quantity	Completion %
<b>Km 8+500 - Km 15+900</b>	1	Remedy of identified defects. Replacement of the wearing course	km			100,00%
	2	Cleaning draining ditches	km	7,4	7,4	100,00%
	3	Cleaning culverts	km	2	2	100,00%
	4	Clearing parapets from accumulated soil	km	7,4	7,4	100,00%
	5	Cleaning bus stops	pcs.	20	20	100,00%
	6	Completion of reclamation and handing over of 2 quarries (Ak-Suu 2 and Belek)	pcs		2	100,00%

### 2.3.1 Remedy of identified defects and road maintenance

30. At the end of June, the Contractor completed remedying defects at **km 15.9 to km 61 section (45.1km)**:

- Removal of deformed asphalt and laying new asphalt where ruts had formed;
- cleaning of drainage ditches located along the road;
- cleaning of culverts;
- cleaning of bus bay area;

31. No further work was carried out during the reporting period (July-September).

### 2.3.2 Borrow pits.

32. The contractor had completed the necessary reclamation work at the Belek and Ak-Suu 2 borrow pits and handed them over in accordance with the act of the district commission. Table 5 gives main detail information about borrow pits. All borrow pits used within the framework of this project have been reclaimed and transferred to local authorities. The temporary permit issued by the MOTC, in accordance with the request of the MOTC, has been cancelled by the Ministry of Natural Resources, Ecology and Technical Supervision of the Kyrgyz Republic.

**Table 5. Details of borrow pits at the time of preparation of the report.**

	No. of borrow pit	Km of turn to the borrow pit on the B-O Road	Approximate distance from the B-O Road to the borrow pit (km)	Volume, (m3)	Area (Ha)	Note
1	«Ak-Suu-2»	45+700	8,6	850 000	68,19	Reclaimed, handed over with a certificate 06.06.2024

2	«Belek»	КМ 27+000	8	180000	10,31	Reclaimed, handed over with a certificate 11.07.2024
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Copies of certificates are attached as annex (Annex 1. Reclamation and handed over Akt for «Ak-Suu-2», Annex 2. Reclamation and handed over Akt for «Belek»).



**Ak Suu2 borrow pit.**



**Belek borrow pit.**

**Figure 3. Ak-Suu 2 borrow pit and Belek borrow pit after reclamation.**

### **2.3.3 Plants.**

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

34. The following buildings and structures are located on 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, a platform for the the placement of garbage containers, concrete cesspit pit for sewage.





**Figure 4. Production site. Concrete mixing plant. Asphalt Bitumen Plant.**

35. The contractor carried out partial dismantling of structures at the plant. In December 2023, the Contractor entered into an additional agreement with the owner of the site (the owner of the site is the Ministry of Emergency Situations of the Kyrgyz Republic) to extend the lease and use further this site for the needs of the Contractor, outside the project activities.



**Figure 5. Dismantling of equipment on the production site.**

36. In the *Sokuluk Residential Camp* there were offices of the Contractor and the Consultant, as well as the living quarters for the specialists. At the beginning of 2024, the Contractor dismantled and removed repair shops and warehouses. All other premises, as well as toilets, septic tanks, showers were handed over to the MOTC's subdivision (State Enterprise "Kyrgyzavtozhol" MOTC KR), from which the Contractor rented this territory for the duration of the project.

#### **2.3.4 Tree management.**

37. On 7.4 km road section (km 8.5 - 15.9), in total 504 trees were cut down in 2020 - 2021. Planting of seedlings on 7.4 km section have been started in the spring of 2023. In the autumn of 2023, 1000 seedlings were planted, of which 300 seedlings were planted along the project section and 700 seedlings were transferred to the local government for planting in the territory of existing park areas and school grounds. The village councils will be caring for and water the seedlings themselves.

#### **2.4. Description of any project changes.**

38. Initially, the length of the project section was 52.5 km (km8.5 – km61). Under an agreement with ADB, it was decided to shorten the project road by 7.4 km and establish the beginning of the project road at km 15.9 instead of km 8.5 of the Bishkek-Osh Road. Thus, the total length of the project road according to the contract was 45.1 km, the decision to reduce the above section was taken before the tender for civil works. The Detailed Design was prepared by the previous consultant. Due to finance savings, in July 2018 MOTC and ADB agreed to add back the road section from km 8.5 to km 15.9. In 2020, the contract was awarded to the contractor China Railway no.5 by direct contract award method. An additional Supplementary Initial Environmental Examination (IEE) was conducted for this road section that has been disclosed at ADB website in November 2018. Notice for commencement of work on Section 2 was issued to the contractor on November 19, 2020.

39. Since at km 8.5 - km 15.9 section there is no place for installing street lighting poles on both sides of the road, the designer decided to install street lighting poles along the central axis between the central blocks of the parapets. This decision ensured more safety than if poles would install on the road sides. The foundation of the poles is concrete with anchor bolts. This solution is safer in terms of road safety.

40. Taking into account the cramped conditions, in order to ensure road safety at km 8 + 500 - 10 + 900, the safety zone on the central axis of the road was reduced from 4 meters to 2.6.

41. The side safety zone has been reduced from 1 meter to 0.5 meters on both sides of the road between km 8+500 - km 10+900. On this section, on both sides of the road, it was decided to remove the shoulders and install curbstones.

42. On km 8 + 500 - km 10 + 900 section due to the lack of place for relocation of water supply pipe, which was under the carriageway, the water pipe was relocated under the drainage ditches after agreement with local authorities and design author.

#### **2.5 Changes to project design and construction method.**

43. 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."



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

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

44. During the reporting period, regular visual monitoring was carried out by the environmental specialist of the MOTC Projects Implementation Unit.

##### **3.1.1 Works executed by the Contractor on the Project site.**

45. In August 2024, the Contractor completed the State handing over of the reconstructed section of the Bishkek-Osh highway (km 8.5 - km 61) and handed it over to the Ministry of Transport and Communications of the Kyrgyz Republic. The project section was handed over to the Road Management Department of the Ministry of Transport and Communications of the Kyrgyz Republic, which will be responsible for subsequent maintenance.

##### **3.1.2 Borrow pits.**

46. The last 2 remaining borrow pits Belek and Ak-Suu 2 were reclaimed. Both borrow pits were handed over with the certificate to the raion commissions as per the national legislation.



**Figure 6. Belek borrow pit after reclamation.**



**Figure 7. Ak Suu 2 borrow pit after reclamation.**

### 3.1.3 Activities on the area where plants are located.

47. After dismantling the equipment (crushing plant, etc.), the Contractor does not carry out any work. Considering that the contractor has entered into a new lease agreement with the owners of this site, China Railway No. 5 plans to use this site outside of our project.



**Figure 8. Dismantling of equipment on the production site.**

### 3.2 Site Audits.

48. During the reporting period, regular monitoring of road section was carried out. During the reporting period, 6 site visits (July-December 2024) to the project road were conducted.

**Table 6. Monitoring of construction site in 2024.**

No.	Date	Auditors name	Propose of audit	Summary of any significant findings
1	10.07	Abdygulov A.	Conducting visual monitoring of completed work to eliminate previously identified defects	No violations were detected when visiting the project section
2	14.08	Abdygulov A	Visual Monitoring	No violations were detected when visiting the project section
3	12.09	Abdygulov A.	Visual Monitoring	No violations were detected when visiting the project section

4	07.10	Abdygulov A.	Visual Monitoring	No violations were detected when visiting the project section
5	05.11	Abdygulov A	Visual Monitoring	No violations were detected when visiting the project section
6	19.12	Abdygulov A	Visual Monitoring	No violations were detected when visiting the project section

### 3.3 Issues.

49. When conducting visual monitoring, the following were adopted as “control parameters for control and visual monitoring”: the presence of dust, the cleaning of the used area for the placement of the contractor’s camp, the reclamation of areas used for borrow pits, and the presence of construction waste along the project site. During the reporting period, non-compliance was not identified.

### 3.4 Trends.

50. From September 2024, maintenance of the project site will be carried out by the State Enterprise "Kyrgyzavtozhol" of the Ministry of Transport and Communications of the Kyrgyz Republic. At the time of preparation of the report, the contractor completed the procedure of State acceptance of the project site and its handing over to the balance sheet of the Road Management Department of MOTC KR. On August 8, 2024, the State Commission for Architectural and Construction Control signed the "Act on the assessment of conformity of the design section of the Bishkek-Kara-Balta highway"

## 4. RESULTS OF ENVIRONMENTAL MONITORING.

### 4.1 Overview of Monitoring Conducted During the Reporting Period.

51. Monitoring of environmental components, such as air quality, noise impact, vibration impact on the Bishkek-Kara-Balta Road section in the first half of 2024 was not carried out, since all construction works were completed.

52. The result of the visual monitoring shows a positive visible effect of the implemented project. Significant improvement in road safety for both vehicle drivers and pedestrians. Reduced noise due to improved road surfaces, virtually no dust.

53. During the reporting period, no appeals or complaints were received.

### 4.2 Summary of appeals and complaints.

54. During the reporting period (July-December 2024), the PIU environmental specialist continued visual monitoring of project site to ensure compliance with environmental legislation at the Bishkek-Kara Balta project road.

55. Based on the results of regular monitoring during this reporting period, it was noted that the Contractor completed all civil works as per the contract, and all SSEMP requirements were fulfilled.

## **5. FUNCTIONING OF THE CEMWP.**

### **5.1 CEMWP review.**

56. 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 CEMWP describes the various activities proposed under this Project and designed to prevent, minimize, or compensate environmental impacts that occur as a result of the Project. The mitigation measures provided in the CEMWP were sufficient, effective and acceptable. The CSC has prepared 14 annexes to the CEMP that addressed all major site-specific potential environmental impacts.

57. During the reporting period, no non-compliances were identified.

## **6. GOOD PRACTICE AND OPPORTUNITY FOR IMPROVEMENT.**

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

59. One of the good practice examples is the installation of anti-shock buffers on the carriageway in order to prevent traffic accidents and prevent loss of life, and road marking. 50 buffers were installed at 45.1 km section and 7 buffers at 7.4 km section.

60. The buffers are filled with sand, have a height of 80 cm, a diameter of 55 cm and a weight of 200 kg. The buffers were installed next to parapets on the carriageway, have a reflective film and are therefore visible from afar at night.

61. Installation of lighting in the middle of the project road section. This solution is safer in terms of road safety.

62. Taking into account the cramped conditions, to ensure road safety at km 8+500 –10+900, the safety zone on the central axis of the road was reduced from 4 meters to 2.6.

63. The lateral safety zone has been reduced from 1 meter to 0.5 meters on both sides of the road between km 8+500 – km 10+900. On this section, it was decided to remove the shoulders on both sides of the road and install curbstones.

## **7. SUMMARY AND RECOMMENDATIONS.**

### **7.1 Recommendations.**

64. Given the fact that during the construction period, the Contractor did not always eliminate the violations in the specified time. The Consultant was unable to apply any measures other than the suspension of work, it is necessary to take into account this experience and "include" additional mechanisms in the preparation of the contractor's draft contract in future projects, such as imposition of penalties for non-compliances of environmental safeguards measures 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.

65. Experience in tree planting, in terms of planting trees not along the road, but organizing concentrated green areas in conjunction with local government. This experience needs to be expanded, since this approach allows increasing the survival rate of planted seedlings.

**Certificate of handing over and acceptance of reclaimed land of the Ak-Suu-2 borrow pit.**

Village Belovodskoye

June 06, 2024

The commission for handing over and acceptance of the reclaimed land of the Ak-Suu-2 borrow pit, appointed by the order of the Moscow District State Administration of the Chui Region No. 154/r dated 15.05.2024, consisting of:

- U.Sh. Sadaliev - First Deputy Head of the Moscow District State Administration, Chairman of the Commission;
- M.S. Kemelbaev - chief specialist of the department of industry, economics, agriculture and law enforcement of the Moscow district state administration, secretary of the commission;
- N.N. Baigazieva - Head of the Department of Industry, Economics, Agriculture and Law enforcement;
- S.I. Nazarov - Director of the Moscow branch of the State Agency for Land Resources, Cadastre, Geodesy and Cartography under the Cabinet of Ministers of the Kyrgyz Republic;
- D.B. Biymyrsaeva - acting head of the Moscow District Department of Agrarian Development;
- I.D. Kenzhaliev - Senior Inspector of the Chui-Bishkek Interregional Department of the Land and Water Supervision Service under the Ministry of Agriculture of the Kyrgyz Republic;
- D.B. Sagaev - Head of the Moscow District Water Management Department;
- B.A. Sharshenaliev - head of the Emergency Situations Department of the Moscow district;
- D.M. Aknazarov - head of Ak-Suu aiyl okmotu;
- K.I. Ibraev - representative of the Ministry of Transport and Communications of the Kyrgyz Republic;
- U.T. Shurubekov - chief inspector of the ChROMNRETS of the Kyrgyz Republic;
- Zhang Liang - director of the KR Office of China Engineering Group Co. No.5.

The commission has drawn up this certificate on the following.

An inspection of the works performed in accordance with the terms of technical reclamation at the borrow pit was carried out and the following was established:

1. Clearing the surface of the reclaimed land area from boulders;
2. The quarry benches were brought to a safe condition;
3. Rough planning of the surface of the sites after removal of waste from their territory;
4. Cleaning planning of reclaimed surfaces.

Biological reclamation was not carried out due to natural conditions (due to the low productivity of the land, the absence of a fertile layer and the impossibility of carrying out earthing and the impact of surface watercourses and floods, the quarry area alienated for mining operations, located in the floodplain of the Ak-Suu River, is **self-regenerating**).

China Engineering Group Company No. 5 transfers the reclaimed land of the Ak-Suu-2 quarry with an area of 37.01 hectares, transferred by temporary permit of the State Committee for Industry, Energy and Soil Use of the Kyrgyz Republic No. 03-6/6788 dated 01.06.2017 for the development of sand and gravel mixture, to Aksuy ayil okmotu.

Chairman of the Commission:

U.Sh. Sadaliev signature

Members of the Commission:

N.N. Baigazieva signature

S.I. Nazarov signature

D.B. Biymyrsaeva signature

I.D. Kenzhaliev signature

D.B. Sagaev signature

B.A. Sharshenaliev signature

D.M. Aknazarov signature

K.I. Ibraev signature

U.T. Shurubekov signature

Zhang Liang signature

Secretary of the commission

M.S. Kemelbaev signature



**АКТ**  
**приемки-передачи рекультивированной земли карьера Ак-Суу-2**

с. Беловодское

« 6 » 06 2024 года

Комиссия по приемке-передаче рекультивированной земли карьера Ак-Суу-2, назначенной распоряжением Московской районной государственной администрации Чуйской области № 154/р от 15.05.2024 года, в составе:

- У.Ш. Садалиев – первый заместитель главы Московской районной государственной администрации, председатель комиссии;
- М.С. Кемелбаев – главный специалист отдела промышленности, экономики, сельского хозяйства и правопорядка Московской районной государственной администрации, секретарь комиссии;
- Н.Н. Байгазиева – заведующий отделом промышленности, экономики, сельского хозяйства и правопорядка;
- С.И. Назаров – директор Московского филиала Государственного агентства по земельным ресурсам, кадастру, геодезии и картографии при Кабинете Министров Кыргызской Республики;
- Д.Б. Биймырсаева – и.о. начальника Московского районного управления аграрного развития;
- И.Д. Кенжалиев – старший инспектор Чуй-Бишкекского межрегионального управления службы по земельному и водному надзору при МСХ КР;
- Д.Б. Сатиев – начальник Московского районного управления водного хозяйства;
- Б.А. Шаршеналиев – начальник ОЧС Московского района;
- Д.М. Акназаров – глава Ак-Суйского айыл окмоту;
- К.И. Ибраев – представитель Министерства транспорта и коммуникаций КР;
- У.Т. Шурубеков – главный инспектор ЧРУМПРЭиТН КР;
- Чжан Лян – директор ФКсОО «КЖИГК № 5» в КР.

Комиссия составила настоящий акт о следующем.

Произведен осмотр выполненных работ согласно условиям о технической рекультивации на карьере и установлено:

1. Очистка поверхности рекультивируемого участка земли от валунов;
2. Уступы карьера приведены в безопасное состояние;
3. Грубая планировка поверхности площадок после вывоза с их территории отвалов;
4. Чистковая планировка рекультивируемых поверхностей.

Биологическая рекультивация не проводилась ввиду природных условий (ввиду малопродуктивности земель, отсутствия плодородного слоя и невозможности проведения землевания и воздействия поверхностных водотоков и паводков, площадь карьера, отчуждаемая под добычные работы, расположенная в пойме реки Ак-Суу, является самовосстанавливающей).

Китайская инженерная групповая компания № 5 передает рекультивированную землю карьера Ак-Суу-2 площадью в 37,01 га, переданную временным разрешением ГКПЭН КР № 03-6/6788 от 01.06.2017 года для разработки ПГС, Аксуйскому айыл окмоту.

Председатель комиссии

Садалиев У.Ш.

Члены комиссии:

Байгазиева Н.Н.

Назаров С.И.

Биймырсасва Д.Б.

Кенжалиев И.Д.

Сатиев Д.Б.

Шаршеналиев Б.А.

Акназаров Д.М.

Ибраев К.И.

Шурубеков У.Т.

Чжан Лян

Секретарь комиссии

Кемелбаев М.С.



Sokuluk village

July 11, 2027

**Certificate of handing over and acceptance of reclaimed land of the Belek borrow pit.**

The commission for the acceptance and transfer of reclaimed land from the Belek borrow pit, appointed by order of the Sokuluk district state administration of the Chui region No. 208-P dated June 10, 2024, consisting of:

Adiev K.A. - First Deputy Head of the Sokuluk District State Administration, Chairman of the Commission;

Dzhanibekov A.M., Head of the Department of Economics, Industry and Agricultural Development, Secretary of the Commission;

Bazarkulova Zh.E. - Director of the Sokuluk branch of the State Institution "Cadastre" under the State Agency for Land Resources under the KR Government;

Mayrykov S. - Senior Inspector of the Chui Regional Administration of the Ministry of Natural Resources, Ecology and Technical Supervision (subject to agreement);

Isakov D.Yu. - Head of the Emergency Situations Department for the Sokuluk District;

Zhang Liang - director of the KR Office of China Engineering Group Co. No.5.

Sadykov B.Sh. - Head of the Department of Agricultural Development of Sokuluk District;

Bozov M.K. - Head of Sokuluk District Department of Water Management and Land Reclamation;

Edigeev Zh.K. - head of Sokuluk ayil okmotu;

The commission drew up this certificate on the following:

An inspection of the works performed in accordance with the conditions for technical reclamation of the borrow pit was carried out and it was established:

1. Clearing the surface of the reclaimed land area from boulders;
2. Flattening of slopes;
3. Creation of a reclamation horizon;
4. Rough layered planning;
5. Rough planning of the surface of the sites after removal of boulder waste from their territory;
6. Final planning of reclaimed surfaces.

Biological reclamation was not carried out due to natural conditions (due to low productivity of the land, lack of fertile soil and impossibility of carrying out earthing and the impact of surface watercourses and floods, the area of the borrow pit alienated for mining operations).

China Engineering Group Company No. 5 hands over the reclaimed land of the Belek borrow pit with an area of 3.79 hectares, transferred by temporary permit of the State Committee for Industry, Energy and Subsoil Use of the Kyrgyz Republic No. 03.-6/6709 dated 03.06.2021 for the development of sand and gravel mixture, to Sokuluk ayil okmotu.

Chairman of the Commission

Adiev K.A. signature

Members of the Commission:

Bazarkulova Zh.E. signature

Mayrykov S. signature

Isakov D.Yu. signature

Zhang Liang signature

Sadykov B.Sh. signature

Bozov M.K. signature

Edigeev Zh.K. signature

Secretary of the Commission:

Dzhanibekov A.M. signature

АКТ

**Приемки-передачи рекультивированной земли карьера Белек.**

Комиссия по приемке-передаче рекультивированной земли карьера Белек, назначенной распоряжением Сокулукской районной государственной администрации Чуйской области № 308-8 от 10.06 2024 года, в составе:

Адиев К.А. - первый заместитель главы Сокулукской районной государственной администрации, председатель комиссии;

Джаныбеков А.М. заведующий отдела экономики, промышленности и аграрного развития, секретарь комиссии;

Базаркулова Ж.Э. - директор Сокулукского филиала ГУ «Кадастр» при ГАЗР при ПКР;

Майрыков С. - старший инспектор Чуйского регионального управления Министерства природных ресурсов, экологии и технического надзора (по согласованию);

Исаков Д.Ю. - начальник отдела чрезвычайных ситуаций по Сокулукскому району;

Чжан Лян - директор ФКОО «Китайской инженерной групповой компаний № 5» в Кыргызской Республике;

Садыков Б.Ш. - начальник управления аграрного развития Сокулукского района;

Бозов М.К. - начальник Сокулукского районного управления водного хозяйства и мелиорации;

**Эдигеев Ж. К - глава Сокулукского айыл окмоту;**

Комиссия составила настоящий акт о следующем:

Произведен осмотр выполненных работ согласно условиям о технической рекультивации на карьере и установлено:

1. Очистка поверхности рекультивируемого участка земли от валунов;
2. Выполаживание откосов;
3. Создание рекультивационного горизонта;
4. Грубая послойная планировка;
5. Грубая планировка поверхности площадок после вывоза с их территории отвалов валунного грунта;
6. Чистовая планировка рекультивируемых поверхностей.

Биологическая рекультивация не проводилась ввиду природных условий (ввиду малопродуктивности земель, отсутствия плодородного слоя и невозможности проведения землевания и воздействия поверхностных водотоков и паводков, площадь карьера, отчуждаемая под добычные работы).

Китайская инженерная групповая компания № 5 передает рекультивированную землю карьера Белек площадью в 3.79 га, переданную временным разрешением ГКПЭН КР № 03.-6/6709 от 03.06.2021года для разработки ПГС, Сокулукскому айыл окмоту.

Председатель комиссии:

Адиев К.А.



Члены комиссии:

Базаркулова Ж.Э

Майрыков С.

Исаков Д.Ю.



Чжан Лян

Садыков Б.Ш.

Бозов М.К.

Эдигеев Ж.К



Секретарь комиссии:

Джаныбеков. А.М