

# Baljuvon – Sari Khosor Road Project ESIA

Contract No. 2025.015035



Environmental and Social Management Plan, April 2026



Vista  
Environment

Version	Date	Prepared By	Reviewed By	Approved By
1.0	01.03.26	Various	A. Perkinson	N. Skinner
1.1	19.03.26	Various	A. Perkinson	N. Skinner
1.2	26.03.26	Various	A. Perkinson	N. Skinner
1.3	09.04.26	Various	A. Perkinson	N. Skinner

## Table of Contents

1. Introduction .....	7
1.1 Background .....	7
1.2 Purpose and Scope of the Environmental and Social Management Plan .....	7
1.3 Link to other E&S Instruments .....	7
1.4 Non-Conformance Management .....	8
1.5 Report Structure .....	8
2. Project Description.....	9
2.1 Project Components and Activities .....	9
2.2 Construction Program .....	10
2.1 Key Construction Interfaces .....	11
3. Policy Legal and Institutional Framework.....	12
3.1 Applicable Tajik Laws and Regulations.....	12
3.1.1 General.....	12
3.1.2 Conventions and International Agreements.....	13
3.2 Project Standards .....	13
3.3 EBRD Requirements.....	17
3.4 Institutional Framework .....	18
3.5 Summary.....	21
4. Baseline Environmental and Social Conditions.....	25
4.1 Overview of Current Site Conditions .....	25
4.2 Physical Resources.....	26
4.3 Biological Resources .....	26
4.4 Socio-economic Resources .....	27
5. Key Environmental and Social Risks and Impacts .....	29
6. Environmental and Social Mitigation Plan.....	45
7. Environmental and Social Monitoring Plan .....	96
8. Implementation .....	107
8.1 General .....	107
8.2 Specific Responsibilities.....	107
8.3 Construction Environmental and Social Management Plan.....	109
8.4 Site Induction.....	111
8.5 Reporting .....	112
8.6 Contractors Staff.....	113



8.7	Management Systems .....	117
8.8	Control of Records .....	117
8.9	Corrective Actions .....	118
8.10	Meetings and Site Visits .....	119
8.11	Engineers Responsibilities .....	119
8.12	PIURR Responsibilities .....	123
8.13	ESMP Costs .....	124
9.	Operational Management Plan .....	125
9.1	Purpose and Scope .....	125
9.2	Road Maintenance and Safety .....	125
9.3	Environmental Monitoring .....	126
9.4	Protected Area Liaison .....	127
9.5	Community Relations .....	127
9.7	Annual Reporting to EBRD .....	128
10.	Stakeholder Engagement and Grievance Mechanism .....	130
10.1	Stakeholder Engagement .....	130
10.2	Grievance Mechanism .....	130
	Annex 1: Occupational Health & Safety Management Plan (Framework) .....	131
	Annex 2: Community Health & Safety Plan (Framework) .....	143
	Annex 3: Traffic Management Plan (Framework Outline) .....	155
	Annex 4: Emergency Preparedness & Response Plan (Framework) .....	168
	Annex 5: Waste Management Plan (Framework) .....	184
	Annex 6: Materials, Spoil & Borrow Area Management Plan (Framework) .....	196
	Annex 7: Water Quality & Sediment Control Plan (Framework) .....	208
	Annex 8: Biodiversity Management Plan Framework .....	219
	Annex 9: Labour & Working Conditions Management Plan (Framework) .....	271
	Annex 10: Worker Accommodation & Camp Management Plan (Framework) .....	305
	Annex 11: Chance Finds Procedure .....	323
	Annex 12: Worker Code of Conduct .....	332
	Annex 13: Air Quality and Dust Management Plan (Framework) .....	337
	Annex 14: Noise and Vibration Management Plan (Framework) .....	343
	Annex 15: Erosion and Sediment Control Plan (Framework) .....	349
	Annex 16: Access Road Management Plan (Framework) .....	354
	Annex 17: Land Access Restrictions .....	359





## List of Tables

<a href="#">Table 1: National Standards Applicable to the Project</a>	17
<a href="#">Table 2: National Standards Applicable to the Project</a>	19
<a href="#">Table 3: Overview of Relevant Government Institutions</a>	22
<a href="#">Table 4: Summary Responsibilities</a>	27
<a href="#">Table 5: Summary Risks and Impacts</a>	37
<a href="#">Table 6: Pre-construction/Construction Phase ESMP</a>	53
<a href="#">Table 7: Monitoring Plan</a>	117
<a href="#">Table 8: CESMP Topic Specific Plans</a>	133
<a href="#">Table 9: Contractor Reporting Responsibilities</a>	136

## List of Figures

<a href="#">Figure 1: Contractors E&amp;S Team</a>	138
<a href="#">Figure 2: Contractors Health and Safety Team</a>	138

## Acronyms and Abbreviations

Acronym	Meaning
BOQ	Bill of Quantities
CEP	Committee for Environmental Protection
CESMP	Construction Environmental and Social Management Plan
CHS	Community Health and Safety
ENGINEER	Construction Supervision Consultant
DDC	Detailed Design Consultant
DIN	Deutsches Institut für Normung (German standards)
EBRD	European Bank for Reconstruction and Development
EIA	Environmental Impact Assessment
ESCP	Erosion and Sediment Control Plan
ESHS	Environmental, Social, Health and Safety
ESIA	Environmental and Social Impact Assessment
ESMP	Environmental and Social Management Plan
GIIP	Good International Industry Practice
GoT	Government of the Republic of Tajikistan
GRM	Grievance Redress Mechanism
HSE	Health, Safety and Environment
IFC	International Finance Corporation
ILO	International Labour Organization
JSA	Job Safety Analysis
LAeq	Equivalent Continuous Sound Level
LMP	Labour Management Procedures
LTI	Lost Time Injury
MAE	Maximum Allowable Emissions
MoHSPP	Ministry of Health and Social Protection of the Population
MoT	Ministry of Transport of the Republic of Tajikistan
NCR	Non-conformance Reporting
OHS	Occupational Health and Safety
O&M	Operation and Maintenance
PIURR	Project Implementation Unit for Road Rehabilitation
PM	Particulate Matter
PPE	Personal Protective Equipment
ROW	Right of Way
RSA	Road Safety Audit
SanPiN	Sanitary Rules and Norms
SEA/SH	Sexual Exploitation and Abuse / Sexual Harassment
SEE	State Ecological Expertise
TMP	Traffic Management Plan
TRIR	Total Recordable Incident Rate

## 1. Introduction

---

### 1.1 Background

The Baljuvon–Sari Khosor (BSK) Road Rehabilitation Project (or the “Project”) involves the rehabilitation and upgrading of an existing road corridor connecting Baljuvon District to the Sari Khosor area in the Republic of Tajikistan. The road provides important access for local communities and supports regional connectivity, economic activities, and tourism in the project area.

The Project is implemented by the Ministry of Transport (MOT) of the Republic of Tajikistan through the Project Implementation Unit for Road Rehabilitation (PIURR), with financing support from European Bank for Reconstruction and Development (EBRD). The Project involves improvement of road infrastructure, associated drainage and structures, and temporary construction activities required to support implementation.

The Project has environmental and social risks typical of linear road rehabilitation projects in mountainous terrain. These risks are generally site-specific, temporary, and manageable through the application of appropriate environmental and social management measures. This Environmental and Social Management Plan (ESMP) has been prepared to provide a structured framework for managing such risks throughout the construction and operation phases of the Project.

### 1.2 Purpose and Scope of the Environmental and Social Management Plan

The purpose of this ESMP is to define the measures, responsibilities, monitoring requirements, and institutional arrangements necessary to ensure that the Project is implemented in compliance with:

- Applicable environmental and social legislation of the Republic of Tajikistan;
- EBRD Environmental and Social Policy (ESP), 2024 and Environmental and Social Requirements (ESRs);
- Good International Industry Practice (GIIP) for road construction and operation.

This version is issued as part of the bid documentation for the construction contract and its primary contractual purpose is to define the environmental, social, health and safety obligations of the Contractor during the construction phase.

The ESMP is binding on all parties involved in the Project, including PIURR, the Construction Supervision Consultant/Engineer (referred to as the “Engineer”), contractors, and their subcontractors. Contractors will be required to prepare and implement site-specific CESMPs that are consistent with this ESMP.

### 1.3 Link to other E&S Instruments

This ESMP forms part of the Project’s environmental and social management framework and should be read in conjunction with other relevant environmental and social instruments prepared for the Project, including:

- ESIA Scoping Report;
- Stakeholder Engagement Plan (SEP), Annexed to this ESMP;
- Resettlement Plan (RP);
- Labour Management Procedures (LMP);
- Grievance Redress Mechanisms (GRM) for communities and workers; and



- Contractor-prepared Construction Environmental and Social Management Plans (CESMPs) and associated sub-plans including Biodiversity Management Plan (BMP) and Traffic Management Plan.

In the event of any inconsistency between these instruments, the more stringent requirement shall apply, with priority given to national legislation and EBRD ESRs.

#### 1.4 Non-Conformance Management

The Engineer shall establish, implement, and maintain a formal Non-Conformance Reporting (NCR) system covering all Environmental, Social, Health and Safety (ESHS) aspects of the Project. The NCR system shall apply not only to technical and quality issues but equally to environmental, social, labour, and OHS non-compliances. All non-conformances shall be:

- Recorded in a structured NCR register;
- Categorised by severity (minor, major, critical);
- Assigned corrective and preventive actions with defined timelines;
- Tracked to closure and verified by the Engineer. The Contractor and Engineer shall report NCR status as part of monthly ESHS reporting. The Engineer shall immediately act in accordance with the Contract and escalate any critical non-conformances to the PIURR and the Bank.

#### 1.5 Report Structure

This ESMP is structured as follows:

1. **Introduction:** Provides background information on the Project, the purpose and scope of the ESMP, and its relationship to other environmental and social instruments.
2. **Project Description:** Summarises key project components, activities, schedule, and areas of influence.
3. **Policy, Legal and Administrative Framework:** Describes applicable national environmental and social legislation and the EBRD ESP / ESRs.
4. **Baseline Environmental and Social Conditions:** Summarizes environmental and social conditions in the project area relevant to Project implementation.
5. **Key Environmental and Social Risks and Impacts:** Identifies the main environmental and social risks and impacts associated with the Project.
6. **Environmental and Social Mitigation Plan:** Defines mitigation measures, responsibilities, and implementation arrangements.
7. **Environmental and Social Monitoring Plan:** Sets out monitoring parameters, methods, frequency, and responsibilities.
8. **Implementation Plan:** Describes institutional arrangements, reporting, capacity building, and training requirements.
9. **Stakeholder Engagement and Grievance Mechanism:** Outlines stakeholder engagement activities, disclosure arrangements, and grievance mechanisms for communities and workers.

## 2. Project Description

---

### 2.1 Project Components and Activities

The BSK Project comprises the rehabilitation and upgrading of an approximately 56 km road corridor connecting Baljuvon District to the Sari Khosor area in the Republic of Tajikistan. The Project aims to provide reliable, all-season road access for local communities and regional traffic.

This Project has been classified as Category A under the EBRD Environmental and Social Policy (2024), reflecting the scale of works, the mountainous and river corridor setting, the proximity of the Sari Khosor Nature Park, the biodiversity sensitivity of the corridor and confirmed Priority Biodiversity Features identified through the Critical Habitat Assessment (CHA, May 2026), including Critical Habitat triggered by two Critically Endangered wild pear species.

Category A classification requires full public disclosure of the ESIA prior to EBRD Board consideration, semi-annual Environmental Monitoring Reports to EBRD throughout construction and the early operational period, and EBRD access rights to project sites and records.

The State Ecological Expertise (SEE) review process has been initiated by PIURR as the project proponent. PIURR has already obtained a positive conclusion from the State Committee for Environmental Protection. No construction works shall commence until all conditions of the SEE conclusion have been reviewed and fully incorporated into the Contractor's SSESMP. Contractors should note that the SEE conclusion is a PIURR-held approval — the Contractor's obligation is to operate within its conditions, not to obtain it. Contractor-held permits (borrow area licences, air emission permits, water abstraction approvals, and waste disposal arrangements) are listed separately in ESMP Table 6.

The proposed alignment broadly follows the existing track up to Shahidon (approximately Km 31), after which the road continues toward Sari Khosor through areas where no formal road currently exists and vehicles travel within the river floodplain. The alignment generally avoids passing directly through settlements, with potential interaction limited to Shahidon (Km 31) and Mullokoni (Km 54).

The Project is designed as a Category V two-lane road, suitable for low to moderate traffic volumes, with design speeds adjusted to terrain conditions. The rehabilitation works aim to improve safety, climate resilience, and year-round accessibility for local communities and economic activities.

The main project components and activities include:

- Rehabilitation and upgrading of approximately 56 km of road alignment, including formation, sub-base, base, and asphalt pavement layers;
- Construction and reconstruction of approximately 130 culverts and ten bridges to improve drainage and river crossings;
- Slope stabilization, embankment works, and localized riverbank protection in erosion-prone sections;
- Installation of road safety features, including guardrails, signage, and road markings;
- Establishment and operation of ancillary facilities, which may include:
  - Borrow areas (primarily river gravel);
  - Temporary material processing areas (crushing, grading, asphalt/concrete production);
  - Construction camps, storage yards, and maintenance areas;
  - Temporary access roads and upgrading of existing tracks for construction logistics.





## 2.2 Construction Program

This ESMP is issued at the advance procurement stage. The Contractor is responsible for developing a detailed construction programme post-award, to be submitted to the Engineer for comments prior to commencement of any works.

In developing the programme, the Contractor **must** account for the following ESHS-driven seasonal constraints, which are binding requirements under this ESMP and are not negotiable on programme grounds:

- **In-river works** shall not be carried out during the peak snowmelt and flood season (approximately April to June). The detailed timing restriction, including any site-specific variation, shall be confirmed in the River Works Method Statement prepared post-award in accordance with the hydraulic design report.
- **Vegetation clearance** shall not be undertaken during the bird nesting season (approximately April to July) without prior written approval from the Ecologist and the ENGINEER, following a nest check confirming no active nests within the clearance zone.
- **Works on or immediately adjacent to agricultural land** shall be programmed to avoid the main sowing season (March to May) and harvest season (September to October) unless alternative arrangements have been agreed in writing with affected landowners and recorded in the land access register.
- **Red Book plant translocation**, where required by the pre-clearance ecological survey, must be completed before any clearance of affected areas, within the translocation window specified by the Ecologist.

These constraints affect sequencing, resource allocation, and cost. Contractors must price their bids on the assumption that seasonal windows will govern the programme and that works cannot simply be accelerated to recover time lost to seasonal restrictions.

## 2.3 Area of Influence

For the purposes of environmental and social assessment and management under EBRDs ESR1, the Project's area of influence is defined as follows:

**Direct footprint** — the 56 km road corridor within the approved right-of-way, including all ancillary facilities established by the Contractor (construction camps, borrow areas, spoil disposal sites, crushing and asphalt plants, temporary access roads, and haul routes).

**Indirect influence zone** — the Shurobdaryo River catchment within which sediment, pollutant, and hydrological impacts from construction activities may propagate; the approximately 19 settlements lying along or adjacent to the corridor whose communities will be affected by construction traffic, dust, noise, land access restrictions, and labour influx; and agricultural land and dehkan farms within the construction corridor whose productive use may be temporarily or permanently affected.

**Induced impact zone** — the Sari Khosor Nature Park, located approximately 5 km from the corridor. The Park is not directly disturbed by construction but improved all-season road access following project completion may induce increased visitor pressure and poaching risk. This induced impact falls within the Project's area of influence for biodiversity assessment purposes and is addressed in the Biodiversity Management Plan (Annex 8). The Bukhara deer breeding farm, located within construction noise influence distance of the corridor, is also included within the area of influence for the purposes of ESR6 monitoring obligations.

**Cumulative influence** — potential cumulative impacts arising from the interaction of this Project with other infrastructure investments or land use changes in the BSK corridor are noted in the risk register



(Section 5) and shall be considered by the Contractor when siting ancillary facilities and planning works near sensitive receptors.

## 2.1 Key Construction Interfaces

The following interfaces present the principal environmental, social and safety management challenges during construction and have determined the structure of the mitigation measures set out in Table 6 of this ESMP.

**River corridor** — Extended sections of the alignment run adjacent to or within the active channel and floodplain of the Shurobdaryo River. Bridge construction, embankment reconstruction, culvert replacement, scour protection, and temporary cofferdams will all require in-river or river-adjacent working. The river system exhibits high seasonal variability and is sensitive to sedimentation, hydrocarbon contamination, and disturbance of aquatic habitat including migratory fish.

**Geotechnical instability** — The corridor traverses steep terrain with a documented history of landslides, mudflows, debris flows, and rockfall. Cut slopes and embankments will be inherently unstable during and immediately after construction. Geotechnical risk management is a programme-critical construction interface and is not solely an OHS matter — slope failures can damage completed works, obstruct the community's only access route, and cause fatalities.

**Settlements and community access** — Approximately 19 settlements lie along or adjacent to the corridor. For most of these communities the project road is the sole access route. Construction must maintain continuous community access throughout, manage construction traffic safely in settlement approaches, and minimise dust, noise, and vibration impacts on residents, schools, and medical facilities. Partial land acquisition and temporary land occupation will affect agricultural users in several locations.

**Biodiversity and Priority Biodiversity Features** — The Critical Habitat Assessment (CHA, Rev01, April 2026) has determined that no Critical Habitat is present within the project area of influence under any of the five ESR6 criteria. Priority Biodiversity Features are confirmed present, including confirmed migratory brook trout (*Salmo trutta oxianus*) with autumn spawning migration in the Shurobdaryo, Eurasian Otter (*Lutra lutra*, EN nationally), Bukhara Urial (*Ovis vignei bochariensis*, CR), a minimum of 20 Red Book plant species in the Sari Khosor tract, and multiple IUCN threatened bird species. The Contractor is required to apply PBF-level controls as defined in the Biodiversity Management Plan (Annex 8) from Day 1 of mobilisation. No net loss of confirmed PBFs must be demonstrated through the construction and operational phases.

**Associated facilities** — Construction camps, borrow areas (primarily river gravel extraction), spoil disposal sites, crushing plant, and asphalt plant are integral to the works and carry significant independent environmental obligations. All associated facilities are within the Project's area of influence and are subject to the same ESHS management requirements as the main works. Final siting of all associated facilities requires pre-approval by the Engineer and PIURR, and in some cases by the Committee for Environmental Protection, before establishment.

It is assumed that construction activities will be implemented using conventional road construction techniques and will be carried out in sections to manage terrain constraints, environmental sensitivities, and access conditions.

### 3. Policy Legal and Institutional Framework

---

#### 3.1 Applicable Tajik Laws and Regulations

##### 3.1.1 General

The BSK Project is subject to the ESHS legislation of the Republic of Tajikistan. The national legal framework establishes mandatory requirements for environmental protection, land use, public health, labour relations, occupational safety, and protection of cultural heritage applicable to road construction and operation activities.

The core environmental legislation in Tajikistan is founded on the Law on Environmental Protection (2011), which establishes the principles of pollution prevention, sustainable use of natural resources, and the obligation to assess environmental impacts of planned activities. The law defines the roles of state authorities, including the Committee for Environmental Protection under the Government of the Republic of Tajikistan (CEP), and requires compliance with environmental standards and permitting procedures throughout project implementation. Environmental assessment and approval requirements are further governed by:

- the Law on Ecological Expertise (2012), which regulates the State Ecological Expertise (SEE) process; and
- the Law on Environmental Impact Assessment (2018), which defines screening, scoping, assessment, and public consultation procedures.

Road rehabilitation projects are subject to State Ecological Expertise and must obtain a positive SEE conclusion prior to commencement of construction works.

Other national legislation relevant to the Project includes, inter alia:

- the Water Code (2000), regulating protection and use of surface and groundwater resources;
- the Land Code (1992, as amended) and Law on Land Management (2001), governing land allocation, temporary land use, and soil protection;
- the Law on Production and Consumption Waste, regulating waste generation, handling, transport, and disposal;
- the Law on Atmospheric Air Protection, setting requirements for emission control and air quality protection;
- the Labour Code of the Republic of Tajikistan, establishing labour rights, working conditions, and occupational safety requirements;
- legislation on industrial safety, public health, and sanitation, including applicable sanitary norms (SanPiN).
- the Law on Protected Natural Territories of Tajikistan (2011), governing the legal status, management authority, and buffer zone restrictions applicable to protected areas including the Sari Khosor Nature Park, any induced or indirect impacts on the Nature Park arising from improved road access fall within the scope of this law as well as ESR6;
- the Law on the Protection and Use of Historical and Cultural Heritage (2007), establishing the legal basis for the mandatory stop-work obligation upon discovery of any archaeological or cultural find, the authority of the Agency for the Protection and Use of Historical and Cultural Heritage to direct response actions, and the permitting requirements for earthworks in areas of known heritage sensitivity;



- the Law on Wildlife (1994) and the Red Book of the Republic of Tajikistan, which establish the national species protection framework and define the list of protected flora and fauna species whose disturbance, collection, or destruction is prohibited; the Red Book is the legal basis for the tree-felling permit requirement and for the constraints on vegetation clearance in areas of known protected species presence referenced throughout this ESMP.

Compliance with these legal requirements is mandatory for all Project participants, including contractors and subcontractors.

### 3.1.2 Conventions and International Agreements

The Republic of Tajikistan is a party to a number of international conventions relevant to the environmental and social aspects of this Project. The following conventions are of direct relevance to contractor obligations:

The **Convention on Biological Diversity (CBD, 1992)**, to which Tajikistan acceded in 1997, requires the conservation of biological diversity and sustainable use of its components. This is particularly relevant given the proximity of the Project corridor to the Sari Khosor Nature Park and the presence of riparian habitats.

The **Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES, 1973)** prohibits the trade in protected species. Contractors must ensure that no protected species are collected, disturbed, or traded by workers during the Project.

The **Bern Convention on the Conservation of European Wildlife and Natural Habitats (1979)** has been ratified by Tajikistan and requires the protection of wild flora and fauna, particularly migratory and endangered species.

The **Ramsar Convention on Wetlands (1971)** is applicable where Project activities affect riverine or wetland habitats associated with the Shurobdaryo River system.

The **ILO Core Labour Standards**, including conventions on freedom of association, prohibition of forced and child labour, and non-discrimination (ILO Conventions 29, 87, 98, 100, 105, 111, 138, and 182), are incorporated into the EBRD ESRs and apply to all contractors and subcontractors engaged on the Project.

The UNESCO Convention on the Protection of the World Cultural and Natural Heritage (1972) and the European Convention on the Protection of the Archaeological Heritage (Valletta Convention, 1992) are relevant to the management of chance finds and the protection of cultural heritage assets in the Project area.

Compliance with applicable conventions is mandatory for all Project participants. Where convention obligations are more stringent than national legislation, the convention requirements shall prevail.

## 3.2 Project Standards

Environmental quality standards applicable to the Project are established through national GOST, SNiP, and SanPiN norms, including standards for air quality, noise, vibration, water quality, and occupational exposure. These standards define permissible limits and monitoring requirements and are enforced by competent national authorities, including the CEP and sanitary inspectorates.

**Table 1: National Standards Applicable to the Project**

№	National Standards –GOSTs
1	31431—2011, Protection of nature, air. The number of maximum allowable emissions (MAE), November 29, 2011

№	National Standards –GOSTs
2	31434—2011, Protection of nature, air. Determination of efficiency parameters of dust removal systems, November 29, 2011
3	IEC 61241-0—2011, Electrical equipment used in areas containing flammable dust. Part 0. General requirements, 29 November 2011
4	GOST 17.0.0.01-76 (STSEV 1364-78) (in addition to 1987) A system of standards for the protection of the environment and the improvement of the use of natural resources. Generalities.
5	General provisions GOST 17.0.0.04-80 (1998) nature Protection. Environmental passport (certificate) of industrial facility. Generalities.
6	GOST RISO14001-98. Environmental management systems. Requirements and guidelines.
7	GOST 17.0.0.02-79 (1980). Protection of Nature. Providing metrological control of air, surface water and soil pollution.
8	GOST 17.1.1.01-77 (STSEV 3544-82). Use and protection of water. General conditions and definitions.
9	GOST 17.2.1.01- 76. Classification of emissions (content).
10	GOST 12.1.014-84 (1996) SSBT. Air in the area of work performed. Methodology for measuring pollutant concentrations using indicator tubes.
11	GOST 12.1.005-88 (1991) SSBT. General sanitary and hygienic requirements for air in the area of work performed.
12	GOST 17.2.2.05-97. Norms and methods for measuring emissions containing the use of diesel fuel from tractors and self-propelled agricultural machinery.
13	GOST 21393-75 Diesel vehicles. Analysis of the transparency of exhaust gases. Norms and methods of measurement.
14	GOST 17.2.2.03-77. Concentration of carbon monoxide in the exhaust gases of vehicles with gasoline engines. Methodology of norms and measurements.
15	GOST 17.2.2.03-87. Norms and methods of measurement of carbon monoxide in exhaust gases of vehicles with gasoline engines.
16	GOST 17.4.2.01-81. Designations of sanitary parameters of the condition

In addition to national legislation, the Project applies GIIP for road rehabilitation and operation in mountainous and environmentally sensitive areas. GIIP principles guide the management of environmental and social risks related to earthworks, drainage, erosion control, traffic safety, occupational health and safety, community health and safety, and waste management.

The following table sets out the key environmental quality standards applicable to the Project. Where national standards and EBRD/IFC EHS Guidelines differ, the more stringent value applies. Contractors are required to demonstrate compliance with these standards through the monitoring programme set out in Section 7.



Table 2: National Standards Applicable to the Project

Parameter	National Standard (Tajikistan)	National Value	Limit	EBRD / IFC EHS Guideline	More Stringent Applies?
<b>Air Quality</b>					
Ambient air – PM <sub>10</sub> (24-hour average)	SanPiN RT	0.15 mg/m <sup>3</sup>		IFC EHS Guidelines: 0.15 mg/m <sup>3</sup> (24hr)	Same – national standard applies
Ambient air – PM <sub>2.5</sub> (annual mean)	SanPiN RT	0.035 mg/m <sup>3</sup>		IFC EHS Guidelines: 0.025 mg/m <sup>3</sup> (annual)	IFC more stringent – IFC limit applies
Ambient air – NO <sub>2</sub> (1-hour average)	GOST / SanPiN	0.085 mg/m <sup>3</sup>		IFC EHS Guidelines: 0.2 mg/m <sup>3</sup> (1hr)	National more stringent – national limit applies
Ambient air – CO (8-hour average)	GOST / SanPiN	3.0 mg/m <sup>3</sup>		IFC EHS Guidelines: 10 mg/m <sup>3</sup> (8hr)	National more stringent – national limit applies
Vehicle exhaust emissions	GOST 17.2.2.05-97; GOST 21393-75	Per GOST		EU Stage IIIA/IIIB equivalent (GIIP)	GIIP applies where equipment is sourced internationally
<b>Noise &amp; Vibration</b>					
Construction noise – daytime (07:00–22:00) at nearest residential receptor	SanPiN RT	55 dB(A) LAeq		IFC EHS Guidelines: 55 dB(A) LAeq	Same – national standard applies
Construction noise – night-time (22:00–07:00) at nearest residential receptor	SanPiN RT	45 dB(A) LAeq		IFC EHS Guidelines: 45 dB(A) LAeq	Same – national standard applies
Occupational noise exposure (8-hour TWA)	Labour Code / SanPiN RT	80 dB(A)		IFC EHS Guidelines: 85 dB(A)	National more stringent – 80 dB(A) applies



Ground vibration – residential buildings (PPV)	SanPiN / SNiP RT	0.5 mm/s PPV	DIN 4150-3: 5 mm/s PPV (residential)	National more stringent – 0.5 mm/s applies
<b>Water Quality</b>				
Surface water – suspended solids (discharge to watercourse)	Water Code / CEP norms	25 mg/l	IFC General EHS Guidelines: 50 mg/l	National more stringent – 25 mg/l applies
Surface water – pH (discharge to watercourse)	CEP norms	6.5 – 8.5	IFC EHS Guidelines: 6 – 9	National more stringent – 6.5–8.5 applies
Surface water – total petroleum hydrocarbons / oil (discharge)	CEP norms	0.05 mg/l	IFC EHS Guidelines: 10 mg/l	National more stringent – 0.05 mg/l applies
Drinking water quality (worker camps and affected communities)	SanPiN 2.1.4 (drinking water)	Per SanPiN 2.1.4	WHO Guidelines for Drinking Water Quality (4th ed.)	More stringent of SanPiN and WHO applies



Note: The above limits are to be incorporated into the Contractor's Dust Control Plan, Noise and Vibration Management Plan, and Erosion and Sediment Control Plan as the compliance thresholds against which monitoring results are assessed. Where site-specific conditions require more stringent limits (e.g., proximity to sensitive receptors such as schools or the Sari Khosor Nature Park), the Engineer may specify tighter thresholds in the CESMP approval process.

Note: Where the national standard is more stringent than the equivalent EBRD/IFC EHS Guideline value, the national standard applies as the compliance threshold in accordance with the more-stringent principle. However, for two parameters — ground vibration and total petroleum hydrocarbon discharge — the national limits are of a magnitude that makes consistent, meaningful compliance monitoring extremely difficult in a road construction context, and contractors should note the following when pricing their bids.

The national SanPiN limit for ground vibration (0.5 mm/s PPV) is ten times more stringent than the DIN 4150-3 residential building threshold (5 mm/s PPV). At 0.5 mm/s, routine construction activities including dynamic compaction, vibratory rolling, and heavy plant operation will exceed the limit at distances that make practical standoff infeasible on a narrow mountain corridor. Strict application of this limit as a construction stop-work threshold would effectively prohibit normal earthworks near any structure. Accordingly, the Contractor shall apply the national limit as the target standard and shall implement all practicable vibration mitigation measures. Where the Contractor can demonstrate through pre-construction vibration assessment that the national limit is unachievable for a specific activity and receptor combination without rendering the works impractical, the Contractor shall document this assessment and submit it to the Engineer for approval. The Engineer, in consultation with PIURR, may approve the use of DIN 4150-3 as the operative compliance threshold for that specific activity and receptor, provided that all reasonable mitigation measures have been applied. This approval must be obtained in writing before works commence and recorded in the monthly ESHS report. The DIN 4150-3 limit of 5 mm/s PPV shall in all cases serve as the absolute minimum backstop and shall not be exceeded.

The national limit for total petroleum hydrocarbons in discharge to watercourses (0.05 mg/l) is approximately 200 times more stringent than the IFC EHS Guideline value of 10 mg/l. At 0.05 mg/l any visible surface sheen constitutes non-compliance. Contractors must price their spill prevention, fuel storage, bunding, and drainage management measures on the basis that this limit applies to all discharge points along the corridor, including those adjacent to the Shurobdaryo River. There is no provision for applying the IFC limit in substitution for the national limit for hydrocarbon discharge — the national standard governs and is not subject to the practical-achievability assessment process described above for vibration. Contractors should treat the 0.05 mg/l threshold as an absolute prohibition on any hydrocarbon discharge to watercourses, which in practice means zero-discharge design for all fuel storage and plant washing areas within the drainage catchment of the river system.

### 3.3 EBRD Requirements

The Project is financed by EBRD and is required to comply with the EBRD ESP (2024) and its associated ESRs.

The Performance Requirements applicable to the Project include:

- ESR1 – Assessment and Management of Environmental and Social Impacts and Issues
- ESR2 – Labour and Working Conditions
- ESR3 – Resource Efficiency and Pollution Prevention and Control
- ESR4 – Health and Safety



- ESR5 – Land Acquisition, Involuntary Resettlement and Economic Displacement
- ESR6 – Biodiversity Conservation and Sustainable Management of Living Natural Resources
- ESR7 - Indigenous Peoples has been screened and is not triggered, as no communities meeting the ESR7 definition are present within the project area of influence.
- ESR8 – Cultural Heritage
- ESR10 – Information Disclosure and Stakeholder Engagement

### 3.4 Institutional Framework

The ministries, agencies and institutions having key functions with responsibility for the environmental and social aspects of the Project are listed in Table 3 below.

Table 3: Overview of Relevant Government Institutions

Institution	Role for this Project	Key Permits / Approvals / Oversight (as applicable)
Ministry of Transport (MoT)	Executing Agency (line ministry)	Overall sector oversight; delegates day-to-day implementation to PIURR.
PIURR (Project Implementation Unit for Road Rehabilitation – MoT)	Implementing Agency; borrower's project-side E&S management; coordinates permits, supervision, reporting, GRM	Ensures IEE is submitted to CEP for SEE; ensures CESMP and sub-plans are prepared, approved and implemented; maintains permit tracker and reporting to lender(s).
Committee for Environmental Protection (CEP) under GoT	Competent authority for environmental review/approval and environmental compliance inspections	SEE (State Ecological Expertise) conclusion / national environmental approval; issues multiple environmental permits (incl. emissions, discharges, tree cutting) and can impose conditions.
Local Executive Authorities (District Hukumats / Jamoats)	Local coordination, land-use agreements for temporary sites; local-level grievance channels	Permissions for land use for camps/plants/quarries; permissions related to local waste disposal areas; coordination of local access/traffic measures.
Ministry of Economic Development and Trade (formerly Ministry of Industry and New Technologies) – verify current name with PIURR	Licensing (construction activity licensing / certain industrial activities, as applicable)	License to conduct the type of activity prior to construction.
Basin Water Organizations (BWO) / Ministry of Energy and Water Resources	Competent authority for water abstraction permitting from surface and groundwater sources used for construction (technical water)	Water abstraction permit (special water use permission) for construction water sources; coordination where works affect irrigation channels or water user associations.
Ministry of Health and Social Protection	Public health / sanitary oversight during construction (worker welfare, camps, water quality)	Part of permission for special water use (drinking water) per IEE; sanitary

Institution	Role for this Project	Key Permits / Approvals / Oversight (as applicable)
(Sanitary/Epidemiological Surveillance service)		inspections relevant to camps and welfare facilities.
Agency for the Protection and Use of Historical and Cultural Heritage (under Ministry of Culture)	Competent authority for cultural heritage protection and archaeological oversight; notified in the event of any chance find during construction	Must be notified immediately upon any chance find; provides guidance on stop-work requirements and disposition of finds in accordance with national cultural heritage law. Contractor Chance Find Procedure (Annex B) must reference this authority.
State Labour Inspectorate (under Ministry of Labour, Migration and Employment)	Statutory oversight of labour conditions, occupational health and safety, and worker rights compliance on construction sites	Site inspections for compliance with Labour Code; investigation of labour disputes, accidents, and fatalities; contractors must maintain labour records available for inspection at all times.
Traffic Police / Local Road Safety Authorities	Review/coordination of traffic diversions and safety arrangements during works	TMP to be submitted/cleared where required; coordination on haul routes through settlements.
Engineer (project role – not a government body)	The Engineer acts on behalf of PIURR as the day-to-day supervisor and verifier of ESMP and CESMP compliance throughout the construction phase. The Engineer has authority to: review and approve the Contractor's CESMP and all sub-plans before works commence. However, It is noted that In some specific instances the Engineer may be required to obtain the approval of the PIURR and the Bank for certain sub-plans; conduct routine and unannounced site inspections at any time; issue written non-compliance notices requiring the Contractor to implement corrective actions within defined timeframes; issue a formal Notice to Correct In the event that the Contractor Is not meeting their obligations under the Contract; withhold payments for works that are not being carried out In accordance with the Contract; instruct the Contractor to suspend any activity that poses an imminent risk to worker safety, community safety, or the	Reviews and approves CESMP and all required sub-plans prior to commencement of works; issues non-compliance notices and corrective action instructions; issues and lifts stop-work instructions; reviews Contractor's monthly ESHS reports and forwards to PIURR with compliance assessment; participates in monthly ESHS meetings; provides PIURR with independent verification of ESHS performance for inclusion in semi-annual EMRs to EBRD.



Institution	Role for this Project	Key Permits / Approvals / Oversight (as applicable)
	<p>environment, without prior referral to PIURR. Stop-work instructions issued by the Engineer are binding on the Contractor immediately upon issue and remain in force until the Engineer issues a written instruction to resume. The Contractor shall not resume suspended works on the basis of verbal instruction alone. The Engineer reviews and consolidates monthly ESHS reports submitted by the Contractor and forwards them to PIURR with its own compliance assessment.</p>	
EBRD	<p>EBRD is the financing institution for this Project and exercises ongoing environmental and social supervision rights under the loan agreement throughout the construction phase. EBRD does not manage day-to-day construction activities but retains direct oversight rights including: the right to conduct supervision missions and visit project sites, construction camps, borrow areas, and associated facilities at any time with reasonable notice; the right to inspect all ESHS records, monitoring data, grievance registers, incident reports, and CESMP documentation; the right to require PIURR to implement corrective actions where ESHS performance does not meet the standards required under the loan agreement; and the right to suspend disbursement in the event of material non-compliance with EBRD Environmental and Social Requirements. Contractors shall cooperate fully with EBRD supervision missions and shall make all relevant records and site areas accessible upon request through PIURR and the Engineer.</p>	<p>Receives semi-annual Environmental Monitoring Reports (EMRs) from PIURR; conducts periodic supervision missions; reviews ESHS performance against loan covenants; may require corrective action plans where non-compliance is identified; retains disbursement suspension rights in the event of material ESHS non-compliance.</p>



### 3.5 Summary

The following tables summarises who is responsible and when for ensuring compliance with the legal and regulatory framework.

Table 4: Summary Responsibilities

Topic / Activity	Specific Requirement / Provision	When it Applies (Trigger & Timing)	Preparer	Competent Authority / Issuer
National environmental approval	Obtain SEE conclusion (State Ecological Expertise) based on IEE/EIA documentation prior to construction	Design stage – prior to construction	PIURR (submission package)	CEP
Construction activity licensing	License to conduct the type of activity	Prior to construction (before mobilization)	Contractor (with PIURR oversight and support from the Engineer)	Ministry of Economic Development and Trade (verify current name with PIURR)
Temporary land use for camps / plants / quarries	Permission for land use for construction camp, asphalt/concrete plants, and quarry/borrow areas	Prior to establishment of each site	Contractor (requests); PIURR coordinates with the support of the Engineer.	Local authorities (Hukumats)
Special water use (abstraction / supply arrangements)	Permission for special water use (technical and/or drinking water sources)	Before and during construction (as applicable)	Contractor (application, volumes, sources); PIURR oversight with the support of the Engineer.	CEP / BWO (Ministry of Energy and Water Resources) / MoHSPP (as applicable by source type)
Vegetation removal	Permission to cut down trees and shrubs	Before any clearing where trees/shrubs affected	Contractor prepares request; PIURR submits/coordinates with the support of the Engineer.	CEP
Air emissions permits	Permission for emissions of harmful substances (MPE) from stationary/mobile sources	Prior to operating relevant sources (e.g., asphalt plant, crushers) / during construction	Contractor	CEP

Topic / Activity	Specific Requirement / Provision	When it Applies (Trigger & Timing)	Preparer	Competent Authority / Issuer
Discharge permits	Permission for discharge of hazardous substances to water bodies (MPD) where applicable	Before any discharge / during construction	Contractor	CEP
Borrow pits / quarries and asphalt plant arrangements	If contractor opens borrow pit/quarry or runs asphalt facility: obtain appropriate permits/approvals	Prior to sourcing/operation	Contractor	CEP (and PIURR/Engineer approval within contract)
Temporary waste storage / disposal arrangements	Permission for land acquisition for temporary storage of construction waste	Before establishing waste stockpile/storage sites	Contractor	CEP and/or Local authorities (Hukumats)
Removal/transport of construction & household waste to designated areas	Permission/arrangements to remove waste to designated disposal areas	As required throughout construction	Contractor	Local authorities (Hukumats)
Cultural heritage – chance find notification	Immediate stop-work and notification to competent authority upon discovery of any archaeological or cultural heritage material during excavation	As triggered during construction	Contractor (stop-work and notify); PIURR coordinates with authority with the support of the Engineer.	Agency for the Protection and Use of Historical and Cultural Heritage (Ministry of Culture)
Labour Inspectorate notification – fatalities / serious accidents	Statutory notification to State Labour Inspectorate in the event of a fatality or serious workplace accident, in accordance with the Labour Code of the Republic of Tajikistan	Within statutory timeframe following any fatality or serious incident	Contractor (notification); PIURR and Engineer informed simultaneously	State Labour Inspectorate (Ministry of Labour, Migration and Employment)
Traffic management approvals/coordination	TMP submitted to local traffic authorities; public information on disruptions; coordination on haul routes	Prior to construction and updated as needed	Contractor	Local traffic authorities (coordination); Engineer/PIURR review

Topic / Activity	Specific Requirement / Provision	When it Applies (Trigger & Timing)	Preparer	Competent Authority / Issuer
Contractor CESMP and sub-plans approval	Contractor prepares CESMP and required sub-plans; approvals by Engineer/PIURR and CEP where applicable	Prior to mobilization and before relevant works start	Contractor	Engineer/PIURR (and CEP where applicable)
Sanitary / worker welfare inspections	Compliance with sanitary norms and rules; inspection authority applies to camps, toilets, water supply, food handling	During mobilization and throughout construction	Contractor	Sanitary/Epidemiological Surveillance authority (MoHSPP system)
Legal and Permit Register	The Contractor shall establish and maintain a Legal and Permits Register for the duration of the Contract, identifying all regulatory approvals, licences, and permits required for construction activities and associated facilities. The register shall record, for each permit: the legal basis and issuing authority; the applicable project activity; the responsible party; the date required; current status; date obtained; expiry date; and any permit conditions relevant to ESHS management. The register shall be reviewed and updated monthly and made available to the Engineer and PIURR at all times. No activity requiring regulatory approval shall commence prior to the relevant permit being obtained and recorded in the register.   Contractor (preparation and maintenance)	Established prior to mobilisation; updated monthly throughout construction; submitted in summary form as part of the monthly ESHS report.	Contractor	Engineer / PIURR (monthly review and verification)



## 4. Baseline Environmental and Social Conditions

---

The following section of the ESMP provides an updated overview of the baseline environmental and social conditions of the Project area. This section establishes the contextual foundation for the risks and impacts identified in Section 5. In light of recent hydrological review findings and climate projections, the baseline description reflects not only current observed conditions but also the evolving climatic regime that is already influencing hazard processes in the corridor. The environmental baseline must therefore be understood as dynamic and non-stationary, particularly with respect to hydrology, slope stability, and temperature extremes.

### 4.1 Overview of Current Site Conditions

The existing BSK road is an unpaved earth and gravel alignment providing limited and unreliable access through steep mountainous terrain along the Shurobdaryo River valley. The corridor follows a narrow, geomorphologically active valley floor characterized by sharp horizontal curves, steep gradients, constrained sight distances, and minimal engineered safety features. In many sections, the carriageway is narrow and uneven, with deteriorated surface conditions, erosion of the running layer, and poorly defined shoulders. Drainage infrastructure is frequently absent, undersized, or blocked, resulting in washouts, standing water, and progressive surface degradation during rainfall and snowmelt events.

Over extended sections, the alignment runs directly adjacent to or within the active river channel and floodplain. Historical bank erosion, lateral river migration, and high-velocity flow events have damaged or destroyed portions of the embankment, demonstrating the dynamic and erosive nature of the hydrological system. Recent hydrological assessments confirm that flood depths along certain sections of the corridor can reach approximately 150 cm between km 0–5 and up to 263 cm between km 10–16 during 100-year return period events. Peak discharge in extreme events has been estimated at approximately 653 m<sup>3</sup>/s, with localized flow velocities potentially exceeding 7 m/s in constricted sections. These values reflect significant hydraulic energy acting on embankments and protection works.

The corridor is also highly exposed to landslides, mudflows, debris flows, and rockfall from unstable slopes above the alignment. Steep gradients, shallow soils, and weathered geological materials create inherent slope instability, particularly during intense rainfall or rapid snowmelt. Seasonal snow accumulation at higher elevations further contributes to closure risk and slope degradation through freeze–thaw cycles. These processes have historically caused periodic road closures and pose ongoing safety hazards.

Climate projections indicate that the hydrological and temperature regime of the corridor is expected to intensify over the coming decades. Climate modeling under intermediate and high-emission scenarios projects average temperature increases exceeding 4°C by mid-century, with maximum daily temperatures potentially surpassing 50°C. Extreme precipitation events are projected to intensify significantly, with maximum daily rainfall projected to increase under both intermediate and high-emission scenarios. These projected changes suggest that the frequency and magnitude of flood events, slope failures, and debris flows may exceed historical patterns.

Road safety conditions under the current baseline are poor. Signage, markings, guardrails, and formal pedestrian facilities are largely absent. In settlements, pedestrians, livestock, and vehicles share the same narrow alignment without separation. Travel times are long and highly variable, and the road can become impassable during winter or after extreme weather events, leading to temporary isolation of communities. Overall, the existing road functions as a basic access track rather than a resilient transport corridor, with structural vulnerability to natural hazards, limited drainage capacity, and inadequate safety provisions defining its present condition.



## 4.2 Physical Resources

The Project area lies within a continental mountain climate with strong seasonal contrasts. Winters are cold with snow cover at higher elevations, while summers are warm and relatively dry in lower valley sections. Annual precipitation is moderate but highly seasonal, with peak rainfall occurring in spring, often coinciding with snowmelt. This seasonal combination produces concentrated runoff and peak river discharge.

Hydrologically, the Shurobdaryo River system exhibits strong variability, with tributary channels that may remain dry for much of the year but convey significant water and sediment volumes during storm events. The valley morphology is narrow and confined, intensifying hydraulic forces during flood conditions. Observed failures of existing embankment protection works at certain locations illustrate the consequences of concentrated flow impingement and inadequate cross-drainage beneath protective slabs.

Projected increases in extreme precipitation are expected to amplify peak discharges, sediment transport, and debris flow generation. Intensified rainfall events may produce higher instantaneous runoff with shorter response times, increasing the likelihood of culvert overtopping and embankment erosion. Increased sediment loads are expected to accelerate abrasion of protection materials and contribute to culvert blockage, further reducing hydraulic capacity during extreme events.

Temperature increases are also expected to influence infrastructure durability. Elevated peak temperatures may accelerate asphalt rutting and softening, increase thermal stress cracking in concrete protection works, and contribute to accelerated corrosion of metallic components such as gabion mesh. These projected changes mean that climate resilience is not a secondary design consideration but a defining feature of the environmental baseline.

Baseline air quality in the corridor is generally good due to the rural setting and absence of major industrial emission sources. However, dust generated by traffic on the existing unpaved surface represents a persistent localized issue, particularly during dry weather in settlements. The baseline acoustic environment is typically quiet, reflecting low traffic volumes. Construction activities have the potential to temporarily increase dust, noise, and vibration levels, particularly in proximity to villages.

## 4.3 Biological Resources

The biological baseline reflects a mosaic of modified and semi-natural habitats shaped by mountainous terrain, river valleys, and long-standing human land use. Much of the corridor traverses agricultural land, pasture, roadside disturbed areas, and degraded slope vegetation. These habitats are generally of lower ecological sensitivity due to existing disturbance. However, riparian environments along the Shurobdaryo River and its tributaries represent comparatively higher-value habitats. These narrow strips of vegetation support greater structural diversity and are ecologically important within an otherwise sparsely vegetated landscape.

Although the Project alignment does not intersect nationally designated protected areas, the Sari Khosor Nature Park lies approximately four kilometres from the corridor and falls within the Project's indirect area of influence. Preliminary biodiversity screening conducted during project preparation has identified a number of features of high conservation significance within and adjacent to the corridor. These include: confirmed populations of migratory brook trout (*Salmo trutta*) in the Shurobdaryo River and its tributaries; a minimum of 20 Red Book of Tajikistan plant species documented in the Sari Khosor tract, including spring ephemerals of the genera *Tulipa*, *Eremurus*, and *Juno/Iris*; globally threatened bird species identified within IBAT screening buffers, including Saker falcon (*Falco cherrug*, Endangered) and Egyptian vulture (*Neophron percnopterus*, Endangered); and the Bukhara deer breeding farm, a specific sensitive receptor located within construction noise influence distance of the corridor.



The Critical Habitat Assessment (CHA, Rev01, April 2026) has determined that no Critical Habitat is present within the project area of influence under any of the five ESR6 criteria. Priority Biodiversity Features are confirmed present across multiple species and habitat types as set out in the CHA. All construction activities must be implemented under PBF-level controls as defined in the Biodiversity Management Plan (Annex 8) from Day 1 of mobilisation. Contractors must price their bids on the assumption that these controls apply in full from the outset of works.

A pre-construction biodiversity field survey programme is underway and will be completed prior to construction commencement. The survey programme will spatially delineate confirmed PBF locations, populate the Sensitive Feature Register in the Biodiversity Management Plan, establish GPS-referenced locations and buffer distances for all Priority Biodiversity Features, and provide the species-specific data required to finalise pre-clearance ecological inspection protocols. No vegetation clearance, ground disturbance, or earthworks shall commence on any section of the corridor or at any ancillary facility until: (a) the pre-construction biodiversity survey for that section has been completed; (b) the Sensitive Feature Register has been updated with confirmed survey findings; (c) the Biodiversity Management Plan has been revised accordingly and submitted to the Engineer and PIURR; and (d) written approval of the updated BMP has been obtained. The expected completion date for the pre-construction biodiversity survey programme will be confirmed in the bid addendum issued prior to tender close. Contractors shall programme their mobilisation and site establishment activities on the assumption that this gating condition applies and shall not treat the pre-clearance ecological survey as a parallel activity that can be compressed to recover programme time.

#### 4.4 Socio-economic Resources

The Project area is predominantly rural and characterised by dispersed settlements with limited infrastructure and strong reliance on natural resources. Approximately 19 villages lie along or near the corridor. Many communities experience seasonal isolation due to snow, landslides, and flooding, restricting access to healthcare, education, markets, and administrative services. Travel times are long, and road safety conditions are poor. These baseline constraints provide a clear development rationale for the Project, as improved connectivity is expected to enhance access to essential services and economic opportunities.

Livelihoods in the area are largely land-based. Households depend on small-scale agriculture, dehkan farms, livestock grazing, forestry land, and fruit trees for subsistence and supplemental income. Remittances and limited non-farm employment provide additional income streams, but diversification opportunities remain constrained. Even partial land acquisition can materially affect household welfare due to the limited asset base and high dependence on agricultural production.

Baseline documentation confirms that the Project will not result in physical displacement of residential structures. However, partial acquisition of agricultural and forestry land, loss of trees and crops, and temporary land occupation during construction represent significant economic impacts. Some dehkan farms may experience the loss of more than ten percent of productive land, qualifying as severely affected. The presence of vulnerable households—including female-headed households, elderly-headed households, households with disabled members, and land-poor families—heightens the need for targeted livelihood restoration and inclusive engagement measures.

The broader socio-economic context of Khatlon Region indicates persistent vulnerability despite national poverty reduction trends. Livelihoods are often precarious, with households moving in and out of poverty depending on seasonal and economic conditions. This reinforces the importance of careful compensation processes, livelihood restoration planning, and monitoring within the ESMP framework.

A Draft Resettlement Plan (RP) has been prepared by PIURR to manage the permanent and temporary land acquisition, crop and tree compensation, and livelihood restoration obligations arising from the



Project. The RP is a PIURR instrument and its implementation — including payment of all compensation to affected landowners and users — is PIURR's responsibility, not the Contractor's. No construction works, site establishment, or ancillary facility development shall commence on any parcel of land until PIURR has confirmed in writing that compensation for that parcel has been paid in full and that the affected party has been notified. Contractors shall maintain a land access log recording the written confirmation received from PIURR for each section before works commence. Any instruction from a site supervisor to commence works on uncompensated land shall be escalated immediately to the Contractors Environmental and Social Manager (ESM) and the ENGINEER.

#### 4.5 Cultural Heritage and Community Sensitivities

Cultural heritage features in the Project area include formally recognised sites, such as the Baljuvon Fortress and local museum near the start of the alignment, as well as informal but culturally significant community cemeteries located near sections of the corridor. While no direct impacts on registered monuments are anticipated, cemeteries are of high religious and social importance and require strict avoidance or sensitive management. Furthermore, given the history of settlement along river valleys, there remains potential for undiscovered subsurface archaeological material during earthworks. A robust Chance Finds Procedure will therefore be followed by the Contractor (see Appendix 12).

#### 4.6 Road Safety and Community Health

Baseline road safety conditions are poor. The existing road is narrow, unpaved, and geometrically substandard, with sharp curves, limited sight distances, and exposure to slope and river hazards. Pedestrians, children, livestock, and vehicles share the same space, particularly within settlements. These conditions contribute to elevated accident risk and seasonal closures.

Construction activities will temporarily increase traffic volumes and heavy vehicle movement, potentially heightening community safety risks. In the operational phase, improved surfacing and geometry may increase travel speeds, introducing new safety dynamics. Consequently, the ESMP must integrate construction traffic management, speed control measures, safe pedestrian crossings in settlements, and road safety awareness initiatives.

## 5. Key Environmental and Social Risks and Impacts

---

This section presents the identification and preliminary evaluation of the key environmental and social risks and impacts associated with the Project. The assessment is informed by baseline conditions, technical studies, and the specific characteristics of the mountainous river-valley setting. Given the linear nature of the Project, its proximity to the Shurobdaryo River, and its passage through rural settlements and sensitive riparian environments, several risks are inherently elevated prior to mitigation—particularly those related to natural hazards, hydrology, biodiversity, community health and safety, occupational safety, and land acquisition.

The table below consolidates the identified risks across physical, biological, and socio-economic receptors into a single structured risk register. For each topic, the table specifies the relevant EBRD ESR, key receptors, potential risks and impacts, and a qualitative pre-mitigation risk rating (Low, Moderate, or High) with justification. The ratings reflect the likelihood and severity of impacts in the absence of mitigation measures and are intended to guide prioritisation of management actions within the ESMP. Residual risks following implementation of mitigation measures are expected to reduce to acceptable levels consistent with GIIP and EBRD requirements.

Table 5: Summary Risks and Impacts

Sec.	Topic	EBRD ESR (2024)	Receptors	Potential Risks and Impacts	Risk Rating (Pre-Mitigation)	Justification	
5.1 Physical Resources							
5.1.1	Natural Hazards (Flooding, Landslides, Climate Change)	ESR1, ESR4	Road infrastructure, settlements, workers, road users	Landslides, mudflows, flooding (up to 263 cm in 100-year events), erosion, rockfall, river channel migration, intensified precipitation, temperature >50°C, snowmelt regime shifts	High (Critical)	Corridor exposed to severe flood depths and nearly 100 hazard locations. Flood and landslide events during construction represent direct occupational and community safety risks under ESR4 in addition to infrastructure risks under ESR1.	
5.1.2	Air Quality	ESR1	Local communities, workers, agricultural land	Dust emissions (PM10/PM2.5) from earthworks, haul roads, and plant; exhaust emissions from equipment and vehicles	Moderate	Localised and temporary. Settlements close to alignment increase sensitivity during dry construction periods.	
5.1.3	Water Resources & River Hydrology	ESR1, ESR3, ESR6	Shurobdaryo River, tributaries, aquatic ecosystems, downstream users	Sedimentation, spill risk, drainage overload, culvert blockage, underestimation of peak flows, flow velocities >7 m/s in constricted	High (Critical)	Hydrological design is based on SNiP 2.05.03-84, applied at the correct return periods for a Category V road (50-year for bridges, 33-	

Sec.	Topic	EBRD ESR (2024)	Receptors	Potential Risks and Impacts	Risk Rating (Pre- Mitigation)	Justification	
				sections, enhanced sediment transport and boulder impact on structures		year for pipe culverts). Design rainfall of 83mm is the only observed station-based 100-year daily depth available for the project area, derived from Khovaling and Kangurt meteorological stations. Regional climate modelling (CRA, NEX-GDDP dataset at 25km resolution) indicates a 100-year daily rainfall of approximately 145mm for the southern corridor sections under current conditions, rising under high-emission scenarios by 2050. The gap between the observed station figure and modelled values reflects known uncertainties in regional climate models in complex mountain terrain and does not in itself indicate underestimation in the	

Sec.	Topic	EBRD ESR (2024)	Receptors	Potential Risks and Impacts	Risk Rating (Pre- Mitigation)	Justification	
						design. Design flows incorporate debris flow multipliers ranging from 2.6 to 4.8 (with most catchments above 3.5) applied to liquid discharge, providing substantial conservatism above the rainfall input. The design has eadroom to absorb realistic climate change uplifts, because the non-linear relationship between rainfall input and design flow means a proportional increase in rainfall produces a smaller proportional increase in calculated flows.	
5.1.4	Soil, Geology & Embankment Stability	ESR1	Slopes, road embankments, agricultural land	Slope instability, embankment washout, hydrostatic pressure failure under concrete slabs, debris flow deposition, inadequate	High	Documented failures at km 4 due to concentrated flow directed perpendicular to embankment and inadequate cross-drainage. Climate-	



Sec.	Topic	EBRD ESR (2024)	Receptors	Potential Risks and Impacts	Risk Rating (Pre- Mitigation)	Justification	
				cross-drainage causing progressive failure		driven precipitation intensification increases landslide triggering frequency. Steep and geomorphologically active terrain throughout corridor.	
5.1.5	Noise & Vibration	ESR1, ESR4	Communities, sensitive receptors (schools, clinics), livestock	Construction noise from earthworks and plant; blasting vibration affecting structures and communities.	Moderate	Settlements located close to alignment increase noise sensitivity. Temporary and manageable through standard controls. Note: national SanPiN vibration limit (0.5 mm/s PPV) is significantly more stringent than DIN 4150- 3 — see standards table note in Section 3.	
5.1.6	Drainage & Culvert Capacity	ESR1, ESR4	Embankments, bridges, communities, downstream receptors	Culvert blockage by debris and boulders, overtopping of drainage structures, hydrostatic uplift under slabs, box	High (Climate- Amplified)	Drainage structures have been designed to SNiP 2.05.03-84 return period standards for a Category V road, using	

Sec.	Topic	EBRD ESR (2024)	Receptors	Potential Risks and Impacts	Risk Rating (Pre- Mitigation)	Justification	
				culvert failure under climate-amplified flows		a 100-year observed daily rainfall of 83mm as the design input — a figure that exceeds the required 33–50 year design standard by a substantial margin. Design flows incorporate debris flow multipliers of 3.5–4.8, meaning final design flows are three to five times the liquid runoff figure and are primarily determined by catchment physical characteristics rather than the rainfall input. A proportional increase in rainfall does not produce the same proportional increase in design flow. The design therefore has inherent conservatism against	



Sec.	Topic	EBRD ESR (2024)	Receptors	Potential Risks and Impacts	Risk Rating (Pre-Mitigation)	Justification	
						climate-amplified flows within the range of plausible projections for this region. The principal residual risk is physical blockage of culvert openings by transported boulders and debris rather than hydraulic capacity exceedance, and this is addressed through maintenance provisions in the Operations and Maintenance Plan and through the specification of clear-span structures at the most exposed crossings. Sedimentation and drainage risks to downstream receptors are managed through the	

Sec.	Topic	EBRD ESR (2024)	Receptors	Potential Risks and Impacts	Risk Rating (Pre-Mitigation)	Justification	
						Water Quality and Sediment Control Plan (Annex 7).	
5.1.7	Materials Durability (Concrete, Gabions)	ESR1	River protection works, bridges, embankments	Thermal cracking of concrete, corrosion and abrasion of gabion mesh from increased sediment loads, accelerated weathering, reduced design life under climate-amplified conditions	High (Long-Term)	Temperature increases >4°C, peaks >50°C in riverbed. Potential climate impact on concrete and mesh durability. Increased sediment transport accelerates abrasion and corrosion kinetics.	
5.1.8	River Gravel Extraction	ESR1, ESR3, ESR6	Shurobdaryo River bed, aquatic habitat, spawning gravels, downstream morphology	Disturbance of riverbed during gravel extraction; destruction of brook trout spawning redds; alteration of river morphology; sedimentation of downstream habitat; pressure on alternative borrow sources where river gravel is unsuitable for gabion fill	High	River gravel is the primary identified borrow material for the Project. Extraction from the active channel or floodplain directly threatens confirmed PBF features including migratory brook trout ( <i>Salmo trutta oxianus</i> ) spawning habitat and Eurasian Otter river corridor.	

Sec.	Topic	EBRD ESR (2024)	Receptors	Potential Risks and Impacts	Risk Rating (Pre- Mitigation)	Justification	
5.2 Biological Resources							
5.2.1	Flora and PBF	ESR6	Vegetation clearance, habitat disturbance, loss of rare plant communities, disturbance to riparian habitats supporting confirmed PBFs	Vegetation clearance, habitat disturbance, loss of rare plant communities, disturbance to riparian habitats supporting confirmed PBFs under ESR6	High	The Critical Habitat Assessment (CHA, Rev01, April 2026) has determined that no Critical Habitat is present within the project area of influence under any of the five ESR6 criteria. Priority Biodiversity Features are confirmed present, including at least 20 Red Book plant species documented in the Sari Khosor tract, confirmed migratory brook trout, Eurasian Otter (EN nationally), and multiple IUCN threatened species. PBF-level controls apply in full under EBRD ESR6. No net loss of confirmed PBFs must be demonstrated through	

Sec.	Topic	EBRD ESR (2024)	Receptors	Potential Risks and Impacts	Risk Rating (Pre-Mitigation)	Justification	
						the construction and operational phases.	
5.2.2	Fauna (Terrestrial and Aquatic)	ESR6	Fish (including migratory brook trout), aquatic organisms, large mammals, migratory bird species, Bukhara deer breeding farm	Sedimentation and water quality impacts on aquatic fauna, disturbance to wildlife movement, hunting or collection by workers, impacts on Bukhara deer breeding farm near the corridor	High	Confirmed presence of migratory fish (brook trout) and diverse aquatic communities. Multiple nationally threatened bird species confirmed as PBFs in the CHA (Rev01, April 2026), including Saker Falcon, Egyptian Vulture, Bearded Vulture, and Barbary Falcon. Bukhara deer breeding farm identified as a specific sensitive receptor near the corridor requiring targeted assessment and mitigation.	
5.2.3	Protected Areas	ESR6	Sari Khosor Nature Park (indirect), wider landscape	Indirect hydrological and tourism-related pressure on Nature Park; cumulative induced development effects from improved access; increased poaching	Moderate	No direct Project footprint within the Nature Park. However, improved road access is expected to induce increased tourism and associated pressures	

Sec.	Topic	EBRD ESR (2024)	Receptors	Potential Risks and Impacts	Risk Rating (Pre- Mitigation)	Justification	
				pressure from construction workforce and post-completion tourism		including poaching risk. Indirect impacts on a Nature Park adjacent to a corridor with confirmed PBFs are assessed as Moderate. The CHA (Rev01, April 2026) assesses cumulative and operational phase impacts from improved road access — including increased hunting pressure on PBF species and encroachment toward the park — and sets out specific management recommendations addressed in Section 9.4 of this ESMP.	
5.3 Socio-economic Resources							
5.3.1	Community Health & Safety	ESR4	Roadside communities, children,	Flood exposure and embankment failure risk; traffic accidents during construction and operation; restricted	High	Intensified flood regime increases risk of overtopping and access disruption. Settlements directly adjacent to	

Sec.	Topic	EBRD ESR (2024)	Receptors	Potential Risks and Impacts	Risk Rating (Pre-Mitigation)	Justification	
			pedestrians, road users	access to services; exposure to dust, noise, and construction hazards near work fronts		alignment with known baseline safety concerns. Construction traffic on narrow haul routes through settlements increases accident probability significantly.	
5.3.2	Labour, Working Conditions & SEA/SH	ESR2, ESR4, ESR10	Construction workers, local community (particularly women and girls)	Wage and contract issues; inadequate accommodation standards; labour influx tensions; Sexual Exploitation and Abuse / Sexual Harassment (SEA/SH) risks associated with contractor workforce presence	Moderate – High (SEA/SH)	Standard construction labour risks apply throughout. Labour influx from contractor workforce triggers EBRD requirements for SEA/SH risk screening and management under ESR2, ESR4, and ESR10. Code of Conduct, worker GRM, and SEA/SH awareness training required.	
5.3.3	Occupational Health & Safety	ESR2, ESR4	Construction workforce	Injuries from machinery, excavations, working at height; extreme heat stress (>50°C); exposure to high-velocity flood	High (Climate-Amplified)	Extreme heat under climate projections (peaks >50°C) and intensified flood conditions increase accident probability and	



Sec.	Topic	EBRD ESR (2024)	Receptors	Potential Risks and Impacts	Risk Rating (Pre-Mitigation)	Justification	
				events and slope failure during works		heat stress risk for outdoor workers. Standard OHS risks elevated by mountainous terrain and geohazard exposure throughout corridor.	
5.3.4	Cultural Heritage – Cemeteries & Chance Finds	ESR8	Known cemeteries near alignment; subsurface archaeological resources	Disturbance to or loss of cemetery sites located close to the alignment; discovery of subsurface archaeological material during excavation	Moderate	Known cemeteries are located close to the alignment and are culturally sensitive assets requiring specific avoidance and management. Long-established settlement history and planned earthworks indicate potential for chance finds.	
5.3.5	Gender and Vulnerable Groups	ESR2, ESR5, ESR10	Women, female-headed households, vulnerable and land-dependent households	Disproportionate livelihood disruption from land acquisition and climate-induced flood events; SEA/SH exposure; reduced access to services during	Moderate	Increased flood frequency may exacerbate vulnerability of female-headed and land-dependent households. Disproportionate impacts from partial	

Sec.	Topic	EBRD ESR (2024)	Receptors	Potential Risks and Impacts	Risk Rating (Pre-Mitigation)	Justification	
				construction for those with limited mobility		land acquisition on land-poor and vulnerable households are an ESR5 obligation addressed through the RP.	
5.3.6	Waste Management	ESR1, ESR3	Soil, watercourses, communities	Uncontrolled construction waste and hazardous waste; spill risk amplified during extreme rainfall events; illegal dumping at borrow areas and spoil sites	Moderate	Higher runoff under climate projections increases contamination spread potential from poorly managed waste and fuel storage areas.	
5.3.7	Land Acquisition & Livelihoods	ESR5	Farmers, pasture users, land-dependent and vulnerable households	Permanent and temporary land take for road works and associated facilities; increased floodplain alteration potentially extending land impacts beyond design footprint; disruption to agricultural access	High	Draft RP confirms no physical displacement but partial land acquisition and temporary land use will result in economic displacement and livelihood impacts, particularly for vulnerable households. The primary rating driver is confirmed economic displacement from partial land	

Sec.	Topic	EBRD ESR (2024)	Receptors	Potential Risks and Impacts	Risk Rating (Pre- Mitigation)	Justification	
						acquisition, which exists independently of climate change. Climate change may extend the floodplain impact footprint beyond the design boundary and is treated as an amplifier, not the primary risk basis.	
5.3.8	Cumulative Impacts	ESR1	Sari Khosor Nature Park, surrounding communities, regional environment	Combined effects of improved road access inducing tourism growth; cumulative pressure on Nature Park; combined operation of multiple associated facilities	Moderate	Improved access expected to increase tourism to Sari Khosor area, with indirect pressures on the Nature Park. Multiple associated facilities operating simultaneously may generate elevated cumulative disturbance.	
5.3.9	Resource Use & Energy Demand	ESR1, ESR3	Natural resources, river aggregate	Increased material demand for climate-resilient protection and drainage upgrades; pressure on river gravel	Moderate	Climate adaptation increases total material volumes. River gravel suitability limitations	



Sec.	Topic	EBRD ESR (2024)	Receptors	Potential Risks and Impacts	Risk Rating (Pre-Mitigation)	Justification	
				sources and alternative borrow materials		increase pressure on quarry sources.	

*Note: Risk ratings reflect pre-mitigation conditions. EBRD ESR references are to the EBRD Environmental and Social Policy (2024) and Environmental and Social Requirements (ESRs). Where differences exist between the 2024 ESRs and the 2019 Performance Requirements, the 2024 ESRs apply as the current policy applicable to this Project.*

## 6. Environmental and Social Mitigation Plan

---

### 6.1 General

The following sections provide the environmental, health and safety mitigation plan for the design, pre-construction and construction phases of the Project. The design phase is presented in narrative form summarising the key design outputs that constrain the Contractor's works. The pre-construction/construction phase is presented in tabular form identifying:

- a) Potential Impacts and Risks
- b) Mitigation measures for each (or groups of) identified risks and impacts
- c) Monitoring Indicators
- d) The responsibilities for implementing the mitigation
- e) Frequency of monitoring
- f) Costs

### 6.2 Design Phase

The mitigation measures for the design phase are the responsibility of the Detailed Design Consultant (DDC) and PIURR. The outputs of the design phase — including approved hydraulic calculations, geotechnical reports, road safety audit responses, biodiversity assessments, material specifications, drainage designs, and contract specifications — define the minimum standards and constraints within which the Contractor must operate. The Contractor is required to:

- Implement all mitigation measures assigned to them in the construction phase ESMP table in a manner consistent with the design intent and specifications produced during the design phase;
- Review and familiarise themselves with all design-stage documents, including the hydraulic design report, geotechnical investigation, RSA report, biodiversity assessment, RP, CRA and BMP, prior to mobilisation;
- Raise any conflict, ambiguity or inadequacy between design outputs and site conditions immediately with the Engineer, and not proceed until resolved;
- Prepare their CESMP and all sub-plans in full compliance with the standards, thresholds, and constraints established at design stage; and
- Where design documents specify climate adjustment factors, trigger levels, material performance standards, or timing restrictions (e.g. for in-stream works), treat these as binding contractual requirements.

All design documents referenced in this section will be included in the bid package or issued by addendum prior to tender close, and any documents not available at bid issue will be issued before the CESMP submission deadline post-award. The principal design-phase outputs that constrain the Contractor's works are summarised below.

#### **Natural Hazards, Hydrology and Climate Resilience**

The BSK Project is located in a corridor subject to documented and projected climate change, as assessed in the Climate Risk and Adaptation Assessment (CRA, 2023). The CRA identified flooding, debris flows, slope instability, and extreme temperatures as the principal climate-amplified risks over



the project's operational design life. The following design measures have been incorporated specifically in response to CRA findings and are binding on the Contractor — no substitution or reduction is permitted without written Engineer approval.

The design includes seismic load calculations for all bridges and retaining structures; hydraulic calculations for all bridges and culverts based on SNiP 2.05.03-84 return period standards using a 100-year observed daily rainfall input of 83 mm, with design flows incorporating debris flow multipliers of 2.6–4.8 that provide inherent conservatism against climate-amplified precipitation within the plausible projection range for this region; slope stability assessments along the alignment; and material performance specifications covering concrete mixes, gabion mesh, and riprap sizing, selected to meet the material degradation requirements of the corridor's aggressive climate environment including high sediment abrasion and thermal stress cycling. The Contractor must construct to these parameters and must not substitute alternative sizing, capacity assumptions, or material specifications without the Engineer's written approval.

Slope benching at sections with high and steep gradients has been incorporated as a specific CRA adaptation measure under Technical Specification Section 2400 (Slope Protection and Erosion Control). Benching reduces effective slope angle, intercepts rainfall runoff, and reduces vulnerability to rainfall-triggered shallow sliding. It shall not be omitted or reduced without Engineer approval.

Polymer-modified bitumen (PMB) is specified for the asphalt wearing course in response to the CRA projection of maximum daily temperatures exceeding 45–50°C at the 100-year return period by 2050. PMB improves resistance to rutting and softening at high road surface temperatures. Conventional bitumen shall not be substituted without Engineer approval and written confirmation that the substitute meets an equivalent performance specification.

River training and engineering works — spur dikes and channel regulation works at high-risk embankment sections — are included under Technical Specification Section 2100 and BOQ Bill No. 3 as structural components of the climate resilience design. They shall be constructed to specified dimensions and materials without substitution.

Geotechnical investigations carried out during design have informed foundation type selection, with piled foundations specified for all bridges. However, the required pile depths at individual bridge locations are subject to confirmation against actual ground conditions encountered during construction. Prior to commencement of foundation works at each bridge, the Contractor shall carry out site-specific geotechnical investigation to the depth required to confirm founding conditions, and shall submit the results together with revised pile depth calculations to the Engineer for approval before proceeding. No foundation works shall commence until this confirmation has been received in writing from the Engineer. Where investigation reveals conditions materially different from design assumptions, the Contractor shall notify the Engineer immediately and a design review shall be undertaken before works proceed.

Construction-phase management of climate-amplified hazard risk — including seasonal scheduling to avoid peak flood periods, rainfall stop-work triggers by work type, flood emergency response procedures, and on-site weather monitoring — is addressed in the Natural Hazards and Water Resources mitigation rows of Section 3.

#### **River Gravel Extraction and Borrow Materials**

A Preliminary Borrow Area Register will be prepared identifying candidate extraction zones, estimated volumes, suitability classifications by use type, seasonal restriction windows to protect fish spawning, minimum setback distances from the active channel, and reinstatement requirements. Alternative sources for gabion fill will be identified by the Contractor where river gravel is unsuitable. The Contractor shall prepare an extraction method statement as a mandatory CESMP sub-plan and must not extract from any location not in the Register without the Engineer's approval. Information on the



locations for Borrow Materials is provided for information only and It Is the responsibility of the Contractor to verify the sources and suitability of materials to be used.

### **Road Safety and Traffic Management**

The design will specify safety barrier locations and performance classes, guide post spacing, chevron marker locations, road markings, speed restriction signage (40 km/h in villages, 60 km/h rural), humped pedestrian crossings in village areas, and community protection measures at sensitive receptors. The Contractor must install all road safety infrastructure as specified and must not omit or modify any element without the Engineer's written approval. A road safety audit will be carried out by the Engineer prior to completion of the Works and the Contractor will be required to incorporate any additional measures identified.

### **Water Resources, Drainage and Erosion Control**

The design will include drainage calculations using climate-adjusted rainfall intensities, cross-drainage for all concrete slab protection sections, lined ditch and check dam designs, cut-off drains above major cut slopes, silt traps, sediment control structures, and outlet erosion protection. An Erosion and Sediment Control Plan (ESCP) will be required as a mandatory CESMP sub-plan. The Contractor must not reduce culvert sizes, omit sediment control measures, or alter drainage alignments without the Engineer's approval.

## **6.3 Pre-construction / Construction Phase**

The construction phase ESMP table sets out the mitigation measures, monitoring requirements, and responsibilities applicable during pre-construction and construction. The Contractor is required to implement all measures assigned to them and to reflect these commitments in the CESMP and its sub-plans. The engineer will monitor and verify compliance on behalf of PIURR and EBRD.

Table 6: Pre-construction/Construction Phase ESMP

Ref.	Topic	Impact / Issue	Commitment / Mitigation Measure	Monitoring Indicator / Means of Verification	CEMP Sub-plan	Implementation	Supervision	Timing / Frequency
1. Pre-Construction Obligations — Gating Requirements Before Any Site Access								
C-PC-01	CESMP Approval	No site access without approved management plan	No site establishment, or construction works shall commence until the Contractor's CESMP and all required sub-plans (Annexes 1 to 16) have been submitted, reviewed, and approved in writing by the Engineer and PIURR and have received the Bank's "no objection" where applicable. The CESMP must be submitted at least 30 days before the intended date of the physical start of the works on site. The approved CESMP shall be made available to all subcontractors before they commence any works.	Approved CESMP on file with Engineer sign-off date. Sub-plan approval status log. No site access granted before approval. Subcontractor receipt records.	Annexes 1–16	Contractor (ESHS Manager)	ENGINEER / PIURR	30 days pre-mobilisation
C-PC-02	Permits & Licences	Non-compliant construction if permits not obtained	Contractor to verify validity of Project's State Ecological Expertise (SEE) conclusion before site access. Obtain all required construction permits before commencing activities that require them: borrow pit/quarry extraction permits (CEP), asphalt plant MPE emission permit (CEP), water abstraction permit (BWO / Ministry of Energy and Water Resources), hazardous waste handling licence, temporary land occupation agreements. Maintain permit register on site, available for inspection at all times.	Permit register on site with copies of all permits. Validity dates monitored — renewal flagged 60 days before expiry. Engineer spot-check records.	N/A	Contractor (ESHS Manager)	ENGINEER / PIURR	Pre-construction / Ongoing



Ref.	Topic	Impact / Issue	Commitment / Mitigation Measure	Monitoring Indicator / Means of Verification	CEMP Sub-plan	Implementation	Supervision	Timing / Frequency
C-PC-02a	RP Land Access Confirmation	Contractor accesses land for which PIURR has not confirmed compensation payment, causing ESR5 non-compliance, community disputes, and potential EBRD disbursement suspension.	No construction works, site establishment, or ancillary facility development (camps, borrow areas, spoil sites, access roads) shall commence on any parcel of land until PIURR has confirmed in writing that RP compensation for that specific parcel has been paid in full and that the affected landowner or user has been formally notified. The Contractor shall: (a) maintain a Land Access Log recording the written PIURR confirmation received for each section and parcel before works commence; (b) mark confirmed and unconfirmed parcels on the construction programme and site drawings; (c) immediately escalate to the Engineer and ESHS Manager any instruction to commence works on a parcel without PIURR written confirmation; and (d) treat absence of PIURR confirmation as a stop condition — the same status as absence of an approved CESMP. (e) for any section involving physical or economic displacement, the Engineer shall prepare a formal sectional RAP Completion Report verifying that compensation has been paid in full and affected parties formally notified, and shall not issue a works commencement instruction for that section until EBRD has provided written sign-off on that report. PIURR compensation confirmation is a necessary input to the Engineer's	Land Access Log on site with PIURR written confirmation records per parcel. Construction programme shows confirmed/unconfirmed land status. Zero instances of works commencing on unconfirmed parcels. Monthly Land Access Log submitted as part of ESHS report to Engineer. Any escalation records on file. For resettlement sections: Engineer's sectional RAP Completion Report on file; EBRD written sign-off on that report confirmed before works commencement instruction issued. Zero instances of works commencing on resettlement parcels without both Engineer's report and EBRD sign-off on file.	Annex 9 / Land Access Log	Contractor (ESHS Manager / Site Engineer)	PIURR (compensation confirmation); Engineer (RAP Completion Report preparation and works commencement gating); EBRD (sign-off on sectional RAP Completion Reports)	Pre-construction for each section; updated continuously as works advance. For resettlement sections: Engineer's RAP Completion Report prepared and EBRD sign-off received before works commencement instruction issued — triggered section by section as programme advances, not at fixed intervals.

Ref.	Topic	Impact / Issue	Commitment / Mitigation Measure	Monitoring Indicator / Means of Verification	CEMP Sub-plan	Implementation	Supervision	Timing / Frequency
			report but is not itself sufficient to permit works commencement on resettlement sections.					
C-PC-03	Baseline Surveys	Clearance commencing before pre-construction biodiversity survey is complete risks irreversible loss of confirmed PBF features.	Conduct the following baseline surveys and record results before any ground disturbance: (1) Pre-condition photographic survey of all structures, roads, and infrastructure within 50 m of construction corridor — before any earthworks at each section. (2) Noise and air quality baseline measurements at all sensitive receptors within 250 m — before any construction activities at each section. (3) Condition survey of all existing access roads and tracks to be used for construction haulage — before first use. (4) Pre-clearance ecological walkover survey by qualified Ecologist within the clearing limit of each work section immediately before clearance of that section. The pre-clearance walkover confirms site conditions at the point of clearance, checks for the presence of any protected or sensitive features not previously identified, and issues a Pre-Clearance Certificate (Annex 8, Appendix B) for that section. The pre-clearance walkover is NOT a substitute for the ESIA-stage biodiversity survey. GATING CONDITION: No vegetation clearance or ground disturbance shall commence in any section until: (a) the pre-construction biodiversity survey for that section has been	Pre-condition survey reports (photos and written) on file before ground disturbance at each section. Noise/AQ baseline records. Road condition assessment reports. Pre-clearance ecological walkover report and signed Pre-Clearance Certificate on file before clearance of each section. Pre-construction biodiversity survey completion confirmation from PIURR on file before clearance gate is opened for each section. Sensitive Feature Register updated for each section before clearance approved. Zero clearance without Pre-Clearance Certificate AND PIURR ESIA survey confirmation.	Annex 8 / Annex 16	Contractor (ESHS Manager and Ecologist)	Engineer and PIURR	Pre-construction and before each section clearance

Ref.	Topic	Impact / Issue	Commitment / Mitigation Measure	Monitoring Indicator / Means of Verification	CEMP Sub-plan	Implementation	Supervision	Timing / Frequency
			completed; (b) the Sensitive Feature Register (Annex 8, Appendix A) has been updated with confirmed survey findings for that section; (c) the Biodiversity Management Plan has been revised accordingly and approved by the Engineer and PIURR. The Contractor shall not treat the pre-clearance walkover as satisfying this gating condition — these are two separate and sequential requirements.					
C-PC-04	Worker Induction	Workers starting work without understanding ESHS requirements	Mandatory ESHS induction for every worker — including subcontractor workers and visitors — before first day on site. Induction to cover as minimum: CESMP commitments, Code of Conduct, GRM, SEA/SH policy, biodiversity sensitivities, chance finds procedure, emergency response, OHS requirements, PPE use, and waste management. Maintain attendance records. No site access without induction completion.	Induction records: 100% of workers inducted before site access. Induction materials reviewed by Engineer. Spot checks on new arrivals.	All sub-plans	Contractor (ESHs Manager)	Engineer and PIURR	Before any site access; updated for each new work phase
C-PC-05	ESHs Staffing	Inadequate ESHs oversight causing non-compliance — risk elevated on a 56 km remote corridor with multiple simultaneous work fronts.	Contractor to appoint and mobilise dedicated ESHs staff before commencement of works. Minimum required positions and qualifications are as follows: (a) Environmental and Social Manager (ESM) — full-time, minimum 5 days/week on site. Minimum qualifications: degree in environmental science, civil engineering, or related field; minimum 7 years' experience on IFI-	ESM, HSS, and Ecologist CVs approved by Engineer pre-mobilisation — approval records on file. ESHs staff site attendance register (daily). Ecologist appointment confirmation for each vegetation-sensitive	All sub-plans	Contractor (ESHs Manager)	Engineer and PIURR	CVs approved pre-mobilisation; attendance register throughout construction

Ref.	Topic	Impact / Issue	Commitment / Mitigation Measure	Monitoring Indicator / Means of Verification	CEMP Sub-plan	Implementation	Supervision	Timing / Frequency
			<p>financed infrastructure projects; demonstrated experience preparing and implementing ESMPs and CESMPs. CV to be submitted for review by Engineer before mobilisation. (b) Health and Safety Specialist (HSS) — full-time, minimum 5 days/week on site. Minimum qualifications: recognised OHS qualification (NEBOSH, IOSH, or national equivalent); minimum 15 years' on-site construction experience of which at least 5 years in a dedicated OHS role on infrastructure projects in mountainous or remote terrain. CV to be submitted and approved by Engineer before mobilisation. (c) Ecologist — part-time, minimum 50% time during all vegetation-sensitive phases (clearance, in-river works, reinstatement). Minimum qualifications: degree in ecology, botany, zoology, or environmental science; minimum 5 years' experience in biodiversity survey and management on infrastructure projects; demonstrated experience with rare plant species and aquatic ecology. (d) Community Liaison Officer (CLO) / SCLO — present during all phases when works are active near settlements. Fluency in Tajik and/or Russian required. All ESHS key personnel CVs must be approved by the Engineer before mobilisation. The Contractor shall not substitute or replace any approved</p>	<p>phase. CLO contact details published in affected communities before works commence in each section. Subcontractor safety representative records. Zero unapproved key personnel substitutions.</p>				

Ref.	Topic	Impact / Issue	Commitment / Mitigation Measure	Monitoring Indicator / Means of Verification	CEMP Sub-plan	Implementation	Supervision	Timing / Frequency
			ESHS key personnel without prior written approval from the Engineer. Subcontractors must each appoint an on-site safety representative.					
C-PC-06	Management of Change	New or increased E&S risks introduced when design, method, site location, or traffic routing changes without formal review.	Implement a formal Management of Change (MoC) procedure within the CESMP. Where any proposed change to design, construction method, site location, disposal area, traffic routing, or other operational arrangement may introduce new or increased E&S risks, the Contractor shall: update the ESHS Risk Register; revise relevant method statements or sub-plans; obtain required approvals from the Engineer before implementing the change; and secure additional permits where applicable. No change with E&S implications shall be implemented without documented Engineer approval.	MoC procedure in CESMP. MoC register — all changes logged with risk assessment and approval status. Engineer approvals on file before changes implemented. Zero unapproved changes with E&S implications.	All sub-plans	Contractor (ESHS Manager)	Engineer and PIURR	Triggered by any change with E&S implications
<b>2. Air Quality</b>								
C-AQ-01	Dust — Earthworks & Haul Roads	PM10/PM2.5 from earthworks, borrow areas, and haul roads affecting settlements along 56 km corridor. Risk elevated in dry summer months.	Prepare Dust Control Plan within Annex 13. Apply dust suppression to all active earthworks and unpaved haul roads: minimum three water bowser applications per day during dry/windy conditions; increase frequency as needed. All vehicles transporting fine or loose materials to be sheeted or covered. Restrict vehicle speeds: ≤30 km/h on unpaved haul roads generally; ≤20 km/h within 250 m of settlements. Suspend	Daily watering logs. Wind speed and direction monitoring records. Work suspension records when threshold exceeded. Vehicle sheeting inspection (daily). Spot PM10 readings at sensitive receptors (weekly during high-risk works).	Annex 7	Contractor (ESHS Manager)	Engineer and PIURR	Daily (dry season); PM spot checks weekly

Ref.	Topic	Impact / Issue	Commitment / Mitigation Measure	Monitoring Indicator / Means of Verification	CEMP Sub-plan	Implementation	Supervision	Timing / Frequency
			dust-generating earthworks when wind speed exceeds 20 km/h in direction of residential areas. Stabilise any surface no longer in active use immediately (gravel, geotextile, hydroseed). Apply dust suppression during all cutting, grinding, and sawing activities. Locate stockpiles away from sensitive receptors or water regularly. Provide N95 (or equivalent) respiratory protection to all workers during dusty activities.	N95 PPE issuance records. Complaints register and close-out.				
C-AQ-02	Exhaust Emissions	Vehicle and plant exhaust affecting worker health and community air quality. Diesel generators to be minimised.	All construction equipment to be maintained to manufacturer schedule — maintenance logs kept on site. Use low-sulphur fuel ( $\leq 0.1\%$ sulphur) where available in Tajikistan. Enforce no-idling policy: maximum 5 minutes engine idling when not in active use — post signage at all sites. Prohibit use of visibly smoky equipment; remove non-compliant plant from service until repaired. Prefer mains electricity over diesel generators where technically feasible. Comply with national emission standards for stationary sources (asphalt plant, crusher, concrete plant) — MPE permit required from CEP before operation.	Maintenance records on site. Fuel procurement records (low-sulphur). No-idling enforcement records and signage photos. Daily visible smoke checks — non-compliant equipment removal records. Generator vs mains power documentation. MPE permits on file.	Annex 7	Contractor (ESHS Manager)	Engineer and PIURR	Daily checks; weekly records review
C-AQ-03	Asphalt Plant & Crusher	Concentrated emissions from asphalt plant and aggregate crusher	Locate asphalt plant and crusher at maximum practicable distance from settlements and watercourses. Site selection plan to be approved by	Site approval by Engineer before installation. MPE permit on file. Air	Annex 7	Contractor (ESHS Manager)	Engineer and PIURR	Weekly monitoring during operation

Ref.	Topic	Impact / Issue	Commitment / Mitigation Measure	Monitoring Indicator / Means of Verification	CEMP Sub-plan	Implementation	Supervision	Timing / Frequency
		near settlements or sensitive receptors.	Engineer before installation. Obtain CEP MPE emission permit before operation. Conduct air quality monitoring at plant perimeter and at nearest sensitive receptor during operation. Equip plant with dust extraction/filtration where required by permit. Bitumen storage: lined impermeable containment, no storage near watercourses or plantations; emergency spill response equipment on site at all times during operation.	quality monitoring results at plant and sensitive receptors vs national GOST + WHO limits. Bitumen containment inspection records.				
<b>3. Natural Hazards, Geotechnical Stability &amp; Climate Resilience</b>								
C-NH-01	Slope Failure & Rockfall	Slope failure or rockfall injuring workers, blocking communities, or damaging structures. Risk elevated by climate-amplified precipitation.	Prepare Slope Stability & Rockfall Management Plan as part of Annex 15. Stage earthworks to avoid long unsupported cut faces; define maximum exposure height and duration in method statement. Install temporary slope protection immediately on completion of each cut (catch berms, scaling, rockfall netting, geotextile as required). Inspect all cut slopes daily and after every rainfall event $\geq 10$ mm, blasting event, or seismic event. Define rainfall stop-work trigger levels in CESMP (mm/hr and cumulative daily). Prohibit worker access below unsupported cuts. Scale loose material before allowing access. Implement slope reinforcement (retaining walls, bioengineering) on slopes $\geq 30\%$ ; conduct slope stability	Slope stability assessment for slopes $\geq 30^\circ$ documented and approved. Daily slope inspection logs. Rainfall trigger register and stop-work records. Temporary protection installation photos. No uncontrolled slope failures or access incidents. Monthly reporting to ENGINEER.	Annex 7	Contractor (ESHS Manager)	Engineer and PIURR	Daily; after rainfall $\geq 10$ mm; after blasting; after seismic

Ref.	Topic	Impact / Issue	Commitment / Mitigation Measure	Monitoring Indicator / Means of Verification	CEMP Sub-plan	Implementation	Supervision	Timing / Frequency
			assessment before final method selection. Grade all formation areas to shed water away from the slope.					
C-NH-02	Flooding & Debris Flow	Floods or debris flows at 100+ hazard locations; climate projections show increase in extreme rainfall; flow velocities >7 m/s.	Prepare Flood Emergency Response Procedure within Annex 4. Install temporary diversion channels and protective berms at all active river crossing and low-lying work fronts before and during rainy season. Prohibit storage of spoil, fuel, or chemicals in mapped flood zones. Assign daily river level monitoring responsibility during wet season; define action levels for evacuation. Schedule foundation and drainage works near watercourses outside peak rainfall periods where practicable. Temporary access roads: appropriate gradients, cross-drainage, and surface stabilisation — no construction on slopes during intense or prolonged rainfall. Remove all temporary diversions and berms on completion, restoring natural flow.	Flood procedure in Annex 4. Temporary diversion records (photos). Daily river level logs during wet season. Zero hazardous materials stored in flood zones (verified weekly). Washout and flood incident log. 24-hour reports to Engineer after any flood event.	Annex 7 / Annex 4	Contractor (ESHS Manager)	Engineer and PIURR	Pre-rainy season setup; daily during wet season; after storms
C-NH-03	Seismic Events	Seismic event causing collapse of partially built structures, injuring workers, or damaging communities.	Design and install temporary bracing and shoring for all partially built structures per method statement submitted to the Engineer. Post-event inspection of all structures before restart after any felt earthquake. Define restart authorization: no works resume without written sign-off. Construction safety procedures —	Method statements with bracing designs on file. Post-seismic inspection records. Restart authorisations documented. Monthly drill records. Worker seismic awareness training records.	Annex 1 / Annex 4	Contractor (ESHS Manager)	Engineer and PIURR	Triggered by seismic event; monthly drills



Ref.	Topic	Impact / Issue	Commitment / Mitigation Measure	Monitoring Indicator / Means of Verification	CEMP Sub-plan	Implementation	Supervision	Timing / Frequency
			including evacuation protocols — to be included in Annex 4 and communicated to all workers during induction. Conduct monthly emergency muster drills.					
C-NH-04	Extreme Rainfall — General Site Controls	Climate-amplified rainfall increasing frequency of all natural hazard risks across the corridor.	Define rainfall monitoring and response protocol in CESMP: specify thresholds for heightened monitoring, partial suspension, and full stop-work per work type (earthworks, in-river works, slope works, blasting). Maintain on-site weather station or verified monitoring service throughout construction. Log daily rainfall vs thresholds; share weekly rainfall summary with Engineer. Pre-position emergency flood equipment (pumps, sandbags, spill kits) before each rainy season. Stabilise exposed soils promptly; minimise duration of open excavations.	Daily rainfall records vs trigger levels. Stop-work action records. Pre-season emergency equipment inventory. Exposed soil stabilisation records. Weekly rainfall reports to Engineer.	Annex 7	Contractor (ESHS Manager)	Engineer and PIURR	Daily
<b>4. Soils, Topsoil &amp; Materials Management</b>								
C-SG-01	Topsoil Management	Loss of irreplaceable topsoil through mixing, erosion, or vehicle compaction causing permanent land degradation.	Strip topsoil separately from subgrade before any excavation; do not mix with subgrade. Stockpile in dedicated areas: max height 2 m, slope ≤25%, with drainage trenches to divert runoff. Segregate topsoil from subsoil — never mix. If topsoil stored >6 months, monitor for anaerobic conditions and manually aerate where required. Protect stockpiles from vehicle compaction	Topsoil stripping and stockpile records. Segregation confirmation photos. Stockpile aeration records if >6 months. Vehicle exclusion barriers at stockpiles. Final reinstatement topsoil placement records.	Annex 6 / Annex 15	Contractor (ESHS Manager)	Engineer and PIURR	Daily (operations); weekly stockpile checks

Ref.	Topic	Impact / Issue	Commitment / Mitigation Measure	Monitoring Indicator / Means of Verification	CEMP Sub-plan	Implementation	Supervision	Timing / Frequency
			(physical barriers). Stone-pick replaced topsoil before final spreading. Reuse all stripped topsoil for final reinstatement — do not dispose.					
C-SG-02	Spoil Disposal	Uncontrolled spoil tipping onto slopes, into rivers, or onto agricultural land causing secondary hazards, river blockage, and land conflicts.	Use only disposal sites identified in Spoil Management Plan. Absolutely prohibit tipping into the Shurobdaryo River, on riverbanks, in flood plains, on slopes >30%, or on private/agricultural land without PIURR-approved agreement. Maintain spoil tracking register per load: origin, volume, and disposal site. Infertile or rocky material to be reused as fill where practicable; if unsuitable, dispose via licensed operator at approved facility. Inspect disposal sites weekly for slope stability and erosion; reinstate and re-vegetate promptly on completion of each phase.	Approved disposal site list with Engineer sign-off. Per-load spoil tracking register. Zero unapproved disposal incidents. Weekly disposal site inspection records. Progressive reinstatement photos.	Annex 6 / Annex 15	Contractor (ESHS Manager)	Engineer and PIURR	Daily; after any rainfall ≥10 mm
C-SG-03	Hazardous Materials Storage	Spill or leak from improperly stored fuels, chemicals, or asphalt contaminating soil and water.	All fuel storage: secondary bunded containment sized to ≥110% of largest tank volume on impermeable base; locate ≥50 m from any watercourse and outside flood zones. Mobile plant: drip trays fitted and regularly inspected and emptied. All mobile refuelling tankers to carry spill kits. Maintain Material Safety Data Sheets (MSDS) on site for all hazardous materials — accessible to workers. Segregate materials that may react with each other.	Bund sizing calculations on file. 50 m setback from watercourses confirmed. Drip tray inspection and emptying logs. MSDS folder on site and accessible. Chemical segregation plan in CESMP. Daily containment inspection records.	Annex 7	Contractor (ESHS Manager)	Engineer and PIURR	Daily inspection; weekly formal audit

Ref.	Topic	Impact / Issue	Commitment / Mitigation Measure	Monitoring Indicator / Means of Verification	CEMP Sub-plan	Implementation	Supervision	Timing / Frequency
			Procedures for minimum necessary storage volumes to be defined in CESMP. Inspect all containment daily.					
C-SG-04	Spill Prevention & Response	Fuel/oil/chemical spill contaminating the Shurobdaryo River, soil, or groundwater, including during extreme rainfall events.	Prepare Spill Response Procedure within Annex 7. Refueling only at designated contained areas with drip trays. Pre-position spill kits at every fuel storage area, refuelling point, and river crossing work front. Train minimum 2 spill responders per work front; conduct bi-monthly spill response drills. Report all spills (regardless of volume) to Engineer within 2 hours; document cleanup. Dispose of all waste oil and contaminated materials via licensed contractor with manifests. Conduct toolbox talks on spill prevention if inspections identify deficiencies.	Spill response procedure in Annex 7. Spill register (volume, cause, cleanup actions, close-out). Bi-monthly drill records. Drip tray and spill kit inspection records. Waste oil manifests. 2-hour spill notification to Engineer confirmed.	Annex 7	Contractor (ESHS Manager)	Engineer and PIURR	Daily inspection; 2-hr notification if spill occurs
C-SG-05	Borrow Areas & Quarries	Environmental and community impacts from unmanaged borrow pits: instability, dust, water pollution, habitat loss, community land conflicts.	Operate only at licensed borrow areas (CEP and Hukumat permits verified before use — copy to Engineer before first delivery). Borrow pits and quarries shall NOT be located: in active riverbeds or floodplains (unless explicitly permitted by CEP with specific in-river extraction method statement); in protected areas, PBFs, or Sari Khosor Nature Park buffer; on high erosion/landslide-risk slopes; on agricultural land without agreed compensation. Minimise haul distances through villages. Conduct pre-use survey; define maximum	Borrow pit licence and permit copies on file before use. Pre-use survey records. Progressive reinstatement photos (monthly). Final reinstatement inspection report signed by Engineer.	Annex 6 / Annex 15	Contractor (ESHS Manager)	Engineer and PIURR	Pre-use; weekly during operation; monthly reinstatement review

Ref.	Topic	Impact / Issue	Commitment / Mitigation Measure	Monitoring Indicator / Means of Verification	CEMP Sub-plan	Implementation	Supervision	Timing / Frequency
			extraction depth and footprint. Dust suppression, haul speed limits, access controls. Strip and stockpile topsoil; progressively rehabilitate each section as extraction advances. Where new borrow areas are opened, prepare a Borrow Area Restoration Plan before commencement. Plans for access roads on steep terrain to be submitted to Engineer before construction. Final reinstatement: regrading, topsoil replacement, re-vegetation using native seed mixes; Engineer sign-off required.					
C-SG-06	River Gravel Extraction	Destabilisation of Shurobdaryo riverbank and channel morphology from borrow extraction — riverbed gravel is the primary anticipated borrow source.	Where riverbed or riverbank extraction is permitted by CEP licence, prepare a separate River Extraction Method Statement submitted to the Engineer and PIURR before commencement. The method statement shall specify: extraction zone limits set back from active bank edge; maximum extraction depth per event and cumulative volume per season; prohibition on extraction during high-flow/snowmelt periods; measures to prevent bank scour and undercutting; re-profiling and bank stabilisation on completion of each extraction phase; monitoring of bank stability and channel cross-section during and after extraction. Strictly prohibit extraction outside approved zones. Minimise haul distances through settlements.	River extraction method statement submitted before any extraction. CEP licence on file. Extraction zone markers in place. High-flow period exclusion records. Monthly bank stability inspection records. Post-extraction re-profiling records.	Annex 3 / Annex 7	Contractor (ESHS Manager)	Engineer and PIURR	Method statement pre-works; monthly monitoring

Ref.	Topic	Impact / Issue	Commitment / Mitigation Measure	Monitoring Indicator / Means of Verification	CEMP Sub-plan	Implementation	Supervision	Timing / Frequency
C-SG-07	Contaminated Material	Discovery of contaminated soil, buried waste, or asbestos during excavation.	Define Unexpected Contaminated Material Procedure in CESMP. On discovery: stop work; isolate; notify Engineer within 2 hours. Include asbestos identification in worker toolbox talks — old culverts and demolished structures may contain asbestos; do not disturb. Characterise material before disposal; dispose via licensed hazardous waste contractor with manifests; notify CEP if required by law.	Stop-work and 2-hour notification records. Characterisation sampling records. Licensed disposal manifests. CEP notification record. Asbestos toolbox talk records.	Annex 7	Contractor (ESHS Manager)	Engineer and PIURR	As triggered
5. Water Resources, Hydrology & Pollution Prevention								
C-HY-01	Erosion & Sedimentation	Sediment-laden runoff entering Shurobdaryo and tributaries, damaging aquatic habitat and fish populations including migratory brook trout.	Prepare Erosion & Sediment Control Plan (ESCP) within Annex 15. Install silt fences, sediment traps, check dams, and straw wattles at all drainage outlets before any ground disturbance. Stage clearing to minimum footprint; re-stabilise exposed surfaces immediately using mulch, hydroseed, geotextile, or riprap. Sediment basins at borrow areas before extraction begins. No direct discharge of sediment-laden water to watercourses. Protect all culvert inlets. Inspect all controls weekly and after every rainfall $\geq 10$ mm; repair within 24 hours of failure. Conduct visual turbidity checks at active crossings after each rainfall event. Ensure new access tracks do	ESCP in CESMP with site plan. Sediment control installation photos (before works). Weekly + post-rain inspection logs. Turbidity visual checks at watercourse crossings. Zero direct discharge events. Monthly reporting to Engineer.	Annex 15	Contractor (ESHS Manager)	Engineer and PIURR	Daily; after any rainfall $\geq 10$ mm

Ref.	Topic	Impact / Issue	Commitment / Mitigation Measure	Monitoring Indicator / Means of Verification	CEMP Sub-plan	Implementation	Supervision	Timing / Frequency
			not obstruct existing drainage or irrigation channels.					
C-HY-02	Water Abstraction	Competition with communities for scarce water resources in the Shurobdaryo basin.	Obtain water abstraction permit from Basin Water Organisation (BWO) / Ministry of Energy and Water Resources before commencing any surface or groundwater abstraction. Obtain written community agreement before using any local piped water supply for construction purposes. Where local piped water unavailable or not agreed, use rainwater collection or imported tanked water. Minimise total water consumption — track and report monthly. Optimise dust suppression watering to avoid waste. Track fuel and water use and investigate spikes.	BWO abstraction permit on file before any extraction. Written community water-use agreements on file. Monthly water consumption reports. Abstraction volume vs permit limits tracked.	Annex 7	Contractor (ESHS Manager)	Engineer and PIURR	Pre-construction (permits); monthly reporting
C-HY-03	In-River Works	Direct disturbance of Shurobdaryo bed and banks during bridge and culvert works; turbidity; disruption to fish passage and spawning — including confirmed migratory brook trout populations.	Prepare a method statement for all in-river works, submitted to the Engineer before commencement of each phase of river works. SEASONAL RESTRICTION — PROVISIONAL (binding from contract award, subject to adjustment from ESIA survey): No in-river or riverbed works shall be undertaken during the provisional fish spawning protection window of 1 November to 28 February inclusive. This restriction applies to all works within or immediately adjacent to the active channel, including bridge construction, culvert installation,	In-river works method statement submitted before each phase commences. Provisional seasonal restriction dates observed — no in-river works 1 Oct–30 Nov without Engineer written instruction based on confirmed ESIA survey findings. High-flow period restriction observed April–June. Downstream turbidity	Annex 15 / Annex 8	Contractor (ESHS Manager)	Engineer and PIURR	Method statement pre-works; daily monitoring during in-river works; seasonal restriction enforced Nov-Feb

Ref.	Topic	Impact / Issue	Commitment / Mitigation Measure	Monitoring Indicator / Means of Verification	CEMP Sub-plan	Implementation	Supervision	Timing / Frequency
			scour protection, temporary cofferdams, and river gravel extraction. The provisional window is based on confirmed autumn spawning behaviour of migratory brook trout ( <i>Salmo trutta</i> ) already documented in baseline data. The ESIA aquatic ecology survey will confirm or adjust the precise restriction window. If the ESIA survey is completed before the restriction window is first triggered, the Engineer may instruct a revised window based on survey findings. If the survey is not yet complete when the restriction window is first triggered, the provisional dates apply without exception. April--June carries a conditional flag reflecting elevated hydraulic risk and the national fishing ban on Tajikistan's rivers (approximately 1 April to 15 June). In-river works during this period may proceed subject to the River Works Method Statement demonstrating adequate management of aquatic habitat, water quality impacts, and hydraulic safety risks. See Annex 8, Section 6.2. For all permitted in-river working periods: use cofferdams or pump-around for all works requiring in-channel access; maintain continuous downstream flow; minimise bed disturbance; stabilise disturbed banks immediately on completion using bioengineering where feasible; remove all temporary structures on completion, restoring	monitoring records during all in-river works. Bank stabilisation photos before final inspection. Temporary structure removal confirmed. ESIA aquatic survey completion date recorded; any Engineer instruction adjusting restriction window on file.				

Ref.	Topic	Impact / Issue	Commitment / Mitigation Measure	Monitoring Indicator / Means of Verification	CEMP Sub-plan	Implementation	Supervision	Timing / Frequency
			original channel cross-section; monitor downstream turbidity continuously during works; keep mobile plant $\geq 10$ m from watercourses except where works require closer access. If in-river works cannot be completed before 1 November, the Contractor shall submit a written request to the Engineer and PIURR at least 14 days before the restriction date, stating the reason, works remaining, duration required, and proposed mitigation. Works may continue into the restricted period only with written approval from both. See Annex 8, Section 6.2 for the full deviation procedure.					
C-HY-04	Concrete & Sewage	High-pH concrete washout and camp sewage contaminating soil or water.	Lined concrete washout pits at all concrete works locations before commencement; no washout on bare ground or within 50 m of any watercourse. Batchling effluent collected in settlement pond; treatment method approved by Engineer before use. Camp domestic sewage: septic tanks for camps <150 workers (licensed haulage for liquid waste); treatment on site or via licensed transport for larger camps; all effluent to comply with national standards; no direct discharge to soil or watercourses. Camp sanitary waste: sewage sludge as hazardous waste. Camp setback: $\geq 200$ m from any watercourse; $\geq 500$ m from	Washout facility photos before concrete works. Batchling treatment approval on file. Septic tank or treatment system records. Licensed sewage haulage manifests. Camp location compliance with setback distances. Generator drip tray inspection records.	Annex 7 / Annex 10	Contractor (ESHS Manager)	Engineer and PIURR	Setup before works; daily during concrete/camp operations



Ref.	Topic	Impact / Issue	Commitment / Mitigation Measure	Monitoring Indicator / Means of Verification	CEMP Sub-plan	Implementation	Supervision	Timing / Frequency
			residential areas for noise. Drip trays under all mobile generators.					
C-HY-05	Potable Water Quality	Workers or communities exposed to unsafe drinking water.	Potable water supplied to all sites and camps to meet national standards and ISO 10500; bottled water to be provided where on-site water quality cannot be verified. Water quality testing monthly. Community water sources: do not contaminate or reduce flow/availability to downstream communities. Record baseline water quality at community sources near active work fronts before works commence.	Monthly water quality test certificates. Bottled water supply records where required. Community water source baseline records. Zero water-related illness complaints.	Annex 10	Contractor (ESHS Manager)	Engineer and PIURR	Monthly quality tests; continuous supply management
C-HY-06	Community Irrigation & Domestic Water Supply Disruption	Construction works crossing or running adjacent to irrigation channels, spring intakes, and domestic water points disrupting supply to communities with no alternative source.	Pre-construction SCLO audit of all community springs, irrigation intakes, and domestic water points along the full corridor — GPS-referenced, with dependent community recorded. Minimum 48 hours' advance notice to communities before any works affecting a water source. Where disruption is unavoidable, alternative supply of equivalent quality and quantity provided within 24 hours and maintained until permanent supply fully restored. All disrupted infrastructure reinstated to pre-construction condition, confirmed in writing by community representative before Contractor demobilises from each section.	Water Source Audit on file before works reach each section; written community restoration sign-off records; zero unresolved water supply complaints in GRM.	Annex 7	Contractor (ESHS Manager)	Engineer and PIURR	Pre-construction audit; continuous attention within 500 m of any water source

Ref.	Topic	Impact / Issue	Commitment / Mitigation Measure	Monitoring Indicator / Means of Verification	CEMP Sub-plan	Implementation	Supervision	Timing / Frequency
C-HY-07	Permanent Loss of Riverbank Irrigation Access — Embankment and Bank Protection Works	Road embankment, gabion bank protection, and river training structures permanently interposing a barrier between agricultural land and the active river channel, cutting off existing direct irrigation abstraction points.	Before any embankment raising, bank protection, or river training works commence in each section, SCLO to survey and GPS-record all points where landholders currently access the river directly for irrigation — including informal gravity intakes, channel headworks, and pump abstraction points. Where active access points are confirmed in the construction footprint, design to incorporate a culvert, pipe sleeve, or maintained access gap through the embankment to preserve post-construction river access. Where not technically feasible, alternative water source of equivalent reliability agreed in writing with the affected landholder before works commence and compensation assessed and paid through the RP framework. Survey outcomes submitted to Engineer for approval before works reach each section.	Pre-construction riverbank irrigation survey on file before works reach each section; design drawings showing access provisions at confirmed intake points; written agreements or RP compensation records where access cannot be preserved.	Annex 7	Contractor (ESHS Manager); PIURR (RP compensation)	Engineer and PIURR	Pre-construction survey; design confirmation before works in each section
<b>6. Noise &amp; Vibration</b>								
C-NV-01	Construction Noise Near Settlements	Construction noise affecting settlements, schools, health clinics, and residences directly adjacent to the corridor.	Prepare Noise & Vibration Management Plan within Annex 14. Restrict all high-noise activities to daytime hours: 07:00–19:00 weekdays, 08:00–17:00 Saturdays; no high-noise works on Sundays or public holidays. Avoid noisy works during school hours, prayer times, and local religious or cultural events. Locate stationary plant (crusher,	Noise and Vibration Management Plan in Annex 14. Work hours compliance log. Baseline measurements at sensitive receptors. Weekly spot noise checks during high-noise works vs national standards. Silencer	Annex 7	Contractor (ESHS Manager)	Engineer and PIURR	Baseline pre-construction; weekly spot checks; after complaints

Ref.	Topic	Impact / Issue	Commitment / Mitigation Measure	Monitoring Indicator / Means of Verification	CEMP Sub-plan	Implementation	Supervision	Timing / Frequency
			asphalt plant, generators) at maximum practicable distance from settlements. Fit silencers/mufflers to all generators, compressors, and plant; inspect weekly. Prefer low-noise equipment where practicable (target <55 dBA at 1 m). Install temporary acoustic barriers or hoarding where works are within 50 m of schools, health clinics, or residences. Notify communities ≥72 hours before high-noise activities. Conduct baseline noise measurements at sensitive receptors before construction.	inspection records. Advance notification records. Complaints register and close-out.				
C-NV-02	Vehicle Horn Use	Inappropriate vehicle horn use near schools, clinics, and residences causing unnecessary community disturbance.	Prohibit vehicle horn use within 100 m of sensitive receptors (schools, clinics, mosques, residences) except in genuine emergency. Brief all drivers during induction; post signage at approaches to settlements. Temporary noise screens to be installed around worksites where noise complaints are received from local communities.	No-horn zone signage photos. Driver briefing records. Zero noise complaints related to horn use (or documented corrective action if complaints received).	Annex 7	Contractor (ESHS Manager)	Engineer and PIURR	Continuous
C-NV-03	Worker Noise Exposure	Worker hearing damage from prolonged exposure to construction noise exceeding IFC EHS Guidelines.	Identify all work areas where noise levels exceed 80 dBA and mark with visible signage. Provide and enforce hearing protection (earmuffs or earplugs) for all workers in marked zones. Monitor worker noise exposure and compare against IFC/WBG EHS Guidelines occupational noise limits. Conduct audiometric testing for workers	Noise zone mapping in OHS Plan. Hearing protection issuance records. Worker noise exposure monitoring records vs IFC EHS limits. Daily PPE compliance checks in high-noise areas.	Annex 1	Contractor (ESHS Manager)	Engineer and PIURR	Daily

Ref.	Topic	Impact / Issue	Commitment / Mitigation Measure	Monitoring Indicator / Means of Verification	CEMP Sub-plan	Implementation	Supervision	Timing / Frequency
			regularly exposed to high noise. Inspect hearing protection use daily.					
C-NV-04	Vibration — Blasting & Compaction	Ground vibration from blasting and heavy compaction damaging structures and disturbing communities, particularly near hard rock cut sections.	Prepare Blasting Management Plan within Annex 1. Pre-condition photographic survey of all structures within 50 m of blast locations before any blasting. Use controlled/electronic delay blasting; define PPV thresholds in CESMP (reference IFC EHS Guidelines). Install vibration monitoring at structures within buffer during blasting events. Conduct trial blasts before production; adjust charge weights. Notify communities ≥72 hours before each blast. Prefer drilling over blasting where practicable. Define minimum setback from occupied structures in CESMP.	Pre-condition photographic survey records. Blasting Management Plan approved before first blast. Trial blast records. PPV monitoring logs vs thresholds. Pre-blast notification records. Post-blast inspection logs. Zero PPV exceedances without documented corrective action.	Annex 1	Contractor (ESHS Manager)	Engineer and PIURR	Pre-condition survey before first blast; monitoring at each blast
<b>7. Biodiversity, Vegetation &amp; PBF (ESR6)</b>								
C-BIO-00	Critical Habitat — Wild Pear Species (Net Gain)	Direct loss of, or damage to, Critically Endangered wild pear trees <i>Pyrus tadshikistanica</i> (Tajikistan-endemic) and <i>P. korshinskyi</i> , confirmed at km 11, 15, 16, 29, 34, 37, 43, 47, and 48. The CHA (May 2026) determines these species trigger Critical Habitat	Apply the mitigation hierarchy with Net Gain as the required outcome. (1) Avoidance first — the design team reviews micro-realignment options at every confirmed tree cluster before clearance; confirmed trees marked as no-go zones on construction drawings and physically demarcated on the ground. (2) No clearance of, or works within the root protection zone of, any confirmed wild pear without prior written PIURR approval. (3) Translocation of mature trees only as a last resort, undertaken	Design-avoidance review record per cluster; confirmed trees shown as no-go zones on construction drawings and demarcated on site; PIURR written approval on file before any works at listed chainages; translocation plan, receptor-site confirmation, and survival-rate records;	Annex 8 / BAP / BOMP	Contractor (ESHS Manager / Ecologist)	Engineer and PIURR	Avoidance review before design freeze; clearance check before any works at listed chainages; offset delivery and monitoring per Programme

Ref.	Topic	Impact / Issue	Commitment / Mitigation Measure	Monitoring Indicator / Means of Verification	CEMP Sub-plan	Implementation	Supervision	Timing / Frequency
		under EBRD ESR6 paragraph 14(ii)(c), carrying a Net Gain obligation (not no-net-loss).	by a qualified botanist, with realistic caveats on success rates (particularly for <i>P. tadshikistanica</i> , which reproduces vegetatively); translocation plan and receptor site approved by Engineer and CEP before any clearance. (4) Residual losses compensated through the Biodiversity Offset Programme (BOMP), developed in cooperation with the BGCI/Kulob Botanic Garden Darwin Initiative (ref. 31-017), delivering measurable Net Gain. Record every individual in the Sensitive Feature Register (Annex 8, Appendix A) and the Red Book Plant Translocation Record (Annex 8, Appendix D).	BOMP delivery and monitoring records against Net Gain success criteria. Zero unauthorised clearance of confirmed wild pears.				
C-BIO-01	Pre-Clearance Survey & Demarcation	Clearance of Red Book or PBF species without prior identification and protection.	Complete Biodiversity Screening Form (per Annex 8 BMP) for each work section, borrow area, spoil site, and camp location before clearance or ground disturbance at that location. Classify each site as Low, Moderate, or High biodiversity sensitivity based on proximity to protected areas, riparian habitat, habitat connectivity, and known or potential protected species. For Moderate or High sites, conduct pre-clearance ecological walkover survey by qualified ecologist; confirm Red Book species, PBF, nesting activity, and IAS within clearing limits. Results reported to Engineer before clearance proceeds. Mark clearing limits on the ground before any	Pre-clearance ecological survey report on file before clearance. Clearing limit marking photos before machine access. Exclusion fences photos. No-go zones on construction drawings. Stop-work and escalation records if unexpected sensitive feature or PBF encountered during pre-clearance survey.	Annex 8	Contractor (ESHS Manager)	Engineer and PIURR	Pre-construction (before any clearance)

Ref.	Topic	Impact / Issue	Commitment / Mitigation Measure	Monitoring Indicator / Means of Verification	CEMP Sub-plan	Implementation	Supervision	Timing / Frequency
			machine access; install exclusion fencing around retained trees and sensitive vegetation. Post Red Book species locations on construction drawings as no-go zones. If a sensitive feature not previously captured in the Sensitive Feature Register is identified during the pre-clearance walkover — including any potential new PBF, nationally protected species, or Red Book plant within the clearing limit — stop work in the immediate area and notify the Engineer and PIURR immediately. Do not proceed without an agreed management protocol from the Engineer.					
C-BIO-02	Vegetation Clearance Limits	Clearing beyond approved footprint destroying habitat unnecessarily; use of inappropriate seed mixes introducing invasive species.	Restrict clearance strictly to the approved footprint — no clearance beyond marked limits. Conduct selective vegetation removal only to the minimum necessary. Retain all trees and vegetation not required for construction. Maintain tree inventory: photograph and record all felled trees; fence Red Book species from machine access with bunting or barriers. Implement compensatory planting to offset unavoidable tree removal — planting plan to be agreed with Engineer. Restrict clearance operations to approved hours. Reseed all disturbed and high-erosion-risk areas using native seed mixes only — seed mix specifications to exclude invasive or non-native	Clearing limit exceedance incidents (target zero). Tree inventory maintained. Red Book species fencing photos. Compensatory planting records. Approved native seed mix specifications on file. Reseeding progress records.	Annex 8	Contractor (ESHS Manager)	Engineer and PIURR	Daily clearing limit checks; weekly biodiversity inspection

Ref.	Topic	Impact / Issue	Commitment / Mitigation Measure	Monitoring Indicator / Means of Verification	CEMP Sub-plan	Implementation	Supervision	Timing / Frequency
			species and to be approved by Engineer.					
C-BIO-03	Invasive Alien Species (IAS)	Introduction or spread of invasive alien species via machinery, vehicles, footwear, and materials — significant risk given endemic habitats in corridor.	Establish vehicle wash-down facility at site entry point before any plant or equipment arrives; all vehicles and machinery to be cleaned before entering the site for the first time and before moving between sites. All plant and equipment to be cleaned and inspected before shipment to prevent IAS introduction. Conduct IAS survey during pre-clearance walkover — any IAS detected to be removed or eradicated using approved methods before clearance commences. Never reuse topsoil, mulch, or fill containing IAS propagules. Record and report all IAS detections to Engineer.	Wash-down facility in operation before first plant arrival. Vehicle cleaning records. IAS survey results in pre-clearance report. IAS detection and removal records. Zero new IAS establishment (ongoing monitoring).	Annex 8	Contractor (ESHS Manager)	Engineer and PIURR	Pre-construction (wash-down setup); ongoing
C-BIO-04	Species Translocation & Chance Finds	Mortality of sensitive or Red Book species during clearance or excavation.	Where pre-clearance survey identifies individual plants or animals requiring protection, appoint qualified national ecologist to undertake translocation to approved receptor site before clearance proceeds. Translocation plan and receptor site to be approved by Engineer and relevant authority. Implement chance-find procedure for threatened species (separate from cultural heritage procedure) within BMP: if threatened species encountered during works, stop work in affected area and notify ecologist within 1 hour. Notify Engineer within	Translocation plan approved before clearance. Translocation records and receptor site confirmation. Threatened species chance-find procedure operational. Stop-work and 1-hour ecologist notification records if triggered.	Annex 8	Contractor (ESHS Manager)	Engineer and PIURR	As triggered

Ref.	Topic	Impact / Issue	Commitment / Mitigation Measure	Monitoring Indicator / Means of Verification	CEMP Sub-plan	Implementation	Supervision	Timing / Frequency
			2 hours; do not proceed without ecologist clearance.  Where pre-clearance survey confirms a Critical Habitat-triggering wild pear ( <i>Pyrus</i> spp.), the avoidance-first and Net Gain requirements of C-BIO-00 take precedence over routine translocation.					
C-BIO-04b	General Fauna Encounter Procedure	Injury or mortality of non-Red-Book wildlife (mammals, reptiles, birds) encountered during active works — separate from translocation of protected species.	Define a General Fauna Encounter Procedure in BMP (Annex 8). If any wildlife is encountered during works: stop work immediately in the vicinity; allow the animal to move away unaided without disturbance; do not handle or attempt to relocate without authorisation from the ecologist; notify the ESHS Manager or site ecologist; record the encounter (species if known, location, time, description, photos if safe) in site logs. Minimise lighting in or near sensitive habitats during any night works. All fauna encounter records to be summarised in monthly reports.	Fauna encounter procedure in BMP. Fauna encounter log (all encounters recorded). Zero handling of wildlife without ecologist authorisation. Monthly fauna encounter summary in ESHS report. Night works lighting restriction records near sensitive habitats.	Annex 8	Contractor (ESHs Manager)	Engineer and PIURR	Triggered (any encounter); logs continuous
C-BIO-05	Nesting Season & Timing Restrictions	Disturbance of breeding birds and other fauna during sensitive seasons near Sari Khosor Nature Park and Red Book habitats.	Schedule all vegetation clearance near riparian and forested habitats outside breeding and nesting seasons — timing to be confirmed from pre-construction ecological survey and agreed with Engineer. Where clearance cannot be avoided during nesting season, conduct nest check by ecologist immediately before	Clearance schedule aligned with seasonal restriction windows. Ecologist seasonal confirmation records. Nest check records before any in-season clearance. Stop-work records if active nests found.	Annex 8	Contractor (ESHs Manager)	Engineer and PIURR	Pre-clearance schedule review; nest checks if in-season clearance required



Ref.	Topic	Impact / Issue	Commitment / Mitigation Measure	Monitoring Indicator / Means of Verification	CEMP Sub-plan	Implementation	Supervision	Timing / Frequency
			clearing; stop work if active nests found.					
C-BIO-06	Worker Conduct — Wildlife & Flora	Worker hunting, fishing, trapping, or collection of flora threatening Red Book species and aquatic fauna; risk heightened by proximity to the Sari Khosor Nature Park and the Bukhara deer breeding facility at Dashtaro village (~km 35).	Include strict prohibition on all hunting, fishing, trapping, and plant collection in Code of Conduct — signed by all workers at induction. Prohibit worker access to Shurobdaryo River outside work activities. Prohibit pets, domestic animals, or hunting equipment on work sites or in camps. Conduct biodiversity awareness training for all workers during induction and quarterly refreshers: include Red Book species, Nature Park sensitivity, and breeding farm proximity. Investigate and discipline any violations.	Code of Conduct signed by 100% of workers (induction records). Biodiversity awareness training records (induction + quarterly). Zero hunting/fishing/collection incidents. Disciplinary records for any violations.	Annex 8	Contractor (ESHS Manager)	Engineer and PIURR	Induction (all workers); quarterly refreshers; continuous enforcement
C-BIO-07	Bukhara Deer Breeding Farm	Construction noise, vibration, dust, and worker presence disturbing the Bukhara deer breeding facility at Dashtaro village (~km 35), adjacent to the corridor.	Confirm buffer distance from breeding farm operations based on design documents. During works within buffer: limit noisy activities to daytime only; avoid blasting during breeding/birthing season (timing confirmed with farm management before works commence). Designate farm perimeter as no-go zone for all workers outside approved work areas. Maintain direct communication channel with farm management throughout construction phases near the farm.	Buffer distance confirmed in CESMP. Farm management pre-works consultation records. No-go zone marking and enforcement records. Noise and dust logs during works within buffer. Zero unauthorized access to farm perimeter.	Annex 8	Contractor (ESHS Manager)	Engineer and PIURR	Pre-works consultation; daily during works within buffer

Ref.	Topic	Impact / Issue	Commitment / Mitigation Measure	Monitoring Indicator / Means of Verification	CEMP Sub-plan	Implementation	Supervision	Timing / Frequency
C-BIO-08	Bio-restoration Monitoring	Reinstatement failing to re-establish vegetation, allowing erosion and habitat loss post-construction.	Prepare Reinstatement Implementation Plan within Annex 6 / Annex 15. Establish monitoring programme for bio-restoration success: monitor re-established vegetation cover and species diversity at 3, 6, and 12 months after reinstatement of each section. Compare against undisturbed reference areas. Where vegetation recovery is poor, apply corrective measures (re-seeding, fertilising, erosion control). Report monitoring results to Engineer and PIURR.	Reinstatement Implementation Plan on file. Monitoring results at 3, 6, and 12 months per reinstatement section. Species diversity trends showing positive trajectory vs reference. Corrective measure records where recovery insufficient.	Annex 6 / Annex 15	Contractor (ESHS Manager)	Engineer and PIURR	At 3, 6, and 12 months post-reinstatement
C-BIO-09	Ibisbill Gravel Bar Nesting Protection	In-river and bankside works during the nesting season (March–July) disturbing ground-nesting birds and the unvegetated/sparsely vegetated river gravel bank habitats (C3.62 and C3.55) confirmed as Priority Biodiversity Features. These open gravel bars are the same PBF substrate disturbed by bridge works, cofferdams, and gravel extraction, and support ground-nesting birds during	Before any in-river or bankside works commence in each section, the Ecologist shall survey all gravel bars within the works footprint for active Ibisbill nests. Survey to be conducted within two weeks of works commencing and repeated after any break of more than two weeks during March–July. Where active nests are confirmed, a minimum 100 m exclusion zone shall be established and marked; no in-river or bankside works permitted within that zone until the nest is confirmed inactive by the Ecologist. No works on gravel bars shall commence during March–July without written Ecologist clearance confirming no active nests in the footprint.	Pre-construction gravel bar survey records on file before works in each section; exclusion zone maps submitted to Engineer; Ecologist written clearance on file before any gravel bar works during March–July; zero works within confirmed exclusion zones.	Annex 8	Contractor (ESHS Manager / Ecologist)	Engineer and PIURR	Pre-construction survey before works in each section; repeated after any break >2 weeks during March–July

Ref.	Topic	Impact / Issue	Commitment / Mitigation Measure	Monitoring Indicator / Means of Verification	CEMP Sub-plan	Implementation	Supervision	Timing / Frequency
		the March–July nesting season.						
<b>8. Traffic Management &amp; Road Safety During Construction</b>								
C-TM-01	Work Zone Traffic Safety	Construction vehicle accidents at work zones, haul routes, and settlement crossings. Risk from heavy plant mixing with local traffic on road with no existing safety features.	Prepare site-specific Traffic Management Plan (TMP) per work zone in accordance with CAREC Road Safety Engineering Manual 2 — Safer Road Works (2018) within Annex 3. TMP to be approved by local traffic authorities and Engineer before opening each zone. Implement: advance warning signs, taper signs, 40 km/h restriction through works (lower if required), barrier delineation, retroreflective delineation at night-time work zones. Deploy trained flaggers at all single-lane sections. Notify authorities of oversize loads and arrange escorts before transport. Install construction traffic warning signs at road crossings and along access routes. Baseline condition survey of all access roads before construction — record with photos.	TMP approved per work zone before opening. Daily TMP compliance checks. Traffic incident and near-miss log. Oversize load notification records. Baseline road condition survey records. Speed spot checks (weekly). Monthly reporting to Engineer.	Annex 3	Contractor (ESHS Manager)	Engineer and PIURR	TMP in place before each zone opens; daily compliance; after incidents
C-TM-02	Community Safety at Work Fronts	Community members — particularly children — accessing open excavations, work fronts, or hazardous areas.	Fence and signpost all active work fronts adjacent to settlements at all times including overnight. Install night lighting at work fronts near settlements with high community access risk. Maintain safe pedestrian detour routes around all closures — inspect daily. Protect affected properties with temporary fencing or	Work front barrier and signage photos (daily). Night lighting records at settlement work fronts. Pedestrian route inspection log. School safety session records. GRM safety complaints and close-out. Zero	Annex 2	Contractor (ESHS Manager)	Engineer and PIURR	Daily

Ref.	Topic	Impact / Issue	Commitment / Mitigation Measure	Monitoring Indicator / Means of Verification	CEMP Sub-plan	Implementation	Supervision	Timing / Frequency
			gates on access roads. Community liaison hotline and GRM contacts publicised in all affected villages. Deliver safety awareness sessions to local schools at the start of works in each village — records required. Maintain hazardous conditions attended or fully protected overnight.	public injuries at work fronts.				
C-TM-03	Haul Route Management & Oversize Loads	Vehicle damage to communities and road infrastructure; community disruption; risk from oversize construction loads.	Enforce vehicle speed hierarchy: ≤40 km/h on project road; ≤30 km/h on unpaved haul routes; ≤20 km/h through settlements; ≤10 km/h on site. Conduct weekly speed spot checks. Prohibit night-time driving by construction vehicles except with prior written Engineer approval — log all night movements. Maintain unimpeded community access at all times — planned closures require ≥72 hours advance community notification. Prohibit heavy haul traffic through settlements during school start/end hours unless unavoidable. Use existing roads in accordance with design standards; keep access tracks to minimum necessary width.	Speed spot check records (weekly). Night driving approval logs. Access closure notification records (72-hr advance). Haul route community complaint log. Track width compliance checks. Traffic incident and near-miss log.	Annex 3	Contractor (ESHS Manager)	Engineer and PIURR	Weekly
C-TM-04	Livestock Safety	Cattle, sheep, and goats regularly cross the alignment and use adjacent grazing land; construction vehicles present risk of collision with	Identify all informal livestock crossing points along the 56 km alignment at commencement of works. Install temporary livestock management measures at active crossings: flaggers, temporary barriers, warning signs. Agree crossing times with	Livestock crossing inventory before works commence. Crossing management records. Fencing of excavations/pits — daily inspection	Annex 2	Contractor (ESHS Manager)	Engineer and PIURR	Daily inspection; triggered by closures

Ref.	Topic	Impact / Issue	Commitment / Mitigation Measure	Monitoring Indicator / Means of Verification	CEMP Sub-plan	Implementation	Supervision	Timing / Frequency
		livestock causing injury, livelihood loss, and community conflict.	communities/herders where practicable; maintain crossings accessible outside active construction windows. Prohibit unauthorised driving through grazing areas. Fence all open excavations, dewatered areas, water-filled pits, and borrow areas against livestock entry — inspect daily. Notify herding communities of planned closures ≥72 hours in advance. Record and compensate any livestock injury or death promptly via GRM.	records. 72-hour advance notification records. GRM livestock incident and compensation log. Zero unresolved livestock complaints.				
9. Occupational Health & Safety								
C-OHS-01	General OHS Management System	Injuries and fatalities from inadequate OHS management across 56 km remote corridor.	Implement Contractor OHS Plan (Annex 1) before any construction. Mandatory ESHS induction for every worker before site access. Daily toolbox talks per work front tailored to that day's specific activities. Permit to Work (PTW) system for all high-risk activities: blasting, hot works, lifting, confined spaces, deep excavations, working over water, working at height >2 m. Monthly safety meetings — minutes and participant lists to PMC. Monthly emergency preparedness and response drills. Report all incidents (including near-misses) to Engineer within 2 hours; fatalities and serious injuries to PIURR and EBRD within 24 hours. Supply CESMP to all subcontractors; require each subcontractor to	100% worker induction before site access. Daily toolbox talk logs. PTW register. Monthly safety meeting minutes. Monthly emergency drill records. TRIR, LTI, and near-miss statistics (monthly). 2-hr incident notifications. 24-hr PIURR/EBRD fatality notifications. Subcontractor safety rep records.	Annex 1	Contractor (ESHS Manager)	Engineer and PIURR	Daily supervision; weekly audit; monthly reporting

Ref.	Topic	Impact / Issue	Commitment / Mitigation Measure	Monitoring Indicator / Means of Verification	CEMP Sub-plan	Implementation	Supervision	Timing / Frequency
			appoint an on-site safety representative.					
C-OHS-02	High-Risk Activities	Fatalities or serious injuries from blasting, working at height, lifting, confined spaces, and electrical work.	Task-specific Job Safety Analysis (JSA) or Method Statement required for every high-risk activity — prepared, reviewed by ESHS Manager, and communicated to workers via toolbox briefing BEFORE commencement. High-risk activities include: bridge construction, in-stream works, borrow pit operations, blasting, works near power lines, confined spaces, lifting operations, and night works near communities. Only certified shotfirers for blasting; certified operators for all plant. Electrical equipment in wet or waterlogged conditions: fit residual current devices (RCDs), inspect daily. Certified lifting gear with current inspection records; lifting plans for all crane lifts. Fall protection: 100% tie-off when working at height above project-defined threshold (minimum >2 m); test all structures for integrity before working at height; fall arrest programme including rescue procedures. Excavations >2 m depth: install fencing and warning signage before excavation proceeds. Confined spaces: ensure adequate fresh air supply; conduct atmospheric testing before and during confined space work. Lock-out/Tag-out (LOTO) procedures for all electrical and mechanical isolation. Allow only trained, certified workers to work on	Operator certifications on file. Lifting gear inspection records. Fall protection system inspection records. PTW records per high-risk activity. Excavation >2 m fencing records. Confined space atmospheric test records. LOTO records. Zero fatalities or serious injuries (or documented investigation and corrective action).	Annex 1	Contractor (ESHS Manager)	Engineer and PIURR	Daily; PTW per high-risk activity; weekly audit

Ref.	Topic	Impact / Issue	Commitment / Mitigation Measure	Monitoring Indicator / Means of Verification	CEMP Sub-plan	Implementation	Supervision	Timing / Frequency
			electrical equipment. Exclusion zones around all plant and machinery at all times.					
C-OHS-03	Extreme Heat Stress	Heat stress illness and fatality during projected >50°C summer temperatures for outdoor workers.	Define heat stress action levels in Annex 1 based on air temperature. Specify work/rest ratios and hydration requirements at each action level. Prohibit outdoor heavy work 12:00–15:00 when temperature exceeds 40°C; adjust to early start and evening shifts. Provide shaded rest areas and cold drinking water at every work front during summer. Designate heat stress first responders at each work front. Conduct pre-summer heat stress awareness toolbox talks. Buddy system for isolated work fronts.	Heat stress action levels defined in Annex 1. Summer temperature and WBGT monitoring records. Rest/hydration schedule compliance records. Shade and water provision inspection (daily in summer). Heat stress training records. Zero heat stress illnesses (or prompt documented response).	Annex 1	Contractor (ESHS Manager)	Engineer and PIURR	Daily monitoring (summer); immediate response at action level
C-OHS-03c	Cold Exposure & Remote Working Conditions	Cold injury, hypothermia, and delayed emergency response in mountain terrain with temperatures dropping well below 0°C in winter and unreliable mobile coverage across most of the 56 km corridor.	Include cold weather working procedures in Annex 1: minimum clothing standards, work/rest schedules in cold, emergency warming stations at camps and work fronts during winter operations. Define cold-weather stop-work criteria. Assess communication system reliability along each section of the alignment before mobilisation — identify sections with no mobile coverage; provide satellite phones or radio communication to all work fronts lacking reliable mobile coverage. Communication check-in intervals for isolated work fronts defined in Annex 1. Emergency	Cold weather procedures in Annex 1. Communication systems assessment before mobilisation. Radio/satellite phone inventory for non-coverage sections. Daily check-in records for isolated work fronts. Cold-related illness records (zero target). Emergency drill records (flood and slope scenarios).	Annex 1 / Annex 4	Contractor (ESHS Manager)	Engineer and PIURR	Pre-mobilisation assessment; daily during cold/winter operations

Ref.	Topic	Impact / Issue	Commitment / Mitigation Measure	Monitoring Indicator / Means of Verification	CEMP Sub-plan	Implementation	Supervision	Timing / Frequency
			response procedures specifically address: vehicle/plant overturning on steep slopes, workers entering watercourses, loss of access routes due to landslides or flooding — all scenarios relevant to this corridor.					
C-OHS-03b	Working Near Water — Specific Safety	Drowning or plant overturning risk during extensive river corridor and in-stream works across 5 bridge sites, 130+ culverts, and riverbed borrow extraction.	In addition to general OHS controls, implement specific controls for all works in or near watercourses: site-specific risk assessment before each phase of water-adjacent work; defined exclusion zones around flowing water; stable access and egress routes for workers and plant in riverbed; measures to prevent plant instability in riverbeds (ground preparation, operating limits); provide life jackets, throw lines, and water rescue equipment at all river work fronts — inspect daily; prohibit lone working near water at all times; define weather-, flow-, and water-level-based stop-work criteria for each river work location. Assign a dedicated River Protection Supervisor during all in-stream works and riverbed borrow extraction. JSA required before each river work phase.	Water rescue equipment inspection logs (daily). Life jacket provision records. Lone working prohibition enforced — no river work solo. Water level stop-work criteria defined in Annex 1 and actioned. River Protection Supervisor assignment records. JSA records for each river phase.	Annex 1	Contractor (ESHS Manager)	Engineer and PIURR	Daily; before each water-adjacent phase
C-OHS-04	PPE & Site Facilities	Workers (and site visitors) without adequate PPE or site welfare facilities.	Provide appropriate PPE to all workers free of charge before commencement of works: minimum standard PPE at all times (hard hat, high-vis, safety boots, eye protection where required). Hearing protection	PPE issuance records. Daily PPE compliance observations. Toilet facility census vs workforce numbers. First aid kit inspection	Annex 1	Contractor (ESHS Manager)	Engineer and PIURR	Daily



Ref.	Topic	Impact / Issue	Commitment / Mitigation Measure	Monitoring Indicator / Means of Verification	CEMP Sub-plan	Implementation	Supervision	Timing / Frequency
			in all areas >80 dBA. Task-specific PPE for blasting, chemicals, confined spaces, hot works, water works. Portable toilet facilities at every work site (minimum 1 per 15 workers). First aid kits at every work front — OSHA-compliant. On-site health clinic at main camp with: qualified first aider coverage at all times, emergency evacuation transport available 24/7, medical arrangement with nearest hospital documented. Inspect all safety signs, lighting, and barriers — keep legible and unobstructed. Provide PPE to all site visitors.	records. Health clinic staffing and equipment records. Medical arrangement documentation. Safety sign inspection records.				
C-OHS-05	Drug, Alcohol & Conduct	Drug or alcohol impairment causing accidents; unacceptable worker behaviour undermining safety and community relations.	Implement zero-tolerance alcohol and drugs policy in Code of Conduct and camp rules. The Contractor shall implement a drug and alcohol management programme as part of the Occupational Health and Safety system, including testing where justified for safety-critical roles.  Any testing shall be carried out in accordance with applicable national labour legislation, with workers informed in advance through site rules and induction. Testing shall be undertaken in a manner that respects worker dignity and confidentiality.  Records of testing shall be maintained by the Contractor. Summary information and compliance status shall be reported to the Engineer, while	Drug and alcohol testing records. Zero drug/alcohol-related incidents (or documented disciplinary action). Code of Conduct signed by all workers. Recreational facility provision records. Unauthorized access incident log.	Annex 1 / Annex 10	Contractor (ESHS Manager)	Engineer and PIURR	Random testing; continuous enforcement; monthly audit

Ref.	Topic	Impact / Issue	Commitment / Mitigation Measure	Monitoring Indicator / Means of Verification	CEMP Sub-plan	Implementation	Supervision	Timing / Frequency
			individual test results shall remain confidential.  .Enforce policy on illegal activities: no drugs, no bribery, no harassment. Provide recreational facilities within camps to reduce off-site social pressures. Prohibit unauthorized access to or use of camp facilities by non-project persons.					
C-OHS-06	Driver & Operator Fatigue	Vehicle overturning on steep mountain terrain or collision caused by fatigued drivers — risk elevated by long shifts on narrow mountain roads.	Implement driver and equipment operator fatigue management in Annex 1: maximum driving/operating shift hours defined (reference national regulations and GIIP); mandatory rest breaks; prohibition on driving after defined continuous hours without rest. All drivers and equipment operators to be suitably trained, licensed, and specifically inducted on local mountain conditions, river crossings, gradient limits, and community safety risks. Conduct pre-shift fitness checks. Supervisor authority to remove fatigued workers from driving duties. Log all driver incidents and near-misses.	Driver/operator roster and hours records. Fatigue management policy in Annex 1. Driver induction records (local conditions). Pre-shift fitness check records. Vehicle incident and near-miss log. Zero overturning incidents attributed to fatigue (or documented investigation).	Annex 1	Contractor (ESHS Manager)	Engineer and PIURR	Daily supervision; weekly records review
10. Labour, Working Conditions & Gender-Based Violence / SEA/SH (ESR2, ESR4, ESR10)								
C-LB-01	Labour Rights & Conditions	Wage violations, excessive hours, child labour, forced	Implement the Labour Management Plan. Written employment contracts in workers' own language before	Written contracts for 100% of workers (sample review by	Labour Management Plan	Contractor (ESHS Manager)	Engineer and PIURR	Monthly

Ref.	Topic	Impact / Issue	Commitment / Mitigation Measure	Monitoring Indicator / Means of Verification	CEMP Sub-plan	Implementation	Supervision	Timing / Frequency
		overtime, or discrimination in remote project location with limited oversight.	starting work. Wages paid in full and on time — no unauthorised deductions. Wages shall be paid by bank transfer or through a verifiable electronic payment system. Cash payment is not permitted unless the worker has no access to a bank account, in which case payment shall be made in the presence of a witness, evidenced by a signed and dated receipt countersigned by the worker, and recorded in the payroll register. The Engineer shall be notified of any worker being paid in cash and the reason for this. Maximum 48-hour working week; overtime voluntary and at premium rate. Prohibit employment of anyone under 18. No retention of identity documents. No recruitment or placement fees charged to workers. Workers legally eligible to work in Tajikistan. Worker register accessible to Engineer. All employment contracts, payroll records, time sheets, and labour registers shall be maintained in both Tajik/Russian and English, or accompanied by certified English translations, and shall be available for inspection by the Engineer and for independent labour audit at any time. Collective bargaining, retrenchment, and accommodation provisions in contracts.	Engineer). Payroll records (monthly). Working hours register. Age verification records. Worker register on site. Contract clause verification.				
C-LB-02	Local Recruitment &	Missed opportunity to generate local economic benefit;	Agree local recruitment targets with PIURR before mobilisation. Preferentially recruit unskilled labour	Agreed local recruitment targets documented. Local	Labour Management Plan	Contractor (ESHS Manager)	Engineer and PIURR	Monthly

Ref.	Topic	Impact / Issue	Commitment / Mitigation Measure	Monitoring Indicator / Means of Verification	CEMP Sub-plan	Implementation	Supervision	Timing / Frequency
	Procurement	tensions if outsider workers perceived to take available jobs.	from Project-affected communities. Advertise all vacancies locally using accessible media. Recruitment procedures to be transparent, public, and non-discriminatory; no discrimination on grounds of gender, ethnicity, age, or disability. Apply ballot system for fair selection where demand exceeds supply. Track and report local hiring proportions monthly. Procure goods and services locally within Tajikistan where practicable — monitor local procurement proportion.	hiring proportion (monthly reports). Recruitment advertisements on file. No discrimination complaints. Local procurement records.				
C-LB-03	SEA/SH Prevention	SEA and SH by construction workers affecting community members (especially women and girls) and female workers — risk elevated by labour influx into remote communities.	Prepare SEA/SH Prevention & Response Plan consistent with EBRD ESR2, ESR4, and ESR10. Enforce Worker Code of Conduct with specific SEA/SH prohibitions — signed by all workers at induction. Conduct SEA/SH awareness training at induction and quarterly refreshers. Establish confidential SEA/SH reporting channel separate from general GRM; survivor-centred response procedures. Designate SEA/SH focal point (female where possible). Coordinate with PIURR on referral pathways for survivors. Inform communities of reporting mechanisms. Investigate all SEA/SH reports promptly; apply discipline up to termination. Provide recreational facilities in camps to reduce off-site social pressures.	SEA/SH Plan in CESMP. Code of Conduct signed by 100% of workers. SEA/SH training records (induction + quarterly). Confidential reporting channel operational and communicated to workers and communities. SEA/SH incident log and response records. Recreational facility records. Quarterly PIURR status report.	Labour Management Plan	Contractor (ESHS Manager)	Engineer and PIURR	Induction; quarterly training; continuous; monthly reporting

Ref.	Topic	Impact / Issue	Commitment / Mitigation Measure	Monitoring Indicator / Means of Verification	CEMP Sub-plan	Implementation	Supervision	Timing / Frequency
C-LB-04	Communicable Disease	HIV/AIDS, TB, and other communicable diseases spreading between the workforce and local communities due to labour influx.	Implement worker education programme on communicable diseases (HIV/AIDS, TB, COVID-19, other locally relevant diseases) during induction and bi-monthly refreshers — records required. Provide information on communicable diseases to communities near construction camps through CLO. Provide access to health services and confidential medical support for workers. Include camp hygiene and disease prevention in Camp Management Plan (Annex 10).	Communicable disease training materials and attendance records (induction and bi-monthly). Community information distribution records (via CLO). Camp hygiene inspection records. Zero communicable disease outbreak attributed to project.	Labour Management Plan / Annex 10	Contractor (ESHS Manager)	Engineer and PIURR	Induction; bi-monthly refreshers; ongoing community outreach
<b>11. Land Use, Livelihoods &amp; Agricultural Calendar</b>								
C-LU-01	Agricultural Calendar	Construction disrupting sowing and harvesting seasons causing livelihood losses to farming communities along the 56 km corridor.	Schedule major earthworks, land access, and haul route disruptions outside sowing (March–May) and harvesting (September–October) seasons where technically practicable. Where construction during agricultural season is unavoidable, minimise duration of land occupation and provide advance notice ≥72 hours to affected households. Prioritise reinstatement of agricultural land before next seasonal growing period. Compensate any crop losses promptly in accordance with RP.	Construction schedule aligned with crop calendar — deviations documented with justification. Advance notification records for in-season works. Agricultural land reinstatement records before growing season. Crop loss compensation records.	Annex 6 / Annex 15	Contractor (ESHS Manager)	Engineer and PIURR	Pre-works schedule review; monitoring throughout

Ref.	Topic	Impact / Issue	Commitment / Mitigation Measure	Monitoring Indicator / Means of Verification	CEMP Sub-plan	Implementation	Supervision	Timing / Frequency
C-LU-02	Temporary Land Access & Compensation	Temporary occupation of agricultural, community, or private land for camps, borrow areas, haul roads, and spoil sites causing livelihood disruption.	Operate within approved land access boundaries only — no encroachment without PIURR-approved agreement and documented landowner/user consent obtained before occupation. Protect and reinstate all irrigation channels before agricultural season. Minimise damage to crops and trees; compensate immediately for any damage. Restore all temporarily occupied land to original or better condition; Engineer sign-off before handover.	Land access agreement register. Compensation payment records (prior to occupation). Irrigation channel reinstatement records. Land restoration inspection sign-off by Engineer. Zero unresolved land/livelihood complaints in GRM.	Annex 6 / Annex 15	Contractor (Site Engineer / ESHS Manager)	Engineer and PIURR	Pre-occupation; ongoing; end-of-use (reinstatement)
C-LU-03	Livelihoods	Livelihood restoration — severely affected households	For all 22 parcels where land take exceeds 20% of total plot area, PIURR shall commission an individualised livelihood restoration assessment before works commence on that parcel. The assessment shall identify household-specific restoration options, which may include replacement tree planting, agricultural inputs support, and skills or enterprise development support. Restoration measures shall be agreed with the affected household through the RP consultation process and documented in the RP implementation record. No works shall commence on a severely affected parcel until the restoration assessment is complete and the agreed measures are documented.	Livelihood restoration assessment completed for all 22 parcels before works. Agreed measures documented in RP implementation record.	RP	PIURR	Engineer & EBRD	Pre-construction; updated at each quarterly RP monitoring report

Ref.	Topic	Impact / Issue	Commitment / Mitigation Measure	Monitoring Indicator / Means of Verification	CEMP Sub-plan	Implementation	Supervision	Timing / Frequency
C-LU-04	Livelihoods	Registered commercial business — ZAO Asali Sari Khosor, km 31+800–31+840	Before works commence at km 31+800–31+840, PIURR shall confirm in writing: (i) that an income loss assessment for ZAO Asali Sari Khosor has been completed; (ii) that the partial land and structure take does not physically constrain access to or operation of the honey production facility; (iii) that any temporary construction-phase disruption to access or operations will be compensated; and (iv) that compensation reflects full replacement cost of affected structures. The Engineer shall not issue a commencement instruction for works at this location until written confirmation from PIURR is on file.	Written PIURR confirmation on file before works commence at km 31+800. Income loss assessment documented in RP.	RP	PIURR	Engineer & EBRD	Pre-construction at km 31+800
12. Community Relations, Stakeholder Engagement, Security & GRM								
C-CR-01	Grievance Management	Community grievances unresolved, escalating tensions, or undermining the project's social licence.	Implement project GRM at site level per SEP. Establish community liaison hotline and GRM contact points at each work front and in each affected village before works commence. Acknowledge all grievances within 5 working days; aim to resolve within 30 days; escalate unresolved grievances to PIURR. Log all grievances, responses, and close-out in GRM register. Report GRM statistics monthly to Engineer and PIURR. Hold community health and safety review consultations at least	GRM register (all grievances logged). 5-day acknowledgement rate (target 100%). Resolution rate and time. Monthly GRM report to Engineer and PIURR. 6-monthly community consultation records. Suggestion box inspection records.	Annex 2	Contractor (ESHS Manager)	Engineer and PIURR	GRM operational before works; monthly reporting; 6-monthly reviews

Ref.	Topic	Impact / Issue	Commitment / Mitigation Measure	Monitoring Indicator / Means of Verification	CEMP Sub-plan	Implementation	Supervision	Timing / Frequency
			every 6 months. GRM suggestion boxes at worksites and camps.					
C-CR-02	Security & Voluntary Principles	Security personnel causing harm to communities or using excessive force.	If security personnel are engaged, implement Voluntary Principles on Security and Human Rights. Select security providers through due diligence (background checks, references). All security personnel to receive training on appropriate use of force, community relations, Code of Conduct, and prohibition of SEA/SH. Conduct periodic audits of security performance. No military or police engagement for site security without PIURR approval.	Security provider due diligence records. Security personnel training records. Voluntary Principles policy in CESMP. Periodic audit records. Zero incidents of excessive force or community harm by security personnel.	Annex 9	Contractor (ESHS Manager)	Engineer and PIURR	Pre-construction (selection); ongoing audits
<b>13. Cultural Heritage (ESR8)</b>								
C-CH-01	Cemeteries & Known Heritage Features	Works encroaching on known cemeteries and heritage features causing physical damage and community distress.	Mark all known cemeteries and heritage features as exclusion zones on construction drawings before works commence. A minimum 10 m exclusion buffer shall be applied from the boundary of each confirmed cemetery — no machine access is permitted within this buffer. Cemetery Shulash (km 12+300–12+440) and Cemetery (Mazor) Langar (km 32+280–32+600) are confirmed receptors and shall be included in the exclusion buffer from the outset. All additional cemeteries confirmed through the CHSEP shall be added to the exclusion zone register before works reach each relevant section. Install physical	Exclusion zone marking photos before works. Weekly exclusion zone inspection records. Community and elders notification records. Agency for Cultural Heritage correspondence on file. Zero encroachment incidents.	Annex 11	Contractor (ESHS Manager)	Engineer and PIURR	Before works near features; inspection weekly



Ref.	Topic	Impact / Issue	Commitment / Mitigation Measure	Monitoring Indicator / Means of Verification	CEMP Sub-plan	Implementation	Supervision	Timing / Frequency
			<p>exclusion fencing and inspect weekly. If design requires works adjacent to a cemetery, obtain specific Engineer approval; conduct works by hand within buffer. Notify community and village elders ≥72 hours before any works near cemeteries. Coordinate with Agency for Protection and Use of Historical and Cultural Heritage (Ministry of Culture) for any works affecting known heritage assets.</p> <p>A minimum 10 m exclusion buffer shall be applied from the boundary of Cemetery Shulash (km 12+300–12+440) and Cemetery (Mazor) Langar (km 32+280–32+600). Buffer extents shall be physically marked with fencing and recorded on construction drawings before works commence in each section. For any additional cemeteries confirmed through the CHSEP, a 10 m exclusion buffer shall equally apply.</p> <p>Before construction commences, the Contractor shall prepare a Cultural Heritage Stakeholder Engagement Plan (CHSEP) in consultation with PIURR. The CHSEP shall identify and consult cultural heritage stakeholders along the Project route, confirm the locations and use patterns of all cemeteries and living heritage receptors not captured in the desktop baseline, determine whether any of the 13 identified UNESCO ICH receptors are practised by communities along the corridor,</p>					

Ref.	Topic	Impact / Issue	Commitment / Mitigation Measure	Monitoring Indicator / Means of Verification	CEMP Sub-plan	Implementation	Supervision	Timing / Frequency
			and develop receptor-specific management measures in consultation with stakeholders. The CHSEP shall be submitted to the Engineer and PIURR for approval before any works commence and shall be maintained as an active instrument throughout the construction period.					
C-CH-02	Chance Finds	Discovery of archaeological artefacts, human remains, or objects of cultural significance during excavation or borrow pit works.	<p>The Cultural Heritage Monitor (CHM) is a specialist role distinct from the ESHS Manager and Ecologist. The CHM's CV and qualifications shall be submitted to the Engineer for approval before mobilisation commences. The CHM shall not be substituted without prior written Engineer approval.</p> <p>Implement Chance Finds Procedure (Annex 11). All earthworks workers to receive toolbox talk on chance finds recognition and procedure before any earthworks commence. On discovery: stop work immediately; secure site; notify Site Manager within 1 hour; ESHS Manager to notify Engineer and PIURR within 2 hours; PIURR to notify Agency for Protection and Use of Historical and Cultural Heritage. No work to resume without written Ministry of Culture clearance through PIURR. Document all finds with photos, GPS coordinates, and written description.</p>	Chance find toolbox talk records (100% of earthworks workers). Chance find log if triggered. 1-hour site manager notification; 2-hour Engineer notification records. Ministry of Culture clearance before restart. Zero unauthorised restart after chance find.	Annex 11	Contractor (ESHs Manager)	Engineer and PIURR	Toolbox before earthworks; immediate response if triggered

Ref.	Topic	Impact / Issue	Commitment / Mitigation Measure	Monitoring Indicator / Means of Verification	CEMP Sub-plan	Implementation	Supervision	Timing / Frequency
			Provide weather protection (covering) where required to prevent deterioration. Secure physical protection of find and buffer zone until authority clearance.					
<b>14. Waste Management &amp; Resource Efficiency (ESR3)</b>								
C-WA-01	Construction Waste Management	Uncontrolled waste, illegal dumping, and hazardous waste mishandling contaminating land and water.	Prepare Waste Management Plan (Annex 5, cross-ref. Annex 10 for camp waste). Apply waste hierarchy: prevention, minimisation, reuse, recycling, then disposal. Segregate at source: general, recyclable, hazardous — separate labelled containers at all work fronts and camp. Containers: covered, tip-proof, weatherproof, scavenger-proof; integrity checks regular; labelled by waste type; replace damaged containers immediately. Prohibit all open burning of waste. Hazardous waste: banded locked area on impermeable base; dispose via state-licensed contractor with manifests. Non-hazardous waste: licensed contractor to approved facility — transfer notes per load. Waste register recording type, quantity, contractor, and destination for all streams.	Approved Waste Management Plan. Waste register (all streams, up to date). Licensed contractor documentation and state certificates. Hazardous waste manifests. Transfer notes per load. Zero illegal dumping (site checks). Zero waste burning. Daily housekeeping inspection records.	Annex 7	Contractor (ESHS Manager)	Engineer and PIURR	Daily housekeeping; weekly register review; monthly reporting
C-WA-02	Camp Waste & Sanitation	Camp waste and sewage causing disease, water contamination, and	Domestic waste collected in lidded, scavenger-proof containers; disposed at approved landfill via authorised contractor. Sewage: septic tanks for camps <150 workers	Domestic waste disposal records (licensed landfill receipts). Sewage system type and	Annex 7 / Annex 10	Contractor (ESHS Manager)	Engineer and PIURR	Weekly

Ref.	Topic	Impact / Issue	Commitment / Mitigation Measure	Monitoring Indicator / Means of Verification	CEMP Sub-plan	Implementation	Supervision	Timing / Frequency
		community nuisance.	(licensed removal of liquid waste); treatment on site or via licensed transport for larger camps. Sewage sludge treated as hazardous waste. Conduct bi-monthly training and drills on pollution prevention, spill response, and emergency preparedness — attendance records required. Worker training on waste management at induction and bi-monthly refreshers.	capacity records. Licensed sewage removal manifests. Bi-monthly training and drill records. Camp waste inspection records (weekly).				
C-WA-03	Resource Efficiency	Excessive fuel and water consumption increasing project costs and resource pressure on the Shurobdaryo basin.	Enforce no-idling policy (max 5 min idling). Optimise water use for dust suppression — targeted application, not continuous flooding. Track and report fuel and water consumption monthly; investigate spikes. All water abstraction from surface or groundwater requires BWO permit. Prefer mains electricity over diesel generators where practicable. Procure goods and services locally within Tajikistan where practicable.	Monthly fuel and water consumption logs. No-idling enforcement records. Water abstraction permit on file before extraction. Abstraction volume vs permit limits. Consumption spike investigation records.	Annex 7	Contractor (ESHS Manager)	Engineer and PIURR	Weekly
<b>15. Landscape, Visual Amenity &amp; Access Road Management</b>								
C-VIS-01	Site Housekeeping & Visual Amenity	Untidy construction sites causing community nuisance and reputational damage.	Maintain clean and orderly work areas and access routes at all times — daily housekeeping enforcement. Keep access road and track widths to the minimum necessary for construction and operation. Maintain community consultation throughout construction to address visual and amenity concerns promptly.	Daily housekeeping inspection records at all work fronts. Track width compliance checks (weekly). Community consultation records. Zero unresolved visual/amenity complaints in GRM.	Annex 16	Contractor (ESHS Manager)	Engineer and PIURR	Daily

Ref.	Topic	Impact / Issue	Commitment / Mitigation Measure	Monitoring Indicator / Means of Verification	CEMP Sub-plan	Implementation	Supervision	Timing / Frequency
C-VIS-02	Access Road Management	Damage to existing roads and tracks; erosion and instability of new construction access tracks.	Use existing roads for construction access in accordance with applicable standards and design. Before using any existing community road for haulage, record its baseline condition with photos. Suitably compact new earth access tracks before use; inspect before first use and periodically thereafter. Grade access tracks to prevent erosion; install cross-drainage at all required intervals. Plans for access tracks in steep terrain to be submitted to Engineer for approval before construction. Reinstatement all access tracks to at least baseline condition on completion.	Baseline road condition survey records (before use). Access track construction plans approved for steep terrain. Compaction records. Periodic track inspection records. Reinstatement condition survey vs baseline on completion.	Annex 16	Contractor (ESHS Manager)	Engineer and PIURR	Baseline pre-use; periodic during use; reinstatement at completion
16. Post-Construction Reinstatement, Monitoring & Handover								
C-PC-06	Site Reinstatement & Closure	Failure to fully reinstate disturbed areas leaving lasting environmental, safety, and community impacts.	Prepare Reinstatement and Closure Plan (Annex 6 / Annex 15) — agree standards with Engineer and PIURR before handover of each section. Progressive reinstatement during construction — do not defer to end of contract. Requirements: remove all temporary structures, plant, and equipment; remove all waste and hazardous materials; rehabilitate all borrow areas and quarries; rehabilitate camp sites to pre-construction condition; restore all drainage and irrigation features; revegetate all disturbed areas with native species; restore community water and road infrastructure to	Reinstatement Plan in CESMP. Progressive reinstatement records and photos (monthly). Final reinstatement inspection report signed by Engineer and PIURR. Zero outstanding reinstatement items at practical completion. Bio-restoration monitoring reports.	Annex 6 / Annex 15	Contractor (ESHS Manager)	Engineer and PIURR	Progressive (monthly); final inspection before practical completion

Ref.	Topic	Impact / Issue	Commitment / Mitigation Measure	Monitoring Indicator / Means of Verification	CEMP Sub-plan	Implementation	Supervision	Timing / Frequency
			original or better condition. Final reinstatement inspection by Engineer and PIURR with sign-off before practical completion. Photographic record of all reinstatement. Bio-restoration monitoring at 3, 6, and 12 months.					
C-PC-07	Monitoring & Reporting	Inadequate monitoring and reporting preventing identification of non-compliance and adaptive management.	Contractor to maintain and submit: daily site diaries; weekly ESHS inspection checklists; monthly ESHS report to Engineer and PIURR (minimum contents: compliance status, incidents/near-misses, GRM statistics, monitoring results, corrective actions, training records). Engineer to submit semi-annual Environmental Monitoring Report (EMR) to PIURR and EBRD. Corrective and Preventive Action Requests (CPARs) to be raised for all non-compliances and tracked to close-out. Non-compliances escalated to PIURR if not resolved within agreed timeframe.	Daily diaries on site. Weekly inspection checklists submitted. Monthly ESHS reports submitted by 5th of following month. Semi-annual EMRs submitted. CPAR register up to date. All CPARs closed out within agreed timeframe.	All sub-plans	Contractor (ESHS Manager) / ENGINEER / Engineer	Engineer and PIURR / EBRD	Monthly (Contractor); Semi-annual (Engineer to EBRD)
C-CI-01	Community Infrastructure	Utility disruption — overhead power line and water supply	Before any works commence within 50 m of the existing 0.4 kV overhead power line, transformer substations, or community water supply pipelines, the Contractor shall formally coordinate with the relevant electricity and water authorities to agree working procedures, confirm outage scheduling, and ensure that utility relocations are planned and sequenced to maintain continuous	Utility coordination records on file before works in proximity zones. Advance notification records to communities. Any unplanned outage reported to Engineer within 2 hours.	Annex 2 / Annex 3	Contractor (ESHS Manager); PIURR (authority coordination)	Engineer and PIURR	Pre-works in each utility proximity zone



Ref.	Topic	Impact / Issue	Commitment / Mitigation Measure	Monitoring Indicator / Means of Verification	CEMP Sub-plan	Implementation	Supervision	Timing / Frequency
			supply. Coordination records shall be submitted to the Engineer before works in utility proximity zones commence. Any planned outage shall be notified to affected communities at least 48 hours in advance and shall be restored before the end of the working day.					

## 7. Environmental and Social Monitoring Plan

---

The overall objective of environmental, health and safety monitoring is to measure quantitatively the effectiveness of mitigation measures, develop appropriate responses to non-compliance with Project standards, and identify emerging environmental and social issues. Monitoring will be carried out to ensure that all Project activities and mitigation measures comply with applicable Project and national standards, and that the Contractor meets its commitments and requirements under this ESMP and the CESMP.

The reporting chain for monitoring results is as follows: (a) the Contractor submits a monthly ESHS report to the ENGINEER by the 5th of each following month, covering all construction-phase monitoring parameters in this table; (b) the Engineer reviews and forwards the report to PIURR within 10 working days, with a compliance assessment and any recommended corrective actions; (c) Engineer and PIURR compiles and submits a semi-annual Environmental Monitoring Report (EMR) to EBRD within 45 days of the end of each six-month reporting period, covering all phases of monitoring in this table. This reporting chain is a contractual obligation. Contractors must price the cost of monthly ESHS reporting, including monitoring data compilation, within their ESHS staffing and management overhead.



Table 7: Monitoring Plan

ESMP Ref.	Monitoring Parameter	Method / Standard	Location	Frequency	Responsible Party
CONSTRUCTION PHASE					
A. Pre-Construction Gating & Management Systems					
C-PC-02a	RP Land Access Confirmation — Section-by-Section Sequencing	<p>Monthly review of Land Access Log by Engineer — confirm PIURR has issued written compensation confirmation for each land parcel before works reached that parcel. Cross-reference construction programme advance against confirmed parcels to verify no works have commenced on unconfirmed land. Spot-check PIURR confirmation letters against programme progress at each monthly site visit.</p> <p>For any section of the corridor involving physical or economic displacement, the Engineer shall not issue a works commencement instruction for that section until EBRD has provided written sign-off on the RAP Completion Report for that section (or the relevant sectional completion report).</p>	Contractor Land Access Log (on site); PIURR compensation confirmation records; construction programme advance map showing confirmed vs unconfirmed parcels along full corridor	Monthly Land Access Log review by Engineer at monthly site inspection. For sections involving resettlement: Engineer's permission to commence works is conditional on receipt of EBRD written sign-off on the sectional RAP Completion Report. PIURR confirmation reviewed before each new section is opened. Any gap between programme advance and confirmed land immediately escalated to PIURR and EBRD. Logged in monthly ESHS report.	Contractor (Land Access Log maintenance); Engineer (monthly verification, gating of works commencement against RAP Completion Report sign-off, and preparation of sectional RAP Completion Reports); PIURR (compensation confirmation and semi-annual EMR reporting on RP implementation status); EBRD (sign-off on sectional RAP Completion Reports before works permitted on resettlement sections).
B. Air Quality					
C-AQ-01	Dust (PM10 / PM2.5) — Earthworks & Haul Roads	Visual inspection (opacity check, plume observation) daily; portable optical dust meter at sensitive receptors when complaints received or during high-risk works (dry + windy); compare to national GOST / WHO PM10 24-hr guideline 45 µg/m <sup>3</sup>	Active work fronts near settlements; unpaved haul roads through villages; sensitive receptors (schools, residences) within 250 m of works	Daily visual; spot instrumental monitoring during high-risk works or when complaint received	Contractor; Engineer (verification)
C-AQ-02 C-AQ-03	Exhaust Emissions & Asphalt/Crusher Plant	Visual smoke checks on all operating plant daily; maintenance logs reviewed; MPE permit conditions verified for asphalt plant and crusher; perimeter air quality monitoring at plant during operation	All operating plant; asphalt plant perimeter; crusher perimeter; nearest sensitive receptor	Daily visible smoke check; weekly maintenance log review; weekly during plant operation	Contractor; Engineer (verification)

ESMP Ref.	Monitoring Parameter	Method / Standard	Location	Frequency	Responsible Party
<b>C. Natural Hazards, Geotechnical Stability &amp; Climate</b>					
C-NH-01 C-NH-04	Slope Stability, Rockfall & Rainfall Thresholds	Daily visual inspection of all cut slopes and embankments; on-site weather station rainfall record vs defined stop-work thresholds; post-rainfall ( $\geq 10$ mm) and post-seismic inspection forms; slope stability assessments for slopes $\geq 30^\circ$	All cut slopes and embankments along alignment; weather station data; high-risk slope register	Daily visual; immediate after rainfall $\geq 10$ mm, blasting, or any felt seismic event	Contractor; Engineer (verification)
C-NH-02	Flood Risk & Temporary Works in Floodplain	Daily river level monitoring at active river work fronts during wet season; temporary diversion and protection structure inspection before and after rainfall; stop-work trigger records; flood event log	All active river crossings and floodplain work fronts; river level monitoring points	Daily during wet season and river works; after storm events; weekly during dry season	Contractor
<b>D. Soils, Topsoil &amp; Materials Management</b>					
C-SG-01	Topsoil Stripping & Stockpile Management	Site inspection: topsoil segregated from subsoil; stockpile heights $\leq 2$ m; vehicle barriers in place; stockpiles protected from erosion; aeration records if $> 6$ months	All active earthworks areas; topsoil stockpile locations	Weekly inspection; monthly stockpile audit	Contractor
C-SG-02	Spoil Disposal — Approved Sites Only	Spoil tracking register review (per-load records: origin, volume, destination); approved disposal site inspection; no spoil in rivers, riverbanks, floodplains, slopes $> 30^\circ$ , or private land without agreement	Approved disposal sites; Shurobdaryo riverbanks and floodplain (zero-disposal verification)	Weekly tracking register review; monthly disposal site inspection	Contractor
C-SG-03 C-SG-04	Hazardous Materials Storage & Spill Response	Visual inspection: bund integrity ( $\geq 110\%$ capacity); drip trays on mobile plant inspected and emptied; MSDS on site; spill kits present at all fuel points and river crossings; spill register reviewed; $\geq 50$ m setback from watercourses confirmed	All fuel storage areas; refuelling points; mobile plant; maintenance areas	Daily visual; weekly formal inspection; immediate following any spill	Contractor
C-SG-05 C-SG-06	Borrow Areas, Quarries & River Gravel Extraction	Document review: CEP/Hukumat licences on file before use; pre-use survey records; extraction zone markers in place; bank stability inspection at extraction sites; progressive reinstatement progress photos	All active borrow pits, quarries, and river extraction zones	Pre-use check; weekly during extraction; monthly reinstatement review	Contractor

ESMP Ref.	Monitoring Parameter	Method / Standard	Location	Frequency	Responsible Party
E. Water Resources, Hydrology & Water Quality					
C-HY-01	Turbidity & Sediment Control	Visual turbidity check at active river crossings and downstream of earthworks; turbidity tube measurement if visual check indicates concern (target: <25 NTU above background during earthworks, <10 NTU during in-river works); ESCP control inspection (silt fences, check dams, sediment basins). TRIGGER LEVELS AND RESPONSE: — Visual sheen or discolouration observed downstream: immediately notify ESHS Manager; increase ESCP controls; re-inspect within 2 hours. — Turbidity tube reading >50 NTU above background at nearest downstream receptor: suspend earthworks causing discharge; notify Engineer within 2 hours; do not resume until turbidity returns to <25 NTU above background and controls are confirmed adequate. — Any turbidity plume reaching the Shurobdaryo main channel from earthworks: treat as a spill event — stop work, notify Engineer within 2 hours, notify PIURR within 4 hours, log in incident register.	Shurobdaryo River crossings; drainage outlets from active earthworks; sediment control structures; nearest downstream monitoring point at each active river crossing section	Visual check: weekly during active earthworks and after every rainfall ≥10 mm. Turbidity tube: before and after each in-river works phase. Trigger-based response: immediate on any visual sheen or discolouration.	Contractor (daily monitoring); Engineer (verification and trigger response oversight); PIURR (notified on trigger events and semi-annual EMR)
C-HY-02 C-HY-03	Water Quality (Chemical) & In-River Works	Visual inspection for oil sheens, concrete washout discharge, or discolouration at active crossings and downstream. pH check (test strip) at all concrete works locations (acceptable range 6–9). In-river works method statement compliance inspection; downstream flow maintained during cofferdam operations. TRIGGER LEVELS AND RESPONSE: — Any visible oil sheen or petroleum hydrocarbon odour at or downstream of refuelling area or plant washdown area: treat as a spill event immediately — activate Spill Response Procedure (Annex 7); stop all works in the area; notify Engineer within 2 hours; notify PIURR within 4 hours. Note: the national TPH standard is 0.05 mg/l — any visible sheen constitutes likely non-compliance. There is no provision	River crossings during in-river works; concrete washout areas; all refuelling exclusion zones within 100 m of watercourses; nearest downstream monitoring point	Daily during in-river works and active concrete operations. Visual hydrocarbon check: daily at all fuel storage and plant washdown areas near water. pH check: each concrete pour near a watercourse. Trigger-based response: immediate on any visual sheen, discolouration, or out-of-range pH.	Contractor (daily monitoring); Engineer (verification); PIURR (notified on any trigger event and semi-annual EMR)

ESMP Ref.	Monitoring Parameter	Method / Standard	Location	Frequency	Responsible Party
		to apply the IFC 10 mg/l standard as a substitute. Zero discharge of hydrocarbons to any watercourse is the operative standard. — pH reading outside 6–9 range at drainage point near watercourse: stop concrete operations causing discharge; inspect and repair washout containment before resuming; re-test before resuming discharge to drainage. — Any direct discharge of concrete washwater or cement slurry to watercourse: stop work; notify Engineer within 2 hours; remediate.			
C-HY-04 HY-05	C- Camp Sewage, Concrete Washout & Potable Water	Inspection: lined concrete washout pits present and not overflowing; camp sewage system operational and compliant (septic/licensed haulage records); monthly water quality test certificate for potable water; ≥200 m camp setback from watercourses confirmed	Camp sites; concrete work areas; camp water supply	Before camp/concrete works commence; monthly thereafter; water quality test monthly	Contractor
<b>F. Noise &amp; Vibration</b>					
C-NV-01 NV-02	C- Construction Noise Near Settlements (Community)	Class-1 sound level meter (LAeq, Lmax); compare to national GOST limits and IFC EHS Guidelines; work hours compliance log; community advance notification records; no-horn zone enforcement	Site boundary at nearest settlement; schools, clinics, mosques, residences within 250 m of works	Baseline before works at each settlement; weekly spot checks during high-noise works; triggered by any complaint	Contractor
C-NV-03	Occupational Noise Exposure (Workers)	Noise level measurement in all work areas suspected >80 dBA; compare to IFC EHS Guidelines occupational noise limits; hearing protection use compliance observation; hearing protection zone signage check	All work areas with high-noise plant (crusher, compactor, jack hammer, blasting zones)	Initial assessment when new high-noise activity commences; monthly in established high-noise areas; daily PPE compliance observation	Contractor
C-NV-04	Vibration (PPV) — Blasting & Compaction	Portable vibration meter (PPV mm/s) positioned at nearest structure to blast or heavy compaction activity. PRIMARY STANDARD: National SanPiN limit of 0.5 mm/s PPV. All monitoring results are compared first against this	Structures within defined buffer of all blast locations and heavy compaction operations; nearest community buildings and any	Pre-condition survey before first blast at each location. PPV measurement at every blast event. Post-event	Contractor (monitoring); engineer (results review and fallback standard approval)

ESMP Ref.	Monitoring Parameter	Method / Standard	Location	Frequency	Responsible Party
		limit. This is the governing contractual standard. FALLBACK STANDARD: DIN 4150-3 (5 mm/s PPV for residential structures) applies only where the Engineer has issued a specific written approval for a particular activity and receptor combination, following the Contractor's demonstration — via pre-activity assessment — that the 0.5 mm/s national limit cannot be achieved without rendering the works impractical at that location. DIN 4150-3 is an absolute backstop minimum; it does not apply by default. If no Engineer written approval for fallback standard exists, the national SanPiN limit of 0.5 mm/s governs without exception. Pre-condition photographic survey of all structures within 50 m of blast locations before first blast. Trial blast records. PPV log per blast event with monitoring position, distance, and result recorded.	structure where SanPiN exceedance is possible	structure inspection after each blast. Monthly summary of PPV results vs SanPiN limit and any Engineer-approved fallback approvals in monthly ESHS report.	authority); PIURR (semi-annual EMR)
<b>G. Biodiversity, Vegetation &amp; PBF</b>					
C-BIO-00	Critical Habitat — Wild Pear Avoidance & Net Gain Delivery	Document and field review: design-team micro-realignment review record for each confirmed tree cluster; confirmed wild pears marked as no-go zones on construction drawings and demarcated on the ground; PIURR written approval verified on file before any works within the root protection zone of a confirmed tree; translocation plan, receptor-site confirmation, and survival-rate records where avoidance is not feasible; Biodiversity Offset Programme (BOMP) delivery monitored against Net Gain success criteria (measured net increase in <i>Pyrus tadshikistanica</i> and <i>P. korshinskyi</i> reproductive units) per BAP/BOMP targets.	Confirmed wild pear clusters at km 11, 15, 16, 29, 34, 37, 43, 47, 48; BOMP offset receptor site(s) (BGCI/Kulob Botanic Garden Darwin Initiative, ref. 31-017)	Avoidance review before design freeze and before clearance at each cluster; no-go demarcation checked before any works at listed chainages; translocation survival monitored per BOMP; offset Net Gain monitored at least annually through construction and into operation until success criteria are met	Contractor + Ecologist (avoidance, demarcation, translocation); PIURR + ESIA team (BOMP design and Net Gain verification); Engineer (verification); EBRD (sign-off on Net Gain delivery)
C-BIO-01 C-BIO-02	Vegetation Clearance Limits & Biodiversity Screening	Site inspection: clearing boundaries marked on ground before machine access; clearing not exceeding approved footprint; Red Book species exclusion fences intact;	All clearing fronts; Red Book species no-go zones; retained vegetation areas	Daily during active clearance; weekly biodiversity inspection;	Contractor

ESMP Ref.	Monitoring Parameter	Method / Standard	Location	Frequency	Responsible Party
		Biodiversity Screening Form completed per work section; tree inventory maintained		before each new clearing section	
C-BIO-03	Invasive Alien Species (IAS) Controls	Inspection: vehicle wash-down facility operational at site entry; cleaning records for all incoming plant; IAS survey results pre-clearance; IAS detection and removal records reviewed; seed mix specifications approved	Site entry wash-down facility; all clearing fronts; seed stockpiles	Daily wash-down records check; weekly IAS inspection at clearing fronts; pre-clearance IAS survey	Contractor
C-BIO-04 C-BIO-04b C-BIO-05	Species Translocation, Fauna Encounters & Nesting Restrictions	Document review: ecologist appointment confirmed; translocation records if triggered; fauna encounter log reviewed; nesting season schedule compliance verified; nest check records before any in-season clearance	All clearing fronts; ecologist on-call records; fauna encounter log	Pre-clearance nesting schedule review; weekly; triggered immediately for any chance find or encounter	Contractor
C-BIO-06 C-BIO-07	Worker Conduct & Bukhara Deer Farm Buffer (km 35)	Code of Conduct compliance inspection; hunting/fishing/trapping prohibition enforcement records; biodiversity awareness training records (quarterly); no-go zone marking at deer farm perimeter; noise logs during works within farm buffer	Camp sites; active work fronts; Bukhara deer farm perimeter and buffer zone	Induction compliance check; quarterly training records; daily noise log during works within farm buffer	Contractor
C-BIO-08	Bio-restoration & Reinstatement Monitoring	Site inspection of reinstated areas: vegetation cover established, no active erosion, correct native species; compare against reference vegetation areas; reinstatement plan compliance	All reinstated earthworks, borrow areas, spoil sites, and camp sites	Monthly during active reinstatement; at 3, 6, and 12 months post-reinstatement per section	Contractor
<b>H. Traffic Management &amp; Road Safety During Construction</b>					
C-TM-01 C-TM-03	Work Zone Traffic Safety & Haul Routes	TMP compliance inspection: advance signs, speed restrictions enforced ( $\leq 40$ km/h project road; $\leq 30$ km/h haul routes; $\leq 20$ km/h settlements), barriers, retroreflective delineation; weekly speed spot check records; oversize load notification records	All active work zones; settlement approaches; haul route junctions	Daily TMP compliance check; weekly speed spot check; oversize load — pre-movement	Contractor



ESMP Ref.	Monitoring Parameter	Method / Standard	Location	Frequency	Responsible Party
C-TM-02 C-TM-04	Community & Livestock Safety at Work Fronts	Inspection: work fronts fenced and signposted; night lighting at settlement work fronts; pedestrian detour routes clear; livestock fencing at crossings; school safety session records; 72-hour advance notice records for disruptions	All work fronts adjacent to settlements; informal livestock crossing points; school locations	Daily inspection; weekly community safety review; livestock crossing inventory monthly	Contractor
C-TM-01 to C-TM-04	Traffic Incident & Near-Miss Log	Incident register review: all traffic incidents (vehicle collisions, pedestrian near-misses, livestock strikes) logged with location, cause, and corrective action; monthly incident statistics trend review	Project-wide incident register	Continuous logging; monthly trend analysis; immediate investigation for any public injury	Contractor
I. Occupational Health & Safety					
C-OHS-01 C-OHS-02	OHS Management System & High-Risk Activities	Document and site inspection: PTW register reviewed; JSA/method statements on file before each high-risk activity; induction records (100% coverage); daily toolbox talk logs; monthly safety meeting minutes; TRIR and LTI statistics; incident register	All active work fronts; site offices (records); high-risk activity locations	Daily site inspection; weekly PTW/JSA review; monthly OHS statistics; monthly meeting	Contractor
C-OHS-03 C-OHS-03b C-OHS-03c	Welfare: Heat/Cold Stress, Water Safety & Remote Working	Inspection: shaded rest areas and cold water at work fronts (summer); cold weather PPE and warming stations (winter); life jackets and water rescue equipment at all river work fronts (daily check); communication systems (radios/satellite phones) in non-coverage sections — check-in interval records	All river work fronts (water safety); all outdoor work areas (heat/cold); remote work sections (comms)	Daily inspection (summer heat; winter cold; river work fronts); weekly comms equipment check	Contractor
C-OHS-04	PPE Compliance & Site Welfare Facilities	Observation: standard PPE worn by 100% of workers on active sites; task-specific PPE at high-risk locations; toilet facilities present (1 per 15 workers); first aid kits stocked and accessible; clinic staffed at main camp; safety signage legible and bilingual (Tajik/Russian)	All active work fronts and camps	Daily compliance observation; weekly formal PPE and welfare audit	Contractor

ESMP Ref.	Monitoring Parameter	Method / Standard	Location	Frequency	Responsible Party
C-OHS-05 C-OHS-06	Drug/Alcohol Testing & Driver Fatigue	Random drug and alcohol test records reviewed; driver hours log vs maximum shift limit; pre-shift fitness check records; drug/alcohol-related incident log	All work fronts; vehicle/plant operators; camp	Random testing (unannounced); daily driver hours log review; monthly trend analysis	Contractor
C-OHS-01	Incident & Near-Miss Reporting	Incident register: all incidents, near-misses, dangerous occurrences logged; 2-hour Engineer notification confirmed; 24-hour PIURR/EBRD fatality notification confirmed; root cause analysis records; corrective action close-out	Project-wide incident register	Continuous logging; 2-hour notification to Engineer; 24-hour notification to PIURR/EBRD for fatalities	Contractor
<b>J. Labour, Working Conditions &amp; Social</b>					
C-LB-01 C-LB-02	Labour Rights, Contracts & Local Recruitment	Document review: written contracts for sample of workers; payroll records spot-check vs minimum wage; working hours register vs maximum limits; no-deduction confirmation; no-recruitment-fee confirmation; local hiring proportion vs agreed targets; work permits for non-nationals	Contractor HR records; site office; payroll records	Monthly review of HR records; quarterly local recruitment proportion report	Contractor; Engineer (verification via Annual Labour Audit); PIURR (quarterly audit)
C-LB-03	SEA/SH Prevention & Response	Document review: SEA/SH Plan on file; Code of Conduct signed by 100% of workers; SEA/SH training records (induction and quarterly); confidential reporting channel operational; SEA/SH incident register (with privacy); recreational facilities in camp	Contractor records; camp; confidential reporting channel	100% CoC sign-off before mobilisation; quarterly training records; monthly SEA/SH channel availability check	Contractor; Engineer (verification via Annual Labour Audit); PIURR (quarterly audit)
C-LB-04	Communicable Disease Prevention	Document review: communicable disease training records (induction and bi-monthly); community information distribution records (via CLO); camp hygiene inspection; no disease outbreak attributed to project	Camp; communities near construction camps; CLO distribution records	Induction records; bi-monthly training; monthly camp hygiene inspection	Contractor
<b>K. Land Use, Livelihoods &amp; Agriculture</b>					



ESMP Ref.	Monitoring Parameter	Method / Standard	Location	Frequency	Responsible Party
C-LU-01 LU-02	C- Agricultural Calendar, Land Access & Compensation	Document review: works schedule vs crop calendar (March–May sowing; Sept–Oct harvest); land access agreement register; compensation payment records (prior to occupation); 72-hour notification records for in-season works; agricultural land reinstatement records	Land access register; CLO community records; works schedule	Pre-season schedule review; monthly land access and compensation register check; quarterly GRM livelihood complaints review	Contractor; Engineer (verification); PIURR
L. Community Relations, Cultural Heritage & Waste					
C-CH-01 CH-02	C- Cultural Heritage — Cemeteries & Chance Finds	Site inspection: cemetery and heritage feature exclusion zones intact; no encroachment; chance find toolbox talk records (100% earthworks workers); chance find log (if triggered); Ministry of Culture correspondence; GPS coordinates and photo records of finds	Heritage exclusion zones; earthworks fronts; Contractor chance find log	Weekly exclusion zone inspection; chance find log — immediate on discovery; monthly records review	Contractor; Engineer (verification)
C-WA-01 WA-02 WA-03	C- Waste Management — Construction, Camp & Resource Efficiency	Inspection: waste register up to date; segregation of hazardous/non-hazardous/recyclable at all work fronts; no illegal dumping or burning; licensed disposal manifests on file; camp septic/sewage records; fuel and water consumption logs vs permit limits	All work fronts; camp waste areas; hazardous waste storage; licensed disposal facility records	Daily housekeeping check; weekly waste register review; monthly manifests audit	Contractor



## 8. Implementation

---

### 8.1 General

This Section sets out the arrangements for implementation of the ESMP during the construction phase of the Project. It defines the roles, responsibilities, procedures, staffing, monitoring, and reporting requirements necessary to ensure that the environmental, social, health and safety (ESHS) mitigation and monitoring measures identified in this ESMP are effectively implemented.

Through the construction contract, PIURR delegates responsibility to the Contractor for implementation of all relevant ESHS measures for the duration of the Contract. The Contractor shall be required to comply with the requirements of this ESMP during the design (where applicable), pre-construction, construction, operation-related activities under the Contract, and site demobilisation phases.

The Contractor shall be fully accountable to the Engineer and the PIURR for ESMP implementation. Compliance with the ESMP shall be closely supervised, monitored, and verified by the Supervision Consultant, acting on behalf of PIURR.

The Contractor shall be responsible for reporting environmental and social safeguards progress and performance at least monthly, including maintaining records and providing all necessary inputs required for periodic environmental and social monitoring reports for the duration of the Contract.

The obligation to implement mitigation and monitoring measures set out in this ESMP applies to:

- all construction sites;
- off-site village roads and access routes used for construction traffic;
- construction plants, camps, laydown areas, workshops, borrow pits, quarries and storage areas; and
- any temporary or permanent worker accommodation or overnight facilities provided by the Contractor.

The Contractor retains ultimate responsibility for implementation of the ESMP under the Contract. The Contractor shall ensure that ESMP requirements are fully cascaded to all subcontractors, suppliers, and workers, regardless of whether they are formally or informally employed, and shall supervise and monitor subcontractor compliance accordingly. All workers shall comply, in their conduct and work practices, with environmental, health and safety instructions issued by the Contractor.

The Contractor shall be responsible for the preparation of a CESMP for the construction phase. The CESMP shall be fully consistent with this ESMP and the approved environmental assessment documentation. The CESMP shall be prepared within 7 days of the Commencement Date. The approval of the CESMP by the Engineer and, where applicable, approval by the Employer and the issue of the Bank's "no objection" is a condition for the release of the second part of the Advance Payment. and submitted for approval at least 30 days prior to site access, including site establishment, preparation, or clearance. No physical works shall commence until the CESMP has been approved. The following sections define the specific implementation requirements applicable to the Contractor.

### 8.2 Specific Responsibilities

In addition to the general contractual obligations, the Contractor shall be responsible for the following ESHS requirements in accordance with this ESMP:

- a) Implementing all mitigation, monitoring, and management measures assigned to the Contractor under this ESMP and the approved CESMP for the full duration of the Contract, including mobilization, construction, demobilization, and any defects-liability activities.
- b) Ensuring full compliance with all applicable environmental, social, labour, public health, and occupational safety legislation of the Republic of Tajikistan, including permit conditions issued by the Committee for Environmental Protection (CEP), sanitary authorities, and other competent bodies.
- c) Ensuring compliance with EBRD ESP (2024) and applicable ESRs, as well as GIIP relevant to road construction. Where differences exist between the 2024 ESRs and any earlier versions of EBRD policy, the 2024 ESRs govern. Where national standards are less stringent than EBRD ESR requirements or applicable IFC EHS Guidelines, the more stringent standard applies.
- d) Ensuring that all outline and detailed construction methods, temporary works, and site layouts are consistent with the requirements of this ESMP and do not result in impacts greater than those assessed in the approved environmental and social documentation.
- e) Supporting PIURR and the Engineer in updating environmental and social documentation, if required, by providing timely and sufficient information on construction methods, site locations, ancillary facilities, and any design or method changes that may affect environmental or social risks.
- f) Undertaking and documenting comprehensive occupational health and safety risk assessments covering all phases of construction, including site establishment, earthworks, structures, traffic management, and demobilization.
- g) Allocating adequate budget, personnel, equipment, and other resources to implement all ESMP and CESMP requirements, and to supervise and monitor environmental, social, and OHS performance at all construction sites, camps, plants, access roads, and ancillary facilities.
- h) Appointing suitably qualified and experienced environmental, social, and health and safety personnel, as required by this ESMP, prior to commencement of works, and maintaining these positions throughout the Contract.
- i) Adopting a zero-tolerance approach to unsafe practices, enforcing all occupational health and safety requirements of the ESMP and CESMP, including mandatory use of appropriate personal protective equipment (PPE) at all times on site.
- j) Obtaining all required licenses, permits, and approvals prior to commencement of related works, including but not limited to:
  - 1. SEE conclusion and environmental permits;
  - 2. temporary land-use permissions;
  - 3. borrow area and quarry approvals;
  - 4. water abstraction permits;
  - 5. air emission permits; and
  - 6. waste disposal arrangements; and
  - 7. providing copies of all permits and insurances to PIURR and the Engineer.
- k) Providing, with support from PIURR where necessary, and ensuring attendance at environmental, social, and OHS training and induction sessions for all workers, including subcontractors and informal workers.

l) Ensuring that all workers, subcontractors, and suppliers understand and comply with their responsibilities under the ESMP, CESMP, Code of Conduct, and relevant sub-plans.

m) Supporting PIURR in stakeholder engagement activities and implementation of the project-level Grievance Redress Mechanism (GRM), including:

1. maintaining a site-level external grievance register and an internal grievance register for workers;
2. assigning a contractor GRM focal point;
3. attempting prompt resolution of complaints at site level; and
4. including grievance records and actions in monthly reports.

n) Submitting monthly environmental and social performance reports to PIURR and the Engineer, as part of the monthly progress report, covering:

1. implementation of mitigation measures;
2. monitoring activities and results;
3. incidents, near misses, and corrective actions;
4. grievances received and resolved; and
5. non-compliances and follow-up actions.

o) Informing PIURR and the Engineer immediately of any proposed design or method changes, or any unanticipated environmental or social impacts, and providing all necessary information to allow updates to environmental documentation and approval before implementation.

p) Notifying PIURR and the Engineer within 24 hours of any chance find, serious incident, or fatality, and submitting a detailed incident report within 48 hours, including root-cause analysis and corrective actions to prevent recurrence.

q) Informing PIURR and the Engineer immediately of any non-compliance with this ESMP, CESMP, national legislation, or EBRD requirements, and preparing and implementing corrective action plans as required to restore compliance.

### 8.3 Construction Environmental and Social Management Plan

The CESMP is the document to be prepared by the Contractor describing how the Contractor will implement the requirements of this project-level ESMP during the construction phase. The CESMP shall demonstrate how all mitigation, monitoring, and management measures defined in the ESMP will be implemented in accordance with the implementation arrangements, responsibilities, and performance requirements specified in this ESMP and the approved environmental and social documentation. The CESMP shall provide detailed, site-specific and method-specific information, including:

- the locations and implementation details of mitigation and monitoring measures;
- the organizational structure and responsibilities of Contractor personnel for ESHS management;
- roles and responsibilities of subcontractors and other parties involved in ESMP implementation;
- schedules for implementation of mitigation and monitoring measures;
- resource allocation and budgets for ESHS measures;
- training, induction, and capacity-building arrangements;

- site management procedures;
- record-keeping, monitoring, and reporting arrangements; and
- emergency preparedness and response procedures.

The Contractor Labour Management Plan (C-LMP) shall be submitted to the Engineer, PIURR, and EBRD for review and approval/no objection within 7 days of the Commencement Date.. No construction activities shall commence until formal approval has been obtained.

The CESMP, together with all required topic-specific and site-specific sub-plans, shall be submitted by the Contractor to the ENGINEER and PIURR within 7 days of the Commencement Date. The ENGINEER shall complete its review and provide written comments or approval within 10 working days of receipt. The Contractor shall address any comments and resubmit within 5 working days. Written approval of the CESMP and all required sub-plans must be obtained at least 30 days before commencement of any site activities, including site establishment, preparation, or clearance. The Contractor shall programme its mobilisation schedule on the basis that the CESMP approval process will require a minimum of 45 days from submission to approved status, and shall not compress this timeline to recover programme time.

Except for survey works associated with the preparation of working drawings, no physical works or site access shall be permitted until the CESMP has been reviewed and approved by the Engineer, PIURR and EBRD. The CESMP shall include, as a minimum, the following topic-specific management plans as appendices:

Table 8: CESMP Topic Specific Plans

Plan	Approvals		
	PIURR	ENGINEER	EBRD No Objection
CESMP-01 Occupational Health and Safety Management Plan	Yes	Yes	Yes
CESMP-02 Community Health and Safety Plan	Yes	Yes	No
CESMP-03 Traffic Management Plan	Yes	Yes	No
CESMP-04 Emergency Preparedness and Response Plan	Yes	Yes	No
CESMP-05 Waste Management Plan	Yes	Yes	No
CESMP-06 Materials, Spoil & Borrow Area Management Plan	Yes	Yes	No
CESMP-07 Water Quality & Sediment Control Plan	Yes	Yes	No
CESMP-08 Biodiversity Management Plan	Yes	Yes	Yes
CESMP-09 Labour and Working Conditions Management Plan	Yes	Yes	Yes
CESMP-10 Worker Accommodation & Camp Management Plan	Yes	Yes	Yes
CESMP-11 Chance Find Procedure	Yes	Yes	No

Plan	Approvals		
	PIURR	ENGINEER	EBRD No Objection
CESMP-12 Worker Code of Conduct	Yes	Yes	No
CESMP-13 Air Quality and Dust Management Plan	Yes	Yes	No
CESMP-14 Noise and Vibration Management Plan	Yes	Yes	No
CESMP-15 Erosion and Sediment Control Plan	Yes	Yes	No
CESMP-16 Access Road Management Plan	Yes	Yes	No

CESMP framework sub-plans have been prepared and are included as part of the ESMP package for bidders (Annex 1 to 16). Further, a detailed Labour Management Plan has also been prepared which the contractor will be responsible for implementing through his Labour and Working Conditions Management Plan.

The contents of this ESMP and the Contractor's CESMP shall be reviewed and updated periodically to ensure that the environmental, social, health and safety (ESHS) controls and procedures remain applicable to the activities being carried out and effective in managing identified risks and impacts. Reviews shall be undertaken by the Contractor, the Engineer, and PIURR as follows:

- The full ESMP and CESMP shall be reviewed in detail on an annual basis;
- Relevant sections of the ESMP and/or CESMP shall be reviewed following any reportable or major incident;
- Relevant sections of the ESMP and/or CESMP shall be reviewed in response to issues, grievances, or where mitigation measures are found to be ineffective; and
- Relevant sections of the ESMP and/or CESMP shall be reviewed following preparation or revision of any site-specific or topic-specific sub-plan.

Each review shall include analysis of:

- environmental and social monitoring data;
- monthly and periodic monitoring reports;
- incident and near-miss reports;
- complaints and grievances received through the project GRM; and
- feedback from stakeholders and supervising parties.

Any updates to the project-level ESMP shall be subject to review and approval by PIURR and the EBRD, as required under the financing agreements.

Any updates to the Contractor's CESMP or its sub-plans shall be submitted to the engineer and PIURR for review and approval prior to implementation.

## 8.4 Site Induction

All workers — including subcontractor workers, supplier representatives, and visitors — shall complete a mandatory ESHS induction before being permitted on site for the first time. The induction shall be

delivered by or under the supervision of the ESHS Manager and shall cover as a minimum the topics required under; Code of Conduct including SEA/SH prohibitions; the Grievance Redress Mechanism and how to raise a concern; biodiversity sensitivities and restrictions; the Chance Finds Procedure; emergency response arrangements; OHS requirements and PPE obligations; and seasonal construction restrictions. Induction records — confirming the name, date, topics covered, and signature of each inductee — shall be maintained on site and made available to the Engineer on request. Spot checks on new arrivals to confirm induction completion before site access shall be conducted by the ESHS Manager. The induction programme shall be updated when new work phases, new hazards, or significant CESMP revisions arise, and refresher sessions conducted accordingly.

## 8.5 Reporting

The contractors will establish their own internal systems for monitoring and reporting their EMP implementation, including ESMP/SECMP compliance and NCR system covering environmental, social, labour and health and safety issues. The contractors will formally submit monthly environmental management reports per an agreed template to the PIURR. Complete photographic records will be kept by the contractor covering all activities on site as well as key locations such as the construction site, offsite access roads, operational plant, receptors adjacent, workshops, stores, sanitation and welfare facilities, temporary or permanent labour camps or overnight accommodation etc. Photographs of key areas will be taken prior to site establishment and construction activities beginning to provide the environmental baseline. Copies of all geo-referenced photographs will be submitted to the PIURR along with the contractor's monthly report. Specifically, the contractor will be responsible for the following documents and reports:

Table 9: Contractor Reporting Responsibilities

Documents	Responsible Person	Destination of the documents	Submission timing	
			Design period	Construction period
Health and Safety Risk Assessment	HSS	PIURR	X	X (updated prior to the start of construction and then annually updated)
Outline and detailed design for approval	ESM / HSS	PIURR	X (Once, prior to the start of construction)	
CESMP including all subplans for approval		PIURR	X (Once, prior to the start of construction)	X (updated through construction as needed)
Environmental, health and safety checklists		PIURR		X (every week. to be completed daily)
Worker Accommodation Inspection Reports		PIURR/ Engineer (CSC)		X (quarterly)
Monthly environmental management reports, including monitoring records		PIURR	X (every month)	X (every month)



The Contractor shall notify the Engineer and PIURR within 48 hours of any labour-related incident, including, as a minimum: worker strikes or labour unrest; GBVH/SEA/SH allegations or incidents; cases of forced or child labour; fatalities or serious injuries; and significant worker grievances or disputes. A detailed incident report, including root cause analysis and corrective actions, shall be submitted within 5 working days. The same reporting requirements shall apply to high-risk environmental incidents, including major spills, significant pollution events, breaches of permit conditions, or impacts to PBF or protected species.

## 8.6 Contractors Staff

The Contractor shall establish a dedicated ESHS management structure proportionate to the Project risk profile. This structure shall be submitted as part of the CESMP package and shall be subject to formal no-objection by the Engineer and PIURR prior to mobilisation. As a minimum, the Contractor shall establish two functional teams:

### 1. Environmental and Social (E&S) Team

- Environmental and Social Manager (ESM) – overall responsibility for environmental and social compliance
- Ecologist (as required)
- Social / Community Liaison Officer (including external GRM and stakeholder engagement focal point)
- Labour Officer (including worker GRM focal point)

### 2. Health and Safety (H&S) Team

- Health and Safety Specialist (HSS) – overall responsibility for occupational and community health and safety
- Safety Supervisors (per work front / section)

The ESM and HSS shall be independent roles with direct reporting lines to the Contractor's Project Manager and authority to stop works in the event of serious ESHS risk. The Contractor shall provide an organisational chart in his CESMP clearly showing:

- Reporting lines
- Roles and responsibilities
- Staffing numbers per function
- Coverage across all active work fronts

The proposed ESHS organisational structure, key personnel CVs, and resource allocation shall be submitted to the Engineer, PIURR and EBRD for review. EBRD's formal No Objection shall be obtained prior to the Engineer issuing the Commencement Notice, and the Engineer shall not issue the Commencement Notice until EBRD's No Objection has been confirmed in writing. The reference to no-objection by the Engineer and PIURR prior to mobilisation in the opening paragraph is contingent upon EBRD's No Objection having first been secured.

Figure 1: Contractors E&S Team



Figure 2: Contractors Health and Safety Team



Figure 3:

The following sections provide the specific implementation requirements for all parties.

### **Contractors Environmental and Social Manager**

Contractors must retain the expertise of an Environmental and Social Manager (ESM) who is an environment specialist, to prepare, implement and continually update the EMP/CESMP and to oversee and report on its implementation throughout the contract period. The ESM will be the contractors main focal point for all environmental, social, health and safety issues associated with the Project and will lead the other team members listed below.

The ESM will be a suitably qualified and experienced full-time member of staff on the contractor's roster and should be on site at least five days per week. The required qualifications of the ESM are as follows:

- Degree in environmental sciences, environmental management or related field.
- At least 5 years' experience in on-site environment, health and safety supervision and monitoring.
- Experience of at least two construction projects of a similar type, location setting, size and scale.
- Experience of construction projects receiving IFI funding whilst being conversant with national laws and regulations and IFI environment safeguards policies and requirements.

Specifically, in overseeing EMP implementation and managing the safeguard team, the ESM shall be responsible for:

- Identifying any areas of environmental sensitivity on the site and along village roads used to access it, including physical cultural resources and with the support of the ecologist and botanist areas of natural habitat to be avoided.
- Incorporate mitigation requirements written in the EMP in preparing the CESMP and their sub-plans.
- Translate mitigation requirements written in the CESMP and its sub-plans into practical measures on the ground.
- Ensure that all staff are fully aware of the environmental sensitivities of the site and their responsibilities, as outlined in the management plans (e.g., via practical toolbox talks ahead of the construction).
- Keep records, take field notes and photographs to demonstrate compliance with the EMP / CESMP.

In addition, the ESM will be responsible for the preparation and completion of weekly environmental checklists and an environmental section of the contractor's monthly progress reports that shall be submitted to PIURR for review. The monthly reports, which will include the weekly environmental checklists, shall contain sections relating to:

- General progress of the contract and key construction works undertaken or milestones met.
- Records of and data from environmental monitoring.
- Environmental incidents, e.g., spills of liquids, fatalities, etc.
- Progress of any environmental initiatives, e.g., energy savings, recycling, etc.
- Conclusions and recommendations (corrective action plan).

The ESM shall provide daily toolbox training at the construction site and operational plant as well as monthly toolbox training with the Labour Officer on code of conduct, sanitation and welfare at the labour

camp site/overnight accommodation. The ESM shall keep a record of all monthly training and toolbox training undertaken.

### **Contractors Ecologist**

The Contractor shall engage an ecologist on a part-time basis. They will have a degree in ecology, botany, or similar, and at least 5 years' experience of biodiversity surveys (flora and fauna) and management and supervision of similar projects. The Ecologist will be specialized in rare plants, reptiles and mammals listed in the Red Data Book of Tajikistan. The specialist will report directly to the ESM and will be responsible for the following:

- Pre-clearance and post-construction surveys including the extent and quality of habitats on site
- Demarcating construction areas and access roads in areas of Natural Habitats.
- Oversight of land clearing activities, removal of vegetation, top soil strip and storage (the ecologist must be on site full time during site establishment, clearance and vegetation removal)
- Wildlife encounter protocol
- Vegetation restoration measures

### **Contractors Health and Safety Specialist & Health and Safety Supervisors**

The contractor shall hire a suitably qualified and experienced Health and Safety Specialist (HSS). The HSS shall have at least 15 years on-site experience of health and safety supervision including on at least 5 projects of similar type, location setting, size and scale of project and road construction. They will have NEBOSH/IOSH certification or equivalent, and relevant bachelors and masters qualification. They will need experience of construction projects receiving IFI funding whilst being conversant with national laws and regulations and IFI environment safeguard policies and health and safety requirements. The HSS shall report directly to the ESM. The main responsibilities of the HSS will be:

- Provide H&S training, including daily toolbox training sessions at each work site.
- Provide inputs to the CESMP and approve H&S risk assessments and plans for specific work activities.
- Conduct routine site inspections and issue internal stop notices, if necessary, for unsafe activities.
- Maintain H&S statistics log for near misses, as well as incidents.
- Provide H&S input to Contractors reports.

The HSS will be a suitably qualified and experienced full-time member of staff on the contractor's roster and should be on site at least five days per week. If the contractor works more than five days per week, or more than one shift, during days or hours off an alternate suitably qualified and experienced Senior Engineer will be required to provide cover for them, acting on the advice of, and reporting to ESM.

The HSS will be supported by full-time, dedicated, on-site Health and Safety Supervisors with at least one steward to each 50 persons to ensure each active construction site is to have adequate health and safety supervision to ensure the health and safety of all workers and local communities.

### **Contractors Labour Officer**

The Labour Officer will have at least 5 years of labour rights management expertise including on construction sites with a bachelors in social science or related field. The Labour Officer will act as the GRM focal point for workers at construction sites, operational plants, and labour camps/overnight

accommodation, including receiving and addressing grievances. They will monitor compliance with labour rights and standards, including risks related to forced labour, child labour, and GBVH, and report labour-related incidents (e.g. strikes, GBVH cases, serious injuries, and fatalities) in line with Project reporting requirements. The Labour Officer will be responsible for organising regular formal meetings and consultations with workers, conducting weekly checks of labour, sanitation, and welfare facilities, ensuring that records of training, timesheets, and pay slips are maintained, and communicating issues to the HSS and Contractor Management to ensure timely corrective actions. The Labour Office shall be a full-time position who will prepare the Labour Management Plan and manage all labour-related issues in coordination with the ESM and HSS.

### **Contractors Social and Community Liaison Officer (SCLO)**

Responsible for organizing regular formal meetings and consultations with the community to keep them informed of project progress, e.g. construction schedule and changes in the schedule and to receive feedback from the community on any project related issues. Records findings of consultations and communicates issues to the ESM and Contractor Management to ensure timely corrective actions where necessary. Completes weekly site visits to all neighbouring villages to complete informal meetings with the community. The SCLO will act as the contractor's GRM focal to keep affected persons informed of works and be available to receive and deal with any grievances at the contractors' site level. Qualified with a Bachelors degree in social science or similar suitable qualification. They will have at least 5 years of experience in stakeholder engagement and community consultation on major infrastructure projects, preferably in Central Asia or comparable rural and mountainous settings. Fluency in Tajik and/or Russian is required. Familiarity with the cultural norms, land use practices, and community dynamics of Khatlon Region is desirable.

## **8.7 Management Systems**

Contractors shall have in place, or implement during the contract period, an environmental, health and safety management system consistent with the principles of ISO 14001 (environmental management) and ISO 45001 (occupational health and safety management), or equivalent national standards. Formal third-party certification to ISO 14001 or ISO 45001 is not a condition of contract, but contractors must demonstrate a functioning ESHS management system through their CESMP — including document control, internal audit procedures, management review arrangements, and corrective action tracking. The CESMP shall describe how the contractor's ESHS management system operates and how it integrates with the project-level ESMP obligations.

The Contractor and its subcontractors shall be subject to independent annual labour audits conducted by qualified third-party auditors. Audits shall assess compliance with:

- Contractor LMP (C-LMP)
- Project LMP
- EBRD Performance Requirement 2 (Labour and Working Conditions)

Audit findings shall be reported to PIURR and EBRD and corrective action plans implemented within agreed timelines.

## **8.8 Control of Records**

The list of records that must be available by the contractor for review must include amongst others:

- Definitive ESIA and EMP (as disclosed on the EBRD/PIURR website)

- Legal register (of applicable national and state legislation)
- Environmental, health and safety (labor) permits and licenses
- Contractor's certifications and insurances
- Tree felling permits, vehicle emission test certificates etc.
- Training plan and training records (including inductions)
- Community liaison plan, community awareness documentation and records of all consultations undertaken
- Records of emergency preparedness and response drills
- Document review and approval records
- CESMP and sub-plans and copies of approval records
- Completed site checklists and photographic records
- Copies of correspondence related to EHS issues
- Corrective and preventive action request records
- H&S Risk Assessment
- Incident record and incident reports
- GRM register
- Work program and schedule
- List of equipment and maintenance log
- Route/program of construction material transportation
- Records of maintenance and cleaning schedules for sediment and oil/grease traps
- Records of quantity of discharged wastewater and concentration of pollutants
- Waste disposal records and waste transfer notes including waste disposal sites and instructions for waste transportation
- Log of material inventories and consumption
- Chance find records (if any)
- Staff contracts, timesheets and pay slips
- LabourCamp / Overnight Accommodation Audit Reports
- Water Quality sampling results
- Air Quality and Noise test results
- Habitat surveys
- Tree inventory

These records shall be kept on-site by the Contractors' ESM and available for inspection at any time.

## 8.9 Corrective Actions

If any standards are breached or any of the safeguard requirements that are covenanted in the loan agreements are found not to be satisfactorily complied with by contractors, an appropriate, time bound, budgeted, corrective action plan (CAP) will be developed and implemented to rectify unsatisfactory performance or safeguard noncompliance. The Engineer will also issue corrective action requests to the contractor during their day-to-day supervision and monitoring of ESMP Implementation as required.

For the purpose of this ESMP, a Category 1 non-compliance is defined as: any breach of an applicable EBRD ESR obligation; any breach of national environmental or social legislation; any fatality or serious injury to a worker or member of the public; any significant environmental pollution event (spill, discharge, or release reaching a watercourse); any SEA/SH incident; any chance find that has not been properly managed; or any instance of construction works commencing on land for which RP compensation has not been confirmed. PIURR shall notify EBRD of any Category 1 non-compliance within 5 working days of becoming aware, regardless of whether a CAP has already been initiated. Notification shall include: a description of the non-compliance; the immediate action taken; and the proposed CAP with timetable and responsible parties. This 5-day notification obligation is separate from, and does not replace, the semi-annual EMR reporting requirement.

### 8.10 Meetings and Site Visits

The Engineer will convene monthly EHS meetings to be attended by Contractor's management and EHS team to discuss progress. During the monthly EHS meetings areas for improvement, unsafe acts, and any non-compliances, time-bound corrective actions and responsibilities to address them will be discussed, agreed, and documented. The Engineer will instruct the contractor to take corrective action at any time in relation to ESMP implementation. For any EBRD supervision missions to ongoing construction works Contractors will provide all EBRD staff or staff consultants with a project site health and safety induction and adequate PPE, as a minimum comprising: safety helmet; high-visibility vest; safety footwear (steel toe-capped boots); and safety glasses or eye protection where required by site conditions. Additional PPE shall be provided for visits to high-risk work areas (hearing protection at noisy plant, respiratory protection at dusty locations, life jackets near water).

### 8.11 Engineers Responsibilities

#### General Obligations

The CSC, referred to throughout this ESMP as the "Engineer", is appointed by PIURR to provide independent supervision of the Works Contract and to act as PIURR's representative for all technical, contractual, and ESHS matters during the construction phase. The Engineer's ESHS responsibilities are additional to, and do not reduce, the Contractor's primary obligation to implement this ESMP and the approved CESMP. The Engineer acts as the first tier of independent oversight between the Contractor and PIURR, and is responsible for verifying, auditing, and reporting on ESHS performance throughout the construction period and the Defects Notification Period.

The Engineer shall diligently implement and adhere to the Environmental and Social Action Plan (ESAP), this ESMP, and the Contractor's approved CESMP, and shall monitor the implementation of such plans in accordance with the monitoring provisions contained in each plan. The Engineer shall cause the Contractor to carry out the Project in accordance with the EBRD's Environmental and Social Requirements; the contractual requirements set out in the Works Contract; and the ESAP, ESMP, CESMP, RAP, SEP, and BMP. The Engineer shall not give any instruction, approval, or consent that would require or permit the Contractor to act in a manner inconsistent with the ESHS obligations of this ESMP.

The Engineer shall assist PIURR in the development and implementation of the Environmental and Social Management System (ESMS) in accordance with ESR1 requirements. This shall include assisting PIURR to

develop ESHS policies, procedures, and documentation and to integrate them into the PIU Operating Manual as appropriate, and ensuring that the Client understands the legal nature of the ESAP as part of the financing documents and the responsibility of the Client and PIU to implement it.

The Engineer shall provide training to PIURR staff and Contractor personnel on ESHS matters relevant to the Project, including the application of EBRD Environmental and Social Requirements, the obligations of this ESMP, and the requirements of the approved CESMP. Training shall be delivered at mobilisation and repeated as required when new phases commence or significant CESMP revisions are made.

The Engineer shall support PIURR in discharging the conditions precedent and conditions for effectiveness set out in the Financing Documents, and shall assist PIURR to verify that conditions precedent to each disbursement have been met before disbursement requests are submitted. The Engineer shall devise and implement a system to track compliance with all continuing, time-dependent, and repeating covenants, warranties, and representations under the Financing Documents, and shall train PIURR staff on the record-keeping required to demonstrate compliance status.

### CSC ESHS Team

The Engineer shall maintain a dedicated ESHS team throughout the construction period, led by a Senior Environmental Expert who is a Key Expert under the CSC contract. The team shall be proportionate to the risk profile and construction programme and shall comprise, as a minimum, the following positions:

- **Senior Environmental Expert / ESHS Team Leader** — MSc degree in biology, environmental sciences, or similar; minimum 10 years' international professional experience in the application of environmental and social requirements under IFI-financed projects, with demonstrable knowledge of EBRD Performance Requirements; experience in managing ESHS teams. Minimum input: 11 months, including 3 months full-time at commencement to establish ESHS management systems, followed by regular short-term missions throughout construction.
- **Environmental Monitoring Expert** — Degree in a relevant field; minimum 5 years' experience in ESHS systems implementation for IFI-financed projects; specific knowledge of local environmental standards in Tajikistan; fluent in Tajik and Russian. Minimum input: 12 months, including 1.2 months during the Defects Notification Period and close-out.
- **Social/Gender Monitoring Expert** — Degree in a relevant field; minimum 5 years' experience as a Social Expert on IFI-financed projects; specific knowledge of local social standards in Tajikistan; fluent in Tajik and Russian. Minimum input: 10 months.
- **Occupational Health and Safety Specialist** — Degree in a relevant field; minimum 5 years' experience in OHS systems implementation for IFI-financed projects; specific knowledge of local OHS standards in Tajikistan; fluent in Tajik and Russian. Minimum input: 33 months (continuous throughout construction).
- **Senior Resettlement Specialist** — BSc in social science, law, or similar; minimum 10 years' international experience in resettlement audits, resettlement risk assessment, and resettlement complaints handling as per EBRD ESR5. Minimum input: 4 months (regular short-term missions).
- **Senior Traffic and Road Safety Expert** — BSc in traffic engineering or similar; minimum 10 years' international experience in traffic management of roads under construction for IFI-financed projects; specific experience in preparation of Road Safety Audits. Minimum input: 6 months (regular short-term missions).

The CSC's proposed ESHS team structure, key personnel CVs, and resource allocation shall be submitted to PIURR and EBRD as part of the Inception Report, subject to PIURR's approval and EBRD's no objection.



The Commencement Notice shall not be issued until EBRD's no objection to the ESHS team has been confirmed in writing.

### **CESMP Review and Approval**

The Engineer shall formally review and provide a written recommendation to PIURR regarding approval of the Contractor's CESMP and all associated topic-specific sub-plans. The review shall assess compliance with this ESMP, the ESAP, all applicable EBRD ESRs, and GIIP. The Engineer shall complete its review and provide written comments or approval within 10 working days of receipt of any submission. The Contractor shall address any comments and resubmit within 5 working days. The following CESMP components shall be submitted by the Engineer to EBRD for no objection prior to approval: the Labour and Working Conditions Management Plan (CESMP-09) and the Contractor's proposed ESHS organisational structure.

The Engineer shall review the Contractor's working drawings to ensure compliance with the requirements of the Environmental and Social Documentation, including the CESMP siting criteria for ancillary facilities. In the event of unforeseen circumstances requiring changes to the approved CESMP, the Engineer shall review the updated CESMP and make a recommendation to PIURR regarding approval of the revised version.

### **Non-Compliance Management System**

The Engineer shall develop and implement a formal system for the notification, logging, tracking, and escalation of ESHS non-compliances. This system shall be submitted to PIURR and EBRD as part of the Inception Report and shall be subject to PIURR's approval and EBRD's no objection before construction commences. The system shall include, as a minimum:

- A formal system for the notification of environmental non-compliances, utilising standardised NCR forms issued to the Contractor.
- A formal system for the notification of social non-compliances, utilising standardised NCR forms issued to the Contractor.
- A formal system for the notification of labour-related non-compliances, utilising standardised NCR forms issued to the Contractor.
- A formal system for the notification of health and safety non-compliances, utilising standardised NCR forms issued to the Contractor.
- A system for logging and tracking the resolution of each non-compliance, with status updated at each monthly EHS meeting.
- A formalised escalation procedure, including the issue of a Notice to Correct under Sub-Clause 15.1 of the Works Contract and, where necessary, withholding of payments under Clause 14.6(a) and/or (b) of the Works Contract.

Category 1 non-compliances, as defined in the Corrective Actions subsection of this chapter, shall be escalated by the Engineer to PIURR within 24 hours of identification. The Engineer shall not close any Category 1 non-compliance without written confirmation from PIURR that the corrective action has been satisfactorily implemented.

### **Site Inspections and Monitoring Verification**

The Engineer shall conduct regular, scheduled, and unannounced ESHS inspections of all active work fronts, construction camps, borrow areas, spoil sites, and ancillary facilities. The minimum inspection

frequency shall be weekly during active construction on each work front. The OHS Specialist shall conduct formal monthly safety audits at all stages of the Project; the audit format shall be submitted to PIURR and EBRD as part of the Inception Report and shall be subject to PIURR's approval and EBRD's no objection. Worker accommodation inspections shall be conducted quarterly, using the Worker Accommodation Inspection Checklist at Appendix A of Annex 10, and confirmed in writing as conforming to the requirements of the EBRD/IFC Guidelines for Worker Accommodation: Processes and Standards (2009).

The Engineer shall independently verify the Contractor's monitoring data before including it in reports to PIURR. Where monitoring results are unavailable, implausible, or inconsistent with site observations, the Engineer shall require the Contractor to repeat monitoring or shall commission independent laboratory analysis at the Contractor's cost. The Engineer shall ensure that the Contractor maintains a functioning biodiversity monitoring programme and shall prepare pre-construction and post-construction biodiversity management reports.

### **Grievance Redress Mechanism Oversight**

The Engineer shall oversee the establishment and operation of the project GRM in accordance with the Stakeholder Engagement Plan. The Engineer shall ensure that separate mechanisms are maintained for internal complaints (Contractor's workforce) and external complaints (third parties and the general public). The Engineer shall maintain a grievance review schedule updated monthly, and shall include a summary of all grievances received and their resolution status in each monthly report to PIURR. The Engineer shall monitor the operation of the GRM and ensure that all complaints are acknowledged within 5 working days and resolved within the timeframes specified in the SEP.

### **Meetings**

The Engineer shall convene and chair monthly ESHS meetings attended by the Contractor's management and ESHS team, and PIURR's representative. At each meeting, areas for improvement, unsafe acts, non-compliances, time-bound corrective actions, and responsibilities shall be discussed, agreed, and documented. Meeting minutes shall be circulated to all attendees within 5 working days. In addition, the Engineer shall conduct formal weekly site ESHS meetings with the Contractor's ESHS team on each active work front. For any EBRD supervision mission, the Engineer shall ensure that all EBRD staff and consultants receive a project site ESHS induction and adequate PPE before accessing the site.

### **Reporting Obligations**

The Engineer's reporting obligations to PIURR and EBRD are as follows. All reports shall be submitted in English and Russian unless otherwise agreed with PIURR in writing.

- **Inception Report** — within 4 weeks of mobilisation. Shall include the Assignment Implementation Plan, the NCR system framework, the monthly safety audit format, the ESAP implementation plan with measurable delivery metrics, and the CSC ESHS team structure and CVs. Subject to PIURR's approval and EBRD's no objection.
- **Monthly Progress Reports** — submitted to PIURR within 10 working days of the end of each reporting period. The ESHS section shall include: Contractor ESHS performance against this ESMP; environmental and social monitoring data and verification; status of all open NCRs; GRM register summary; ESAP implementation progress; OHS statistics (LTIs, near misses, first aid cases); and any gender or social issues identified.
- **Semi-Annual Environmental Monitoring Reports (EMRs)** — prepared by the Engineer on behalf of PIURR and submitted to EBRD within 20 working days of the end of each six-month reporting period. Each EMR shall cover: compliance with EBRD ESRs and the ESAP; Contractor ESHS

performance and any material non-compliances; GRM summary; OHS record; compliance with national environmental and social legislation; and copies of any public disclosures on ESHS matters.

- **Incident and Accident Reports** — immediately upon any incident likely to have a material adverse effect on the environment, health, or safety, the Engineer shall provide PIURR with immediate written notice specifying the nature of the incident and any steps taken. A detailed report shall be submitted within 5 working days. Any fatality or incident involving multiple serious injuries requiring hospitalisation shall be reported to both PIURR and EBRD within 3 working days.
- **Quarterly Periodic Project Reports** — submitted within 20 working days of the end of each reporting period, as required under the Financing Agreements.
- **Labour Audit Reports** — prepared in accordance with the scope in Annex 3 of the CSC Terms of Reference. The first audit shall be completed no later than when the main workforce is mobilised; subsequent annual audits shall be completed during the peak construction season. The audit format shall be submitted to PIURR and EBRD no less than 30 days prior to the first audit and is subject to PIURR's approval and EBRD's no objection.
- **Road Safety Audit Report** — completed prior to the completion of the Works and opening of the road to traffic, covering detailed findings and recommendations to address any deficiencies. Submitted within 20 working days of completion of the audit.
- **Resettlement Audit Report** — submitted within 20 working days of completion of the audit.
- **Project Completion Report** — draft submitted to PIURR on Project Completion; final version submitted within 4 weeks of receiving PIURR's comments. The Final Report shall review all CSC tasks and include a final ESAP implementation progress update.

### 8.12 PIURR Responsibilities

PIURR is the Project Employer and the entity legally responsible to EBRD for compliance with the financing agreements, including all environmental and social covenants. PIURR's implementation responsibilities are distinct from those of the Contractor and the Engineer: PIURR does not directly implement construction-phase mitigation measures, but it holds the instruments — the ESAP, RP, SEP, and this ESMP — and is accountable for their overall delivery. The following obligations rest with PIURR and cannot be delegated to the Contractor or Engineer.

Environmental and Social Action Plan — PIURR is responsible for implementing all ESAP actions assigned to the Client or PIU, including those that fall outside the construction contract. PIURR shall develop an ESAP implementation plan with measurable delivery metrics and delivery dates for each action, in a format that can feed directly into semi-annual reporting to EBRD. Where ESAP items are at risk of delay, PIURR shall notify EBRD promptly and agree a remediation approach.

Land Access and Resettlement — PIURR is responsible for implementation of the Resettlement Plan (RP). No construction works shall commence on any land parcel until PIURR has confirmed in writing to the Engineer that compensation for that parcel has been paid in full in accordance with the RP. PIURR shall maintain a Land Access Confirmation Log and provide the Engineer with updated records at each monthly EHS meeting.

Gender Action Plan - PIURR shall prepare a Gender Action Plan (GAP) as an ESMP sub-plan before construction mobilisation. The GAP shall cover: targeted engagement protocols for female-headed households; gender-disaggregated monitoring indicators; women's employment outreach targets; and

coordination with the Women's Committee of Khatlon Region. The GAP shall be submitted to EBRD before the Commencement Notice is issued.

### 8.13 ESMP Costs

All costs associated with the implementation of this ESMP and the Contractor's CESMP — including staffing, monitoring equipment, sampling, laboratory analysis, reporting, training, induction, PPE, community liaison, grievance management, spill response equipment, seasonal work restrictions, biodiversity protection measures, and site reinstatement — are the Contractor's responsibility and shall be priced within the construction contract. Contractors are expected to have read this ESMP in its entirety before submitting a bid, and to have priced all obligations accordingly. No additional payment will be made for ESHS compliance costs. Costs associated with PIURR-held instruments — including the RP, the Stakeholder Engagement Plan (SEP), and the ESIA — are PIURR's responsibility and are not included in the construction contract.

## 9. Operational Management Plan

---

### 9.1 Purpose and Scope

This Operational Management Plan (OMP) sets out PIURR's environmental and social management obligations during the operational phase of the BSK road, commencing from the date of issue of the Taking Over Certificate and continuing for a minimum of five years after road opening, or until EBRD confirms that operational monitoring obligations have been satisfactorily discharged.

The construction-phase obligations of the Contractor and Engineer cease at practical completion. Responsibility for ongoing environmental and social performance then passes entirely to PIURR and, where applicable, to the road operator to whom operational management is delegated. This chapter defines the minimum operational-phase commitments required to comply with the EBRD Environmental and Social Policy (2024) and the financing agreements, and to manage the residual impacts identified in the ESIA. It should be read alongside the monitoring tables in the Environmental and Social Monitoring Plan chapter, which set out specific parameters, frequencies, locations, and responsibilities for operational-phase monitoring.

Before the Taking Over Certificate is issued, PIURR shall confirm in writing to EBRD that all operational-phase management and monitoring obligations in this OMP have either been assumed directly by PIURR or formally assigned to a named road operator with sufficient institutional capacity to discharge them.

### 9.2 Road Maintenance and Safety

PIURR shall ensure that the BSK road is maintained to a standard that does not create unreasonable safety risks for road users or communities along the corridor. The following specific obligations apply from road opening.

**Road Safety Audit** — The CSC shall complete a pre-opening Road Safety Audit in accordance with the reporting obligations set out in the Implementation chapter. PIURR shall ensure that all recommendations arising from the Road Safety Audit are either implemented before the road opens to traffic, or that a time-bound action plan for post-opening remediation is agreed with EBRD before the Taking Over Certificate is issued. No recommendation rated as high severity by the auditor shall remain unimplemented at road opening without EBRD's written agreement.

**Defect and Hazard Reporting** — PIURR or the road operator shall establish a simple hazard reporting procedure accessible to road users, communities, and local government. Any reported structural defect, slope failure, erosion feature, or road safety hazard shall be assessed within 10 working days of notification and remediated within a timeframe proportionate to the severity of the risk. Records of hazard reports, assessments, and remediation actions shall be maintained and made available to EBRD on request.

**Fauna Crossing Maintenance** — Culvert fauna passages installed at ESIA-identified locations shall be inspected annually and after any significant flood or landslide event. Any blockage, structural damage, or failure of directional guiding elements shall be remediated within 30 days of identification. Inspection records and remediation actions shall be included in the annual operational monitoring report submitted to EBRD.

**Village Speed Limits** — The 40 km/h speed limit applicable in all settlements along the corridor shall be enforced through road signage maintained in good condition throughout the operational period. PIURR shall notify the relevant traffic authority of any sign damage or removal within 10 working days.

**Community Road Safety Awareness Programme** — PIURR shall implement a community road safety awareness programme in all settlements in the period immediately before and after road opening, addressing the new road conditions — increased speeds, paved surfaces, and higher traffic volumes — and providing practical guidance to residents, particularly children and young people. The programme shall be delivered in coordination with local schools and Jamoats and shall draw on lessons from comparable initiatives on the Obigarm–Nurabod Road.

**Police Speed Enforcement** — Before the road opens to traffic, PIURR shall engage with the Ministry of Interior and the relevant traffic police authorities to establish periodic speed enforcement on the project road, with particular focus on settlement areas during the initial months of operation when driver behaviour adjustment to the new road conditions is most acute.

**Road Safety Management Plan** — PIURR shall prepare a Road Safety Management Plan (RSMP) for the operational phase before road opening, covering speed monitoring protocols, road incident reporting and investigation, maintenance schedules for road safety infrastructure, arrangements for periodic road safety reviews, and the mechanism for escalating to additional physical interventions if before-and-after speed studies indicate that operating speeds materially exceed targets.

### 9.3 Environmental Monitoring

PIURR shall implement the operational-phase environmental monitoring programme set out in the Environmental and Social Monitoring Plan. The following obligations are specifically called out here given their importance to residual impact management.

**Road-Kill Monitoring** — Annual road-kill transect surveys shall be conducted along the full 56 km corridor during each of the first three years of operation, and thereafter at the frequency specified in the monitoring plan. Surveys shall be conducted by a qualified ecologist using a slow-drive methodology with GPS-logging of all carcasses by species. If road-kill rates for Red Book-listed species are elevated, PIURR shall commission a targeted investigation and consider additional crossing or barrier measures. Survey results shall be reported to EBRD in the annual operational monitoring report.

**Fauna Crossing Effectiveness** — Culvert fauna passages shall be assessed for actual use by target species during the annual road-kill survey, using evidence of passage (tracks, camera traps where warranted) at each structure. Where a culvert passage is confirmed as non-functional for its target species, PIURR shall assess whether remediation or supplementary measures are warranted and report findings to EBRD.

**Water Quality Monitoring** — Water quality spot-checks at the three principal road-river crossings along the Shurobdaryo corridor shall be conducted annually during the first three years of operation, focusing on hydrocarbon contamination and suspended solids attributable to road drainage. If any result exceeds the applicable national standard or the baseline established during construction-phase monitoring, PIURR shall investigate the source and initiate remediation. Results shall be included in the annual operational monitoring report.

**Pavement Condition Monitoring** — PIURR shall conduct an annual pavement condition survey along the full 56 km corridor during each of the first five years of operation, recording rutting depth, cracking pattern, and surface integrity. Priority attention shall be given to south-facing and valley-bottom sections with the highest temperature exposure. If rutting exceeds acceptable limits during the first five years, PIURR shall commission an investigation into bitumen specification performance against recorded

temperature data and report findings to EBRD. Survey results shall be included in the annual operational monitoring report.

**Drainage Structure Inspection** — PIURR or the road operator shall inspect all culverts and drainage structures along the corridor annually before the onset of the rainy season, and following any significant flood or debris flow event. Inspection shall focus on blockage of culvert openings by boulders and debris, with priority attention to structures at locations mapped as high flood risk in the CRA (approximately km 0–16, km 30–35, and km 45–50). Any blockage identified shall be cleared before the rainy season commences. Inspection records shall be included in the annual operational monitoring report.

**Climate and Hydrology Review** — PIURR shall commission a periodic review of updated climate projections and observed hydrological data against the design assumptions embedded in the Project's hydraulic structures and embankment protection works. This review shall be conducted at intervals of no more than five years from road opening, or following any flood event that exceeds the design return period for any hydraulic structure along the corridor, whichever occurs first. The review shall: compare updated regional climate model outputs against the design rainfall input of 83 mm (100-year daily event at Khovaling station); assess whether the conservatism embedded in the design continues to provide adequate headroom for projected climate change over the remaining operational life; identify any hydraulic structures or embankment sections where design headroom is assessed as materially eroded; and make recommendations for adaptive maintenance or structural upgrade where warranted. A brief report summarising findings and any recommended actions shall be submitted to EBRD within three months of each review.

**PNPCA Monitoring Commitments** — Where monitoring commitments have been made to the Permanent Commission for the Syr Darya and Amu Darya River Basins (PNPCA) or any equivalent transboundary water body authority in connection with the BSK project, PIURR shall implement those commitments in full and report on their status in each annual operational monitoring report submitted to EBRD.

## 9.4 Protected Area Liaison

**Pre-Opening Notification** — Before the road opens to traffic, PIURR shall brief local law enforcement authorities — including the district police and the relevant border or nature protection inspectorate — on the increased access implications of the road improvement for the Sari Khosor Nature Park and the wider Shurobdaryo corridor. This briefing shall be documented and a record provided to EBRD as part of the first operational monitoring report.

**Annual Engagement with the Sari Khosor Nature Park** — During the first five years of operation, PIURR shall meet annually with the Sari Khosor Nature Park Director to review visitor numbers, any known incidents of illegal activity, and the Park's management capacity to absorb increased access pressure. A brief record of each annual meeting shall be included in the operational monitoring report. If visitor numbers increase materially and the Nature Park's management capacity is demonstrably insufficient, PIURR shall engage the Ministry of Environment and Climate Change to discuss targeted management support as part of the project's institutional strengthening commitments.

**Poaching and Illegal Access** — PIURR shall ensure that the annual engagement with the Nature Park administration includes a review of any reported increase in poaching, wildlife collection, or illegal timber and plant harvesting attributable to improved road access. Where a credible increase is identified, PIURR shall raise the matter formally with local law enforcement and report the outcome to EBRD. This obligation does not require PIURR to conduct or fund enforcement operations, but it does require PIURR to ensure the risk is actively flagged to the responsible authorities.

## 9.5 Community Relations



**GRM Continuity** — The project Grievance Redress Mechanism shall remain operational and publicly accessible after road opening. PIURR shall maintain a GRM register for the operational phase, covering any complaints from communities along the corridor related to road operation, maintenance, safety, or environmental impacts. The GRM contact details and procedure shall be publicly displayed at the PIURR office and communicated to community representatives at the post-construction engagement described below.

**Post-Construction Community Engagement** — Within six months of road opening, PIURR shall conduct a structured engagement session with representatives of all communities along the corridor to: inform them of the road's operational status and maintenance arrangements; explain the GRM and how to raise concerns; obtain initial community feedback on the road's condition and any early safety concerns. A record of this engagement shall be submitted to EBRD as part of the first operational monitoring report.

**Annual Community Satisfaction Check** — During each of the first five years of operation, PIURR shall conduct a brief annual community satisfaction check with a representative sample of households along the corridor, covering: road condition and safety perceptions; any noise, dust, or drainage impacts from road operation; awareness and use of the GRM; and any concerns about changes to community life or the natural environment arising from improved access. Results shall be summarised in the annual operational monitoring report. Where material concerns are identified, PIURR shall respond within 30 days with a written explanation of the actions to be taken.

## 9.6 Incident Reporting

PIURR shall notify EBRD immediately — and in any event within 3 working days — of any of the following incidents occurring on or directly attributable to the operational BSK road:

- Any fatality involving a road user, community member, or maintenance worker.
- Any serious injury to a maintenance worker requiring hospitalisation.
- Any significant environmental pollution event, including a fuel or chemical spill reaching the Shurobdaryo or any tributary.
- Any structural failure of a bridge, retaining wall, or culvert that closes the road or poses a risk to life.
- Any incident that becomes the subject of public or media attention in connection with the project.

Following the initial notification, PIURR shall submit a detailed incident report to EBRD within 5 working days, describing the incident, the parties involved, the immediate response taken, and the corrective or preventive actions proposed. Incident reports shall be included in the next semi-annual or annual monitoring report submitted to EBRD.

## 9.7 Annual Reporting to EBRD

PIURR shall prepare and submit an Annual Operational Monitoring Report to EBRD within 45 days of the end of each of the first five operational years following road opening. After year five, the reporting frequency and scope shall be agreed with EBRD based on the outcomes of the monitoring programme. Each annual report shall cover, as a minimum:

- Road-kill transect survey results by species, including any Red Book species mortalities.
- Fauna crossing inspection and effectiveness results.
- Water quality monitoring results at the three designated crossings.



- Road Safety Audit follow-up actions and status.
- Hazard and defect reports received, assessed, and remediated during the year.
- Protected area liaison: summary of annual meeting with Sari Khosor Nature Park administration, visitor numbers if available, and any reported incidents of illegal activity.
- Community relations: summary of annual community satisfaction check findings and any GRM complaints received, with resolution status.
- PNPCA monitoring results, if applicable.
- Any incident reports submitted during the year and the status of corrective actions.
- An overall assessment of whether operational-phase residual impacts are tracking as predicted in the ESIA, and any recommendation to adjust monitoring parameters or frequency.

PIURR shall retain all operational monitoring records for a minimum of ten years from road opening and shall make them available to EBRD on request at any time during that period.

## 10. Stakeholder Engagement and Grievance Mechanism

---

### 10.1 Stakeholder Engagement

Stakeholder engagement for the Project is guided by a standalone Stakeholder Engagement Plan (SEP) prepared in accordance with EBRD ESR 10. The SEP identifies affected parties, other interested parties, and disadvantaged or vulnerable groups, and defines engagement methods, disclosure arrangements, and responsibilities across all phases of the Project lifecycle.

During construction and operation, stakeholder engagement activities will focus on providing timely information on planned works, traffic management, access arrangements, and potential environmental and social impacts, as well as on maintaining ongoing dialogue with local communities, road users, and relevant institutions. Engagement will be implemented by the PIURR, with support from contractors and ENGINEER, and will be adapted as necessary to reflect Project progress and stakeholder feedback. Details of stakeholder identification, engagement methods, disclosure channels, and monitoring arrangements are provided in the Project SEP

### 10.2 Grievance Mechanism

A project-level Grievance Redress Mechanism (GRM) has been established in accordance with EBRD PR10 to allow stakeholders to raise concerns, complaints, or suggestions related to ESHS, and community impacts of the Project. The GRM is designed to be accessible, transparent, culturally appropriate, and free of charge, and does not limit access to judicial or administrative remedies.

The GRM applies throughout the construction and operation phases and includes clear procedures for grievance submission, registration, assessment, resolution, escalation, and feedback to complainants. Separate provisions are in place for SEA/SH-related grievances using survivor-centred and confidential pathways, as well as a Worker GRM consistent with EBRD Performance Requirement 2 and the Project's LMP. Full details of the GRM structure, access channels, service standards, and reporting arrangements are provided in the SEP.

## Annex 1: Occupational Health & Safety Management Plan (Framework)

### Purpose and Scope

This Occupational Health and Safety Management Plan (OHS Plan) establishes the mandatory health and safety requirements for construction of the Baljuvon – Sari Khosor (BSK) Road Project. It applies to all Contractor and subcontractor personnel, all construction activities, and all associated facilities including camps, borrow areas, and plant sites. It is a binding operational document — not a statement of intent.

The BSK corridor presents specific OHS challenges arising from its mountainous terrain, river corridor works, remote location, and the mix of mechanised construction, heavy traffic, and community proximity. This Plan addresses these risks directly and proportionately.

### 1. Legal and Policy Framework

Instrument	Relevance to OHS on BSK Project
Law on Occupational Safety, Republic of Tajikistan (2009, as amended 2012)	Establishes the legal framework for occupational safety in Tajikistan. Requires employers to provide safe working conditions, conduct risk assessments, provide PPE, maintain incident records, and cooperate with the Industrial Safety Inspectorate. Applies to all Contractor and subcontractor personnel.
Labour Code of Tajikistan	Governs employment conditions including working hours, rest periods, and worker welfare obligations. Relevant to fatigue management and welfare facility provision on the Project.
EBRD Environmental and Social Policy (2024) — ESR4	Requires the Contractor to apply recognised international good practice in occupational health and safety management, proportionate to the risks of the Project. Where national standards are less stringent than ESR4 or GIIP, the higher standard applies.
Good International Industry Practice (GIIP) / IFC EHS Guidelines	The IFC General EHS Guidelines and Construction EHS Guidelines are the reference standard for occupational health and safety management on this Project where they exceed national requirements.
ISO 45001 (Reference)	Internationally recognised OHS management system standard. The Contractor shall implement an OHS management system consistent with ISO 45001 principles, even where formal certification is not required.

### 2. OHS Organisation and Responsibilities

Clear accountability for OHS performance is essential on a project of this scale and risk profile. The following roles carry specific OHS obligations. Staffing levels are maintained across all active work fronts.

Role	Name [INSERT]	OHS Responsibilities
Project Manager Overall OHS accountability	[INSERT]	Ultimate responsibility for OHS performance across the Project. Signs off this Plan and ensures the OHS Manager is adequately resourced. Notifies the Engineer within 24 hours of any fatality, lost-time injury, or dangerous occurrence. Receives escalated stop-work notifications.
OHS Manager (Health and Safety Specialist) Full-time, site-based	[INSERT]	Day-to-day OHS management across all work fronts. Has authority to issue stop-work instructions (see Section 4). Prepares and approves risk assessments and JSAs. Conducts or oversees site inspections. Maintains the OHS Register. Investigates incidents and prepares investigation reports. Delivers specialist OHS training. Reports to the ESHS Manager.
Health and Safety Supervisors Minimum 1 per 50 workers at each active work front	[INSERT]	On-the-ground OHS oversight at assigned work fronts. Conduct daily pre-work safety checks and task briefings. Monitor PPE compliance throughout the shift. Authority to stop unsafe activities within their assigned area. Report incidents and near misses to the OHS Manager immediately. Maintain daily safety logs.
First Aid Officers	[INSERT]	Minimum one certified First Aid Officer present at each active work front at all times. Maintains stocked first-aid kits. Provides immediate medical response for injuries and illness. Maintains treatment records (confidentially). Liaises with the OHS Manager on medical arrangements and emergency transport.
All Workers	—	Comply with all OHS requirements, method statements, and instructions. Wear required PPE at all times in designated areas. Report hazards, near misses, and incidents to their Supervisor immediately. Stop work if they consider it unsafe and notify their Supervisor — no worker is penalised for raising a genuine safety concern.

**STOP-WORK AUTHORITY:** The OHS Manager and ESHS Manager have unconditional authority to issue stop-work instructions where serious risk to worker health or safety is identified, environmental controls are absent or ineffective, or community safety is compromised. Health and Safety Supervisors are authorised to stop unsafe activities within their assigned work fronts. Stop-work instructions remain in effect until corrective actions are implemented and verified in writing by the OHS Manager. All stop-work events are recorded and reported monthly.

### 3. Hazard Identification and Risk Assessment

The Contractor shall conduct systematic risk assessments before commencing any activity and shall review and update assessments as work fronts change, following any incident or near miss, and after extreme weather events. High-risk activities require a written Job Safety Analysis (JSA) approved by the OHS Manager before work begins.

### 3.1 High-Risk Activity Register

Activity	Primary Risks	Minimum Mandatory Controls	JSA Reference [INSERT]
River and floodplain works — bridge piling, culvert installation, bank protection	Drowning; flash flood; unstable banks; plant in water	No in-stream works during high-flow season. Life jackets for all personnel within 3 m of open water. Weather and flow monitoring daily. Emergency rescue equipment on site. Evacuation routes marked and briefed before works commence.	[INSERT]
Excavation and earthworks >1.5 m depth	Collapse; entrapment; slope failure	Geotechnical assessment before excavation. Shoring or benching to approved design. No entry into unsupported excavation. Daily inspection by OHS Supervisor — reinspect after rainfall. Exclusion zone at top of excavation.	[INSERT]
Working at height — bridge structures, retaining walls, scaffolding	Fall from height; falling objects	Engineered scaffolding and edge protection. Certified anchor points for fall arrest. Exclusion zones below elevated works. Hard hat mandatory for all in vicinity. Competency check before worker accesses elevated areas.	[INSERT]
Blasting and controlled demolition	Premature detonation; flyrock; concussive injury; gas release	Licensed blasters only. Blast clearance radius enforced by Supervisors before detonation. Communication protocol with nearby communities per Annex 2. Blast record for every event submitted to OHS Manager.	[INSERT]
Heavy plant and vehicle operation — excavators, dumpers, graders, asphalt plant	Collision; rollover; worker-vehicle interaction; crush	Traffic circulation plan. Strict pedestrian/vehicle segregation. Reversing alarms and banksmen. Speed limits enforced. Daily plant pre-start inspection. Operator competency certification held on file.	[INSERT]
Slope stabilisation and rock cutting in mountainous terrain	Rockfall; unexpected slope failure; seismic events	Geotechnical review of cut face design. Rock-face inspection after each blast and after any rainfall or seismic event. Hard exclusion zone below active cut faces. Ground anchor	[INSERT]

Activity	Primary Risks	Minimum Mandatory Controls	JSA Reference [INSERT]
Asphalt and crushing plant operations	Burns; fume exposure; dust inhalation; mechanical injury; fire	and mesh installation per approved design.  Dust suppression systems operational. RPE for workers exposed to dust and fumes. Heat stress protocol during summer works (air temperature can exceed 40°C in Khatlon lowlands). Guarding of all moving parts. Fire prevention and suppression systems at plant.	[INSERT]
Confined space works — culvert interiors, drainage structures, tanks	Asphyxiation; engulfment; entrapment	Permit-to-Work required (Section 4). Atmospheric testing before entry and continuously during occupation. Rescue plan in place before entry. Minimum two-person rule — no lone entry. Emergency rescue equipment immediately available.	[INSERT]
Night works (where approved)	Reduced visibility; fatigue; delayed emergency response	Adequate task lighting. High-visibility PPE mandatory. Fatigue management — maximum shift lengths enforced. Emergency response capability confirmed before night work commences. Additional Supervisor presence.	[INSERT]

#### 4. Permit-to-Work System

A Permit-to-Work (PTW) system controls access to and management of the highest-risk activities on the Project. No work listed below commences without a valid, signed PTW. The OHS Manager is the PTW issuing authority unless stated otherwise.

Work Type	Issued by	Validity	Preconditions Before Issue
Hot works — welding, cutting, grinding, open flame	OHS Manager	Daily — one permit per shift	Fire extinguisher at work location. Fire watch assigned for duration of works and 30 minutes after. Combustibles cleared from 3 m radius. Adjacent vegetation and materials protected.
Confined space entry	OHS Manager	Per task — not transferable	Atmospheric testing completed and recorded. Rescue plan in place with named rescuer. Attendant stationed outside at all times.

		between persons	Communication system confirmed operational.
Blasting	Project Manager	Per blast event	Licensed blaster on site. Blast radius cleared and exclusion enforced. Advance notice given to community and Engineer per agreed protocol. Traffic halted on road during blast window.
Excavation >1.5 m	OHS Supervisor	Daily — reinspected after rainfall	Shoring or benching installed to approved design. Spoil heaped minimum 1 m from edge. Services survey completed. Exclusion zone marked and enforced.
In-channel and river works	OHS Manager	Per works session — not applicable during spawning restriction	River Works Method Statement approved (Annex 8). Flow levels checked. Life jacket stock confirmed. Emergency rescue equipment positioned. Ecologist Pre-Clearance Certificate held.
Work near overhead power lines or underground services	OHS Manager	Per task	Services survey and identification complete. Exclusion distance confirmed with utility owner. Spotter assigned. Plant restricted to safe operating radius.

## 5. Training and Competency

No worker commences any activity on the Project without completing the applicable induction and training. Training records are maintained by the OHS Manager and are available for inspection by the Engineer and PIURR at any time.

Training Type	Target Group	Key Content	Frequency	Record
Site Induction	All workers, subcontractors, and site visitors	CESMP overview; site rules; OHS requirements; PPE; Code of Conduct; GRM; emergency response procedures; environmental sensitivities	Before first day on site	Signed induction register
Daily Task Briefing	All workers at active work fronts	Task-specific hazards; control measures; emergency actions;	Daily, before work begins	Toolbox log

		environmental controls; traffic risks		
Weekly Toolbox Talk	All site workers	High-risk activity review; incident lessons learned; dust, water, waste controls; community safety updates	Weekly minimum; also after incidents, method changes, or new equipment introduction	Attendance sheet
OHS Specialist Training	Workers engaged in high-risk tasks	Working at height; lifting operations; excavation safety; confined space; blasting safety; plant operation	Before task; refresher as required	Training certificates / records
First Aid	Designated First Aid Officers — minimum 1 per active work front	Basic life support; wound management; heat and cold stress; musculoskeletal injury; drowning response	Current certification; renewed every 2 years	Certificates held by OHS Manager
Emergency Response	All personnel	Fire response; spill response; flood evacuation; remote area evacuation logistics; muster procedures; emergency contacts	At mobilisation; periodic drills thereafter (minimum quarterly)	Drill records
Refresher Training	All personnel as applicable	Updates to CESMP; incident lessons; corrective actions arising from audits or incidents	Annually; or after any major incident	Training register



## 6. Worker Welfare and Medical Arrangements

### 6.1 Welfare Facilities

Given the remote and mountainous nature of the BSK corridor, adequate welfare provision is not a convenience — it is a safety necessity. The Contractor shall provide and maintain the following at all active worksites and camps:

- Potable drinking water available at all worksites throughout the working day — not only at camps;
- Shaded rest areas at each active work front, particularly during summer months when temperatures can be extreme;
- Adequate sanitation facilities at worksites — minimum portable toilets at ratio of 1 per 20 workers, serviced regularly;
- Separate facilities for male and female workers where both are employed on the Project;
- Safe food preparation and storage at camps, consistent with the requirements of the Camp Management Plan (Annex 10).

### 6.2 Heat and Cold Stress Management

The BSK corridor spans a significant elevation range. Summer temperatures in the lower valley sections can be extreme; upper sections may be subject to cold stress, particularly in spring and autumn. The Contractor shall implement specific controls for both conditions:

Condition	Controls
Heat stress (summer works)	Rest breaks in shade at intervals not exceeding 2 hours during peak heat. Water provision at minimum 1 litre per worker per hour in high-temperature conditions. Scheduling of heaviest physical work to cooler morning hours where practicable. OHS Supervisor monitors for heat stress symptoms (dizziness, excessive sweating, confusion) and removes affected workers to shade immediately. All workers briefed on self-reporting.
Cold stress (upper sections / autumn–spring)	Appropriate insulated PPE provided. Workers briefed on cold stress symptoms. Warming facilities at work fronts where temperatures are low. No worker required to work in outdoor exposed conditions in extreme cold without appropriate protection and scheduled warm-up periods.

### 6.3 Medical Arrangements

- A minimum of one trained First Aid Officer with current certification is present at each active work front at all times during working hours;
- Stocked first-aid kits are maintained at all worksites and checked by the OHS Manager monthly — expiry dates monitored and stock replenished promptly;
- The Contractor establishes written agreements with the nearest medical facility capable of treating construction injuries before mobilisation. Agreement details [INSERT: facility name, location, contact, capabilities, travel time];

- Emergency transport — either a designated vehicle or a confirmed arrangement — is available at all times to transfer an injured worker to medical care. Maximum target time to medical facility: [INSERT from site-specific assessment];
- Medical treatment records are maintained confidentially by the First Aid Officer and provided to the OHS Manager in anonymised aggregate form for monthly reporting.

## 7. Incident Notification and Investigation

Step	Action	Detail	Timeline
1	Secure scene and provide first aid	Stop works in immediate vicinity. Ensure injured person receives first aid. Do not move injured person unless in immediate danger. Preserve scene for investigation.	Immediate
2	Notify OHS Manager and ESHS Manager	OHS Supervisor notifies OHS Manager immediately by telephone. OHS Manager notifies ESHS Manager and Project Manager.	Within 30 minutes
3	Notify Engineer and PIURR	For fatalities, lost-time injuries, major environmental incidents, and SEA/SH allegations: ESHS Manager notifies Engineer and PIURR. Initial notification includes basic facts and immediate response actions. SEA/SH notifications follow survivor-centred confidentiality protocols.	Within 24 hours
4	Preliminary investigation report	OHS Manager prepares preliminary report including: description of the incident; timeline; persons involved (anonymised where appropriate); immediate cause; initial corrective actions taken.	Within 3–5 working days
5	Root cause analysis and final report	OHS Manager leads root cause analysis using systematic method (5-Why or equivalent). Final report includes: root causes; contributing factors; preventive measures; lessons learned; corrective actions with named responsible persons and target dates.	Within 14 working days (or as agreed with Engineer)
6	Corrective action and close-out	Corrective actions tracked in the OHS Register until closed. Closure requires physical verification by OHS Manager and photographic evidence where applicable. Lessons communicated to all relevant workers via toolbox talk.	Actions closed per target dates; verified by OHS Manager

### 7.1 Near Miss Reporting

Near miss reporting is encouraged as a proactive safety tool. A culture of non-retaliation is mandatory — no worker is penalised for reporting a near miss in good faith. Near misses are:

- Logged in the OHS Register by the OHS Supervisor on the same day;
- Reviewed by the OHS Manager within 48 hours to determine whether any immediate control measure is needed;
- Analysed monthly by the OHS Manager for trend identification — patterns of near misses in a particular activity or location indicate a systemic risk that requires a control review;
- Communicated to workers via the weekly toolbox talk when relevant lessons can be shared without identifying the individual who reported.

## 8. OHS Monitoring, Inspection, and Reporting

Activity	What is Checked	Frequency	Responsible / Record
Pre-work task briefing	All workers at each work front briefed before work begins; JSA reviewed for high-risk tasks	Daily	OHS Supervisor — toolbox log
PPE compliance check	Correct PPE always worn and in serviceable condition in designated areas	Daily — throughout shift	OHS Supervisor — daily safety log
Excavation and slope inspection	Face condition, shoring integrity, exclusion zone, water ingress — reinspect after rainfall	Daily; after rainfall	OHS Supervisor — daily log; OHS Manager counter-checks weekly
Plant pre-start inspection	Brakes, lights, alarms, hydraulics, tyres, guards — defective plant removed from service	Daily before first use	Operator — pre-start checklist; OHS Manager reviews weekly
OHS compliance inspection — all active work fronts	PPE, PTW compliance, housekeeping, emergency equipment, toolbox talk records, first aid kit condition	Weekly	OHS Manager — inspection checklist; findings to ESHS Manager
Near miss and incident log review	All incidents and near misses logged; response procedures followed; corrective actions progressing	Weekly	OHS Manager — OHS Register

OHS KPI compilation	TRIR, LTIFR, near miss count, training coverage %, PTW compliance rate, number of stop-work events	Monthly	OHS Manager — submitted to ESHS Manager for Monthly ESHS Report
First aid kit inspection and stock replenishment	All kits checked for completeness, expiry dates, and serviceability	Monthly	First Aid Officer — checklist held by OHS Manager

## 8.2 Key Performance Indicators

Indicator	Type	Reporting Frequency and Target
Total Recordable Injury Frequency Rate (TRIR)	Lagging	Monthly. Target: continuously improving; benchmark against project type. $TRIR = (\text{number of recordable incidents} \times 200,000) / \text{total hours worked}$ .
Lost-Time Injury Frequency Rate (LTIFR)	Lagging	Monthly. Target: zero lost-time injuries. $LTIFR = (\text{number of LTIs} \times 1,000,000) / \text{total hours worked}$ .
Near Miss Reports	Leading	Monthly count. A rising near-miss count (to a point) indicates improving reporting culture, not deteriorating safety. Trend analysis monthly.
Training Coverage	Leading	Monthly. Target: 100% of active workers with current induction; 100% toolbox talk attendance.
PTW Compliance Rate	Leading	Monthly. Target: 100%. Any PTW violation is a non-conformance reported to Engineer.
Stop-Work Events	Leading	Monthly count of formal stop-work instructions issued. Each event is investigated and the root cause documented.

## 8.3 OHS Registers (Mandatory)

The OHS Manager maintains the following registers throughout the construction period. All registers are available for inspection by the Engineer and PIURR at any time and are submitted in summary form as part of the Monthly ESHS Report:

- Incident Register — all recordable incidents, LTIs, and dangerous occurrences, with investigation status and corrective action close-out;

- Near Miss Register — all near misses reported, with analysis and any resulting method or control changes;
- PTW Register — all permits issued, with permit type, date, issuing authority, scope, and close-out confirmation;
- Training Register — all inductions, toolbox talks, specialist training, and emergency drills, with attendance records;
- PPE Issuance Log — PPE issued to each named worker, with type, size, date issued, and replacement records;
- OHS Inspection Register — all inspections conducted, with findings, assigned corrective actions, target dates, and close-out status;
- Medical Treatment Register — maintained confidentially by the First Aid Officer; anonymised summary provided to OHS Manager monthly.

## 9. Absolute Prohibitions

**ZERO TOLERANCE — THESE PROHIBITIONS APPLY TO ALL PERSONNEL AT ALL TIMES:** Violation of any of the following prohibitions is grounds for immediate removal from site and may result in dismissal and referral to relevant authorities.

Working in any designated PPE-mandatory area without the required PPE;

Lone working near open water, in an excavation, or in any confined space;

Entry into an unsupported excavation greater than 1.5 m depth;

Operating plant or vehicles without the required competency certification;

Bypassing, removing, or tampering with safety guards, interlocks, or systems;

Performing hot works, blasting, or confined space entry without a valid PTW;

Working under the influence of alcohol or controlled substances — the Project is a dry site;

Intimidating, threatening, or retaliating against any worker who reports a safety concern, near miss, or incident.

## Plan Approval

Prepared By OHS Manager / ESHS Manager	Reviewed By Engineer (Supervision Consultant)	Approved By PIURR

<p>Name:</p> <p>_____</p> <p>—</p> <p>Signature:</p> <p>_____</p> <p>Date:</p> <p>_____</p> <p>—</p>	<p>Name:</p> <p>_____</p> <p>—</p> <p>Signature:</p> <p>_____</p> <p>Date:</p> <p>_____</p> <p>—</p>	<p>Name:</p> <p>_____</p> <p>—</p> <p>Signature:</p> <p>_____</p> <p>Date:</p> <p>_____</p> <p>—</p>
--	--	--

## Annex 2: Community Health & Safety Plan (Framework)

### Purpose and Scope

This Community Health and Safety (CHS) Plan establishes the mandatory measures to protect communities along the Baljuvon – Sari Khosor corridor from construction-related risks. It applies throughout the construction period — from mobilisation through to final demobilisation and site closure — and covers all interactions between the Project and the communities, land users, and road users in the area of influence.

Construction of the BSK Road Project involves approximately 56 km of works through a mountainous valley with a number of settlements along the alignment. Key community risks arise from increased heavy vehicle traffic, temporary access disruption, dust and noise, river corridor works, worker-community interaction, and the potential for labour influx effects in a relatively remote area. This Plan addresses each risk directly.

### 1. Legal and Policy Framework

Instrument	Relevance to CHS on BSK Project
EBRD Environmental and Social Policy (2024) — ESR4	Requires the Contractor to assess and manage risks to community health, safety, and security arising from project activities. Includes requirements on road safety, public access to hazardous areas, and labour influx management. Where national standards are less stringent than ESR4, the higher standard applies.
EBRD ESP (2024) — ESR10	Requires meaningful stakeholder engagement and an accessible Grievance Redress Mechanism (GRM) throughout the Project lifecycle. The Contractor operates the site-level GRM interface as set out in Section 7 of this Plan.
Civil Protection Law, Republic of Tajikistan	Governs coordination with state emergency services during disasters. Relevant to emergency response arrangements involving communities, particularly for flood events in the Shurobdaryo corridor.
Road Safety Regulations, Republic of Tajikistan	Establishes speed limits and traffic control requirements applicable to construction traffic operating on the public road and through settlements. Contractor traffic must comply with national road traffic law.
Project Stakeholder Engagement Plan (SEP)	The SEP establishes the project-level GRM and stakeholder engagement framework. This Plan operates the Contractor's site-level interface with that framework. Where the SEP provides more specific requirements than this Plan, the SEP takes precedence.

### 2. Roles and Responsibilities

Role	Name [INSERT]	CHS Responsibilities
Social and Community Liaison Officer (SCLO)  Primary owner of this Plan; community-facing	[INSERT]	Day-to-day management of community interface. Conducts regular visits to all affected settlements. Communicates construction schedules and advance notification of disruptive works. Operates the site-level GRM — receives, logs, and responds to grievances. Coordinates advance notification of works near schools, medical facilities, and community water sources. Maintains consultation records. Reports to the ESHS Manager.
ESHS Manager	[INSERT]	Overall accountability for CHS performance within the Contractor's organisation. Reviews and countersigns monthly CHS report. Escalates community incidents and material grievances to Project Manager and Engineer. Ensures CHS obligations are integrated into works programming and method statements.
Traffic Manager	[INSERT]	Implements and monitors the Traffic Management Plan (Annex 3) with specific attention to community safety in settlements. Ensures speed controls, signage, flaggers, and pedestrian crossings are in place and functioning. Reports traffic incidents to the ESHS Manager.
Site Supervisors	—	First line of community safety enforcement at the work face. Enforce access controls and exclusion zones. Receive community complaints during works and pass immediately to the SCLO. Ensure worker Code of Conduct is observed in and around settlements.
Engineer (Supervision Consultant)	—	Reviews and approves this Plan and updates. Audits CHS compliance during site visits. Receives monthly CHS reports and material incident notifications. Notifies PIURR of material non-compliances.

### 3. Community Risk Register

The following risks have been identified through the ESIA scoping process and are applicable across the BSK corridor. The Contractor updates this Register if additional community risks are identified during construction and notifies the Engineer within 5 working days of any new material risk.

Risk	Affected Groups	Likelihood / Severity	Primary Mitigation Measures	Monitoring
Traffic collision involving community members or livestock	Villagers, pedestrians, children, livestock, non-	High / High	Speed limits in settlements enforced (Annex 3). Flaggers and signage at all active works on the road. Separate pedestrian crossing routes. No heavy vehicle	Weekly traffic route inspection; incident log



	Project road users		movement through settlements between 22:00 and 06:00 without Engineer approval.	reviewed monthly
Injuries from open excavations, unstable slopes, or construction materials	Children; members of public approaching active works areas	Medium / High	All open excavations fenced before end of each working day. Construction sites secured against unauthorised access — gates, fencing, and clear signage. Security patrols at active sites adjacent to settlements. Children's play areas and school routes given particular attention.	Daily barrier and fence check by Site Supervisor
Dust exposure affecting residences and community facilities	Residents near haulage routes and active works; schools; clinics	High / Medium	Haulage routes through settlements watered at least twice daily in dry conditions. All aggregate and fine material loads sheeted during transport through settlements. Works within 200 m of settlements scheduled to avoid peak morning and evening hours where practicable.	Weekly settlement interface inspection; dust complaints reviewed monthly
Noise and vibration from works and traffic	Residents; schools; medical facilities	High / Medium	Noisy works — piling, blasting, rock-breaking — near settlements only during agreed working hours ([INSERT: hours agreed with communities and Engineer]). Advance notice of blasting to affected settlements. Vibration sensitive structures identified [INSERT from ESIA] and monitored during blasting and compaction.	Complaints log reviewed weekly; vibration monitoring at sensitive structures per event
Disruption to access — roads, farms, irrigation channels, community facilities	Dehkan farmers; residents needing access to farms, markets, schools, clinics	High / Medium	Alternative access routes confirmed with communities and PIURR before any disruption. Minimum 72-hour advance notice of any planned access restriction, consistent with C-TM-03. Continuous access to all settlements, farms, and community facilities maintained at all times — if this is not possible, agreed detours are in place before disruption begins.	SCLO verifies access continuity weekly; access complaints actioned within 24 hours

Disruption to irrigation channels and community water sources	Agricultural land users; households relying on channel water	Medium / High	All irrigation channels and community water infrastructure identified and mapped before works reach each section [INSERT: from ESIA survey]. Works affecting water infrastructure require specific method statement approved by Engineer. Immediate temporary repair in the event of accidental damage. Notification to affected users within 24 hours of any interruption.	SCLO checks irrigation channels weekly during active works near agricultural land
Worker-community conflict or misconduct including SEA/SH	Women, girls, and vulnerable community members in particular; all community residents	Medium / High	Code of Conduct signed by all workers, covering respectful behaviour and specific prohibitions on SEA/SH. Worker camps separated from community residential areas. Movement of workers in settlements managed. SEA/SH reporting channels clearly communicated and accessible. Cases handled confidentially following survivor-centred protocols.	SCLO monitors community relations continuously; SEA/SH cases reported to PIURR within 24 hours
Community impacts from river corridor works — flooding, access disruption, river contamination	Downstream communities; communities relying on Shurobdaryo for water or livelihoods	Medium / High	Advance notification to downstream communities before in-stream works commence. Silt and pollution controls per Annex 7 and Annex 8. No in-stream works during high-flow season. Emergency notification procedure in the event of a significant spill or flood event affecting communities.	SCLO notifies downstream communities before river works; water quality monitoring per Annex 7
Labour influx effects — pressure on local services, resources, and social dynamics	Host communities in all settlements along the corridor	Medium / Medium	Labour influx management measures integrated with the Labour and Working Conditions Management Plan (Annex 9). Worker self-sufficiency maintained — camps provide all food, water, and services. Engagement with local authorities on any emerging influx-related concerns.	SCLO monitors community relations; influx issues included in monthly CHS report

## 4. Traffic Safety in Communities

Traffic safety is the highest-consequence community risk on this Project. Heavy construction vehicles operating on and adjacent to an existing public road through settlements with pedestrians, livestock, and children create serious injury risk. The measures below are mandatory and supplement the detailed requirements of the Traffic Management Plan (Annex 3).

- The posted speed limit within all settlements along the corridor is [INSERT from Traffic Management Plan — typically 30 km/h through villages] and is enforced by speed calming measures and flaggers, not just signage. Contractor vehicles do not rely on community members to manage their own risk;
- Flaggers are stationed at the entry and exit points of each settlement when heavy vehicles are operating, not only at active works locations. A flagger at a works area 100 m from a settlement does not protect pedestrians at the settlement boundary;
- Safe pedestrian crossing points with clearly visible temporary signage are established at the start and end of each settlement before heavy vehicle movements begin. Where children cross to reach schools, a dedicated crossing marshal is stationed at school start and finish times;
- Reversing of heavy vehicles in settlements is minimised through traffic circulation design. Where reversing is unavoidable, a banksman is required at all times;
- No heavy vehicle movement through settlements between 22:00 and 06:00 without specific Engineer approval and advance community notification;
- All Contractor drivers operating through or near settlements are briefed on the community traffic safety requirements before operating on the project route. Driving licences and plant certificates are held on file for all operators.

**ZERO TOLERANCE:** Speeding through settlements, failure to provide flaggers at active works adjacent to communities, and leaving open excavations unfenced overnight adjacent to residential areas are zero-tolerance violations. Any Contractor vehicle involved in a traffic incident involving a community member is immediately reported to the ESHS Manager and Engineer, regardless of apparent severity.

## 5. Access and Livelihood Protection

### *5.1 Continuous Access Obligation*

Communities along the BSK corridor depend on the existing road for access to farms, markets, schools, medical facilities, and neighbouring villages. The Contractor's obligation is unambiguous: safe and continuous access to all settlements and their facilities is maintained at all times throughout construction. This is not conditional on engineering convenience.

- Alternative access routes are confirmed with affected communities and agreed with the Engineer before any works that will affect traffic flow or pedestrian access begin — not after;
- Minimum 48-hour advance notice is given to affected communities before any planned road closure or access restriction. Notification is delivered by the SCLO in person or through community notice boards — not only through hoarding signs;
- Emergency access for ambulances, fire services, and other emergency vehicles is maintained at all times through all sections of the corridor, including active works areas. The Traffic Manager confirms the emergency access arrangement with local civil protection services before works in each section commence;

- Access to dehkan farms, grazing land, and irrigation channels is maintained or adequate alternatives are provided throughout the construction period, in coordination with affected land users.

### *5.2 Irrigation and Agricultural Infrastructure*

- All irrigation channels, community water systems, and agricultural access tracks within the project footprint are identified and mapped by the SCLO in consultation with affected communities before works reach each section [INSERT: cross-reference to ESIA survey results when available];
- Works affecting irrigation infrastructure require a site-specific method statement approved by the Engineer. The method statement addresses: how the channel will be managed during works; temporary water supply arrangements for affected users; and the reinstatement standard on completion;
- Accidental damage to irrigation channels or community water infrastructure is repaired immediately — within 24 hours of identification. Affected water users are notified within 24 hours of any interruption;
- On completion of works, all irrigation channels, drainage features, and agricultural infrastructure disturbed within the project footprint are restored to their pre-construction condition or better, confirmed by the SCLO in consultation with affected users.

## **6. Worker Code of Conduct and Community Relations**

The behaviour of Contractor and subcontractor workers toward community members is a direct CHS risk. Worker misconduct — including harassment, intimidation, and sexual exploitation and abuse (SEA/SH) — causes harm to individuals and damages community trust in the Project. The following requirements are mandatory for all personnel.

### *6.1 Code of Conduct*

- All Contractor and subcontractor personnel sign the Project Code of Conduct (Annex 12) before commencing work. Signing is a condition of employment — workers who refuse to sign are not engaged on the Project;
- The Code of Conduct is read out and explained at induction in Tajik and/or Russian. Workers are not simply handed a document — the SCLO or ESHS Manager confirms understanding;
- The Code prohibits: harassment, intimidation, or threatening behaviour toward community members; solicitation of sexual favours; any form of sexual exploitation or abuse (SEA/SH); unauthorised entry onto private land; damage to community property; and discriminatory behaviour;
- Workers are billeted in designated camps and are not permitted to establish informal accommodation in community residential areas.

### *6.2 SEA/SH Prevention and Response*

**SURVIVOR-CENTRED APPROACH:** All SEA/SH cases are handled in accordance with survivor-centred protocols: confidentiality, safety, non-discrimination, and respect for survivor choices are paramount. Cases are not disclosed publicly or in project reports without the survivor's consent. The ESHS Manager reports SEA/SH allegations to PIURR within 24 hours in accordance with agreed confidentiality protocols.

- The SCLO communicates SEA/SH reporting channels clearly to communities at the start of works in each area — these channels are available to community members, not only to workers;
- Reporting channels include: direct contact with the SCLO; the site grievance mechanism; and the PIURR project-level GRM. Anonymous reporting is accepted through all channels;
- The SEA/SH response procedure is documented [INSERT: reference to SEP or separate SEAH response protocol] and followed in every case — allegations are never informally resolved or dismissed without formal investigation;
- Worker awareness of SEA/SH prohibition and reporting channels is reinforced at monthly toolbox talks.

## 7. Grievance Redress Mechanism — Site Interface

The Contractor operates the site-level interface of the Project Grievance Redress Mechanism (GRM) established by PIURR under the Stakeholder Engagement Plan (SEP). The Contractor does not operate an independent parallel GRM — all grievances feed into the central PIURR register. The purpose of this site-level interface is to receive, acknowledge, and respond to construction-related grievances promptly and at the lowest appropriate level.

### 7.1 Access Channels

Community members can raise grievances through any of the following channels:

- Direct, in-person approach to the SCLO or any Site Supervisor — all are briefed to receive and log complaints;
- Complaint box installed at each active worksite and at visible locations in each settlement through which works are passing — boxes checked by the SCLO at minimum weekly;
- Telephone or written submission to the SCLO — contact details displayed on site notice boards and on public display boards in settlements;
- Through local Jamoat or district authorities, who forward grievances to PIURR;
- Direct submission to PIURR through the project-level channels published in the SEP;
- Anonymous submissions through any channel — anonymous grievances are logged and investigated with the same rigour as named submissions.

LANGUAGE: All grievance channels are accessible in Tajik. The SCLO conducts all community interactions in the local language. Russian is also available. Translation support is provided for any community member who requires it.

### 7.2 Grievance Handling Procedure

Step	Action	Detail	Timeline
1	Receive and log grievance	SCLO logs all grievances — including verbal complaints — in the Site Grievance Register on the same day received. Minimum information recorded: date, complainant name (if provided), method of	Day 0 — same day as receipt

		submission, nature of grievance, location, and any immediate action taken.	
2	Acknowledge receipt	SCLO contacts complainant (if not anonymous) to confirm the grievance has been received and will be investigated. Provides reference number and expected response date. Where complainant cannot be contacted, acknowledgement is posted on the site notice board.	Within 3 working days
3	Investigate	SCLO investigates the grievance, involving the relevant Supervisor or specialist (Traffic Manager, OHS Manager, Ecologist) as appropriate. Site visit is conducted where the grievance relates to a specific physical impact. SCLO records investigation findings in the Grievance Register.	Within 10 working days of receipt
4	Respond and agree resolution	SCLO communicates findings and proposed resolution to complainant in person where possible. Where the Contractor can resolve the issue directly, corrective action is taken and confirmed to the complainant. Where the issue requires PIURR involvement (e.g. compensation, land access, SEA/SH), it is forwarded with full documentation.	Within 20 working days of receipt
5	Close and report	Grievance closed in the Register once resolution is confirmed with the complainant or PIURR has confirmed close-out. Unresolved grievances remain open and are escalated to the ESHS Manager and Engineer. All grievances (open and closed) are summarised in the monthly CHS report.	Within 30 working days — escalate if unresolved

**NO INFORMAL RESOLUTION:** Grievances — including verbal complaints — must be logged. The Contractor shall not resolve grievances informally without documentation. A pattern of unlogged complaints resolved informally suggests a GRM that is not functioning and is a material non-compliance. The Engineer may request the full Grievance Register for review at any time.

## 8. Community Engagement During Construction

Community engagement during construction is different in character from the pre-construction consultation carried out by PIURR. It shifts from information gathering to active communication — communities need to know what is happening near them, when, and what they should expect. The SCLO is responsible for maintaining this communication throughout construction.

### *8.1 Advance Notification of Works*

- Before works commence in or near each settlement, the SCLO holds a community briefing covering: the scope and duration of works; expected impacts (traffic, dust, noise, access disruption); the mitigation measures in place; and how to raise a complaint;
- At least 48 hours advance notice is given before any planned activity that will cause significant disruption — road closure, bridge works, blasting, night works;
- Public notice boards are installed at each active works section and updated weekly with the current works programme. Boards include the SCLO contact details and GRM information;
- Advance notice of blasting events is given to all settlements within [INSERT: agreed notification distance from Annex 4] hours before each blast, by a means that reaches residents directly — not only a sign at the blast site.

### 8.2 Periodic Community Meetings

- The SCLO holds periodic meetings with local authority representatives (Jamoat heads) and community representatives at intervals of approximately [INSERT: frequency agreed with PIURR — typically quarterly];
- Meetings cover: progress of works; emerging concerns; grievance status; any changes to the works programme that affect communities; and any incidents or non-compliances with community impacts;
- Meeting records — attendance, key issues raised, and agreed actions — are maintained by the SCLO and submitted to PIURR as part of the quarterly ESHS report.

## 9. Emergency Preparedness — Community Interface

Community-affecting emergencies — including major traffic accidents, flooding events, significant spills, and structural failures — require specific community notification and response actions beyond the internal Contractor emergency procedures set out in the Emergency Preparedness and Response Plan (Annex 4). This section addresses the community dimension of emergency response.

Emergency Type	Community Notification	Contractor Actions
Traffic accident involving community member	SCLO notifies family and local authority immediately. ESHS Manager notifies Engineer within 1 hour.	First aid provided. Scene secured. Emergency transport arranged. Site incident procedure activated per Annex 4. Grievance logged and investigation commenced.
Flooding event affecting communities downstream of works	SCLO notifies downstream communities immediately via pre-agreed channel. Civil protection authorities notified.	In-stream and floodplain works suspended. Access routes to affected communities kept clear. Coordination with civil protection per Annex 4.
Significant spill reaching watercourse	SCLO notifies downstream community leaders immediately — do not wait to assess impact. CEP notified via PIURR.	Spill response activated per Annex 4. Source controlled. Monitoring of watercourse downstream. PIURR and Engineer notified within 1 hour.

Blasting incident — flyrock or uncontrolled blast	Immediate check of all community areas within blast radius. SCLO deployed to assess community impacts and communicate directly.	All blasting suspended pending investigation. Scene secured. OHS incident procedure activated. Engineer notified within 1 hour.
Road closure exceeding planned duration	SCLO immediately notifies affected communities of revised timeline and any changes to detour arrangements.	Traffic Manager activates contingency arrangements. Emergency access maintained throughout.

The Contractor shall prepare an Emergency Medical Access Protocol (EMAP) as a component of the Traffic Management Plan for each work zone before works commence on any section of the corridor. The EMAP shall provide for:

- Immediate road clearance on confirmed emergency vehicle dispatch, with a maximum response time of 15 minutes from notification to cleared passage;
- A 24-hour work zone emergency contact number, communicated to Shahidon hospital and local emergency services before works commence in each section;
- An emergency passing bay maintained at all active work zones sufficient to allow an ambulance to pass; and
- Pre-notification of Shahidon hospital before works commence on any section within 10 km of the hospital.

All EMAP activations shall be recorded and reported to the Engineer and PIURR within 24 hours.

## 10. Monitoring and Reporting

### 10.1 Monitoring Schedule

Activity	What is Checked	Frequency	Responsible / Record
Worksite security and access control	Fencing intact; no unauthorised access; excavations secured; signage in place	Daily	Site Supervisor — daily log
Traffic management in settlements	Speed controls operational; flaggers in position; pedestrian crossings clear; signage visible	Daily during works in or near settlements	Traffic Manager — daily traffic log
Settlement interface inspection	Dust levels; noise impact; access continuity; community notice boards current; complaint box checked	Weekly	SCLO — written inspection record
Irrigation channel and agricultural access check	No unplanned obstruction; channels intact where works are active in agricultural areas; access to dehkan farms maintained	Weekly during works near agricultural land	SCLO — inspection record and consultation with affected users



Grievance register review	All grievances logged; acknowledgements sent; investigations progressing within timeline; no overdue responses	Weekly	SCLO — Grievance Register; ESHS Manager notified of any overdue items
Monthly CHS performance report	Grievances received and resolved; traffic incidents; access disruptions; community meetings held; Code of Conduct violations; SEA/SH cases (aggregated and anonymised)	Monthly	SCLO prepared, countersigned by ESHS Manager — submitted to Engineer; summarised in quarterly ESHS report to PIURR

### 10.2 Absolute Prohibitions

**ZERO TOLERANCE — THESE PROHIBITIONS APPLY TO ALL PERSONNEL AT ALL TIMES:** Violation is grounds for immediate removal from site and may result in dismissal and referral to relevant authorities.

Exceeding posted speed limits or site-specific speed restrictions in or near settlements;

Leaving open excavations, hazardous materials, or unstable slopes unfenced or unsecured overnight adjacent to residential areas;

Allowing members of the public — including children — into active construction zones without authorisation;

Any form of harassment, intimidation, or sexual exploitation and abuse (SEA/SH) toward community members;

Resolving a community grievance informally without logging it in the Site Grievance Register;

Damaging irrigation channels, community water sources, or agricultural infrastructure without immediate notification and repair.

### Plan Approval

Prepared By SCLO / ESHS Manager	Reviewed By Engineer (Supervision Consultant)	Approved By PIURR
Name: _____ _____ Signature: _____	Name: _____ _____ Signature: _____	Name: _____ _____ Signature: _____

Date: _____ —	Date: _____ —	Date: _____ —
---------------------	---------------------	---------------------

## Annex 3: Traffic Management Plan (Framework Outline)

### Purpose, Scope, and Project Context

This Traffic Management Plan (TMP) establishes the mandatory requirements and procedures that the Contractor shall implement to maintain safe and continuous access for road users and community members throughout construction of the Baljuvon – Sari Khosor (BSK) Road in Baljuvon District, Khatlon Region, Republic of Tajikistan.

The BSK Road is the sole paved route connecting Baljuvon district with the Sari Khosor area — a 28-kilometre mountain corridor along the Shurobdaryo River valley that serves approximately 19 settlements ranging from small rural hamlets to larger village centres. For many communities along the corridor, including Shahidon (approximately km 31) and Mullokoni (approximately km 54), this road represents the only access to markets, schools, health facilities, and administrative services. Seasonal isolation due to landslides, snow, and flooding is already a serious challenge under baseline conditions.

Construction of the upgraded road will require periods of partial or full road closure, traffic diversions, one-way working, convoy systems, and significant heavy vehicle movements on a narrow mountain road shared with local community traffic, agricultural vehicles, livestock, and pedestrians — including schoolchildren. Road safety in this context is not simply a technical matter: it is a critical community health and safety obligation under EBRD ESR4 and Tajik road law.

This TMP applies to all traffic-affecting activities along the BSK corridor, including:

- All earthworks, road formation, and pavement construction activities;
- Bridge construction, culvert works, and river protection works;
- Operation of the asphalt plant, crushing plant, and material processing facilities;
- All material haulage on haul routes, access roads, and the public road corridor;
- Construction camp establishment and operation;
- Borrow area access and spoil disposal site access;
- Any activity that restricts, diverts, or affects community road access.

### 1. Legal and Policy Framework

Instrument	Relevance to this Plan
Law of the Republic of Tajikistan on Road Traffic (Traffic Code)	Governs the use of public roads, speed limits, traffic control requirements, and road safety obligations. Construction activities on or adjacent to public roads must comply with all Traffic Code provisions.
Traffic Police Authority (Tajikistan)	The Traffic Police must approve any road closure, temporary diversion, or change to traffic flow on a public road before works commence. The Contractor shall obtain this approval in writing.
National road signage and road works standards (Tajikistan)	All temporary traffic signs, markings, and road works delineation shall comply with national standards. [INSERT: relevant standard references].

EBRD Environmental and Social Policy (2024) – ESR4	ESR4 (Community Health, Safety and Security) requires the Contractor to prevent, minimise, and manage traffic and road safety risks to communities throughout the project lifecycle.
Project CESMP (Parent Document)	This Plan forms Annex 3 of the Contractor's CESMP and must be read alongside the Community Health and Safety Plan (Annex 2), the Emergency Preparedness and Response Plan (Annex 4), and the Grievance Mechanism provisions of the CESMP.

## 2. Roles and Responsibilities

Role	Traffic Management Responsibilities
Traffic Manager (Contractor)	Overall accountability for implementation of this TMP. Designated individual responsible for all temporary traffic arrangements. Liaises with Traffic Police, Engineer, and community. Holds authority to halt or modify works if traffic safety is compromised. [INSERT: Name , Mobile]
ESHS Manager	Ensures traffic management requirements are integrated with environmental and social controls. Reviews community complaints related to traffic. Reports traffic incidents to Engineer.
Site Supervisors / Foremen	Enforce speed limits for construction vehicles at their work fronts. Ensure flagpersons are correctly positioned before any single-lane working or road closure commences. Stop work if traffic safety is compromised.
Flagpersons (Traffic Controllers)	Control traffic flow at single-lane working sections, road crossings, and road closure boundaries. Maintain communication with flagperson at opposite end of controlled section via radio. Wear high-visibility clothing and carry appropriate stop/slow paddles at all times.
Stakeholder and Community Liaison Officer (SCLO)	Communicates advance notice of road closures, diversions, and access restrictions to affected communities and settlements. Receives and logs community complaints about traffic management. Coordinates with local Jamoat and Hukumat authorities.
Engineer Consultant) (Supervision	Reviews and approves the full site-specific TMP. Audits traffic management compliance during site inspections. Approves any significant variation to approved traffic arrangements. Escalates non-compliances to PIURR.
Tajikistan Traffic Police (District)	Approves road closures, diversions, and changes to traffic flow on the public road. May provide traffic enforcement support at high-risk locations. [INSERT: Contact name, station, telephone].

PIURR	Receives notification of significant traffic incidents. Supports coordination with national and regional road authorities. Receives quarterly TMP compliance reports.
-------	---

### 3. Traffic Context and Sensitive Locations

#### 3.1 Road User Profile

The existing BSK road carries a mixed traffic stream that is significantly different from typical urban or inter-city roads. The Contractor shall account for the following user types when designing all temporary traffic arrangements:

Road User Type	Traffic Management Considerations
Pedestrians and schoolchildren	High vulnerability. Children walking to school are present on the road in the morning (07:00–08:30) and afternoon (13:00–15:00). Speed limits and flagperson control are mandatory near schools and settlement crossings at these times.
Livestock and agricultural vehicles	Seasonal livestock movements (cattle, sheep, donkeys) are common, particularly in spring and autumn. Drivers must be briefed to anticipate sudden stopping requirements. Haul truck routes should avoid or time around known livestock movement periods.
Community vehicles (cars, motorbikes, minibuses)	Principal community road users. Access to homes, markets, health facilities, and schools must be maintained at all times. Maximum acceptable closure duration for any section is [INSERT — agree with communities and Engineer]. Emergency access must always be possible.
Agricultural machinery	Seasonal tractors and farming equipment. Wide and slow-moving. Overtaking on narrow mountain sections is hazardous. Works scheduling shall consider harvest periods [INSERT: local agricultural calendar].
Construction heavy vehicles (trucks, excavators, rollers)	Main source of increased traffic hazard. Must be segregated from community traffic wherever feasible. Speed-governed. Restricted to approved haul routes. Subject to convoy procedures where required.
Emergency vehicles (ambulances, fire, police)	Must never be blocked. Emergency vehicle access must be maintained at all times on all road sections. Flagpersons must be instructed to immediately clear a lane for emergency vehicles on sight.

#### 3.2 Sensitive Locations Requiring Enhanced Traffic Controls

The following locations along the BSK corridor have been identified as requiring enhanced traffic management measures due to the proximity of vulnerable road users, community infrastructure, or

geometrically constrained conditions. The Contractor shall develop detailed traffic control layouts for each of these locations as part of the full site-specific TMP:

Ref	Location	Chainage (approx.)	Enhanced Controls Required
SL-01	Shahidon settlement	~km 31	Reduced speed limit (20 km/h). Flagperson control at settlement entry and exit. Pedestrian separation barriers. Advance warning signs 200 m either side. School hours restrictions on haul traffic.
SL-02	Mullokonj settlement	~km 54	Reduced speed limit (20 km/h). Flagperson control. Pedestrian crossing point maintained. Advance warning signs. Community notification of works schedule.
SL-03	[INSERT – any other settlement with direct road frontage]	[INSERT km]	[INSERT specific controls required]
SL-04	Primary bridge construction works area	[INSERT km]	Full road closure with approved diversion route, or single-lane working with flagperson control. Maximum closure period [INSERT]. Pre-agreed with Traffic Police and communities.
SL-05	Narrow valley sections with no passing opportunity	[INSERT km ranges]	Convoy system — controlled one-way flow in alternating directions at agreed time intervals. Radio communication between controllers at each end.
SL-06	Borrow area / spoil site access junctions with public road	[INSERT km]	Give-way priority for public road traffic. Wheel wash facility. Stop/Go sign at junction. Haulage trucks not permitted to emerge onto public road while community vehicle approaching.
SL-07	River crossing works (bridge / culvert construction)	[INSERT km]	Temporary bridge or ford crossing maintained or alternative crossing provided. Pre-agreed with communities. Maximum closure period [INSERT].
SL-08	[INSERT additional sensitive locations as identified during site-specific TMP development]	[INSERT]	[INSERT]

## 4. Speed Limits and Vehicle Standards

### 4.1 Construction Vehicle Speed Limits

The following speed limits apply to all construction vehicles (trucks, excavators, rollers, mobile plant) operating on the BSK Road corridor and on approved haul routes. Speed limits shall be enforced through signage, driver briefing, and spot checks by the Traffic Manager:

Location	Speed Limit	Notes
Open road sections (no settlements or sensitive receptors)	0 km/h	Maximum for all heavy construction vehicles on the BSK corridor during construction. Significantly lower than normal road speed given construction hazards and narrow alignment.
Within settlements and villages (all settlement zones)	20 km/h	Mandatory. Speed limit signs to be erected at entry and exit of every settlement zone identified in the TMP.
School zones (during school hours: 07:00–08:30 and 13:00–15:00)	10 km/h or STOP	Heavy vehicle movements past school gates shall be halted during school arrival and departure times unless a flagperson is controlling pedestrian crossing.
Single-lane working sections (flagperson-controlled)	15 km/h	Walking pace through controlled sections. Vehicles must stop on flagperson instruction.
Within construction camps, work sites, and borrow areas	10 km/h	All areas where workers on foot are present.
Reversing operations near active work or near public access	Spotter required	All reversing by large plant or trucks near any public road or pedestrian area requires a designated spotter (banksman). Reversing alarms mandatory on all heavy vehicles.

#### 4.2 Construction Vehicle Standards

All construction vehicles and mobile plant operating on public roads or in proximity to community traffic shall meet the following minimum standards:

- All heavy goods vehicles and mobile plant shall be roadworthy and hold current registration and inspection certificates under Tajik law;
- All vehicles reversing near public roads or pedestrian areas shall be fitted with working audible reversing alarms and rear-view cameras or mirrors. Where these are not fitted, a dedicated spotter (banksman) is required for every reversing manoeuvre;
- All loads of fine materials (soil, aggregate, sand, crusher dust) shall be sheeted with a tarpaulin before any vehicle leaves a work site, borrow area, or plant area onto the public road;
- No vehicle shall be overloaded beyond its rated payload. The Traffic Manager shall verify that haul truck loads are within approved axle load limits for any bridge or culvert on the haul route;

- Vehicles transporting hazardous materials (fuel, chemicals) shall comply with all applicable national regulations for hazardous goods transport and shall carry appropriate documentation and spill kits;
- All vehicle drivers shall hold a valid driving licence appropriate to the class of vehicle, and shall have completed the Contractor's driver induction programme covering road safety requirements and this TMP;
- Construction vehicles shall not transport unauthorised passengers.

#### 4.3 Haul Traffic Hours

To reduce the impact of heavy vehicle movements on community life and road safety risk to vulnerable road users, the following time restrictions on haul traffic through settlements apply as a default. Variations require Engineer approval and advance community notification:

- Heavy vehicle haulage through or past settlement zones: 07:00 to 22:00 only. No heavy haulage through settlements between 22:00 and 07:00;
- Heavy vehicle movements past school entrances: suspended during school arrival and departure periods (07:00–08:30 and 13:00–15:00 on school days), unless controlled by a flag person;
- Night-time works affecting the road or requiring road closure: subject to specific Engineer approval, advance community notification (minimum 48 hours), and Traffic Police approval.

## 5. Traffic Control Arrangements

### 5.1 Signage

Temporary traffic signs shall be erected before any works commence that affect normal traffic flow. Signs shall conform to national road works standards and shall be maintained in good, clearly readable condition throughout the works. Minimum signage requirements are as follows:

Sign Type	Placement Requirement	Notes
ROAD WORKS AHEAD warning sign	Minimum 200 m in advance of works in each direction of approach	Reflective. With distance indicator (e.g. '200 m'). Maintained at correct distance as works advance.
Temporary speed limit sign (30 km/h / 20 km/h / 10 km/h)	Immediately in advance of each speed zone. Repeated at 100 m intervals in long sections.	Reflective. Must match speed limit applicable to that location.
SINGLE FILE TRAFFIC / ONE LANE AHEAD warning	100 m before the start of any single-lane controlled section	With direction indicator where applicable.
STOP / GO paddle signs (flagperson)	Held by flagpersons at each end of single-lane section	Reflective. Used in daylight and at night with adequate personal lighting.



ROAD CLOSED / DIVERSION signs and arrows	At closure point and at each junction on the diversion route	With direction arrows. Accompanied by traffic cones or barriers to delineate closure.
PEDESTRIAN CROSSING point markers	At each maintained community pedestrian crossing point through work zones	In settlements and near school zones.
HAZARD / EXCAVATION warning signs and barriers	Around all open excavations, trenches, and drop-offs adjacent to the road	With barrier tape or physical barriers. Illuminated at night.
END OF ROAD WORKS sign	At the far end of each road works zone	Speed de-restriction as applicable.

All signs shall be removed promptly when the works they relate to are complete. Sign layouts and placement for each major work zone shall be shown in the site-specific TMP drawings submitted to the Traffic Police and Engineer.

### *5.2 Single-Lane Working and Flagperson Control*

Single-lane working with flagperson control is the default approach for managing traffic through active work zones where the road cannot be fully closed. The following requirements apply to all single-lane working arrangements:

- A minimum of two trained flagpersons shall be deployed at each single-lane section — one at each end. Communication between flagpersons shall be maintained by radio at all times.
- Flagpersons shall wear high-visibility vests or jackets at all times. At night or in low-visibility conditions, they shall also carry a lighted baton or torch.
- The maximum distance between flagpersons (i.e. the length of single-lane section) shall not exceed 500 m unless a relay system with intermediate flagpersons is in place.
- Maximum waiting time for vehicles held at a single-lane section: 10 minutes. If works are expected to generate longer delays, a timed convoy system shall be used instead.
- Flagpersons shall immediately clear a path for any emergency vehicle (ambulance, fire, police) regardless of which direction it is travelling.
- Flagpersons shall not simultaneously perform any other task. Their sole duty during single-lane working is traffic control.
- Rest breaks for flagpersons shall be coordinated so that control is never absent at either end of a single-lane section.

### *5.3 Convoy Systems*

Where the road geometry is too narrow for two-way traffic to pass simultaneously for extended sections — particularly in confined valley sections and during bridge works — a controlled convoy system shall be used. Under a convoy system:

- All community and construction vehicles travelling in one direction are held at a control point, while vehicles in the opposite direction proceed through the controlled section in a single convoy;
- Convoy intervals shall be determined based on section length and vehicle speeds, ensuring vehicles do not catch the previous convoy before clearing the section. Maximum convoy interval: [INSERT — to be determined during TMP development];
- Radio communication shall be maintained between convoy controllers at each end;
- The convoy schedule (times and directions) shall be communicated to local communities and relevant authorities in advance, and posted at community notice boards;
- Emergency vehicles shall be given immediate priority through the convoy system at any time.

#### *5.4 Road Closures and Diversions*

Where works require full road closure — such as at bridge construction sites, culvert replacement at critical crossings, or sections where single-lane working is not feasible — the following requirements apply:

- All road closures require advance written approval from the Tajikistan Traffic Police. The Contractor shall submit the closure application a minimum of [INSERT: 14 days] before the closure date, including: location, duration, alternative access route, community notification plan, and emergency access arrangements.
- All affected communities shall be notified of planned road closures at least 48 hours in advance through: direct engagement by the SCLO; notices posted at community gathering points, mosques, and schools; announcement through local authorities (Jamoat).
- The BSK corridor has no alternative diversion route — it is the only surface link serving all communities along the 56 km valley. Full road closure therefore cannot be managed through diversion. Where works require full road closure, the Contractor shall instead operate time-limited working windows, completing works and reopening the road within the maximum closure duration agreed with affected communities and the Engineer before works commence. The maximum closure duration for any planned full closure shall be agreed with the Engineer and confirmed with affected communities before works commence at that location and shall not be exceeded without re-notification and re-approval from both the Engineer and the relevant Jamoat. Emergency vehicle access shall be maintained at all times through a gated or controlled access point communicated to local emergency services before any closure commences. The maximum planned duration of any full road closure shall be agreed with the Engineer and affected communities before works commence and shall not be exceeded without re-notification and re-approval.
- Emergency vehicle access shall be maintained at all times. If a full closure is unavoidable, a gated or controlled access point for emergency vehicles shall be provided and communicated to local emergency services.

## **6. Pedestrian Safety and Community Access**

### *6.1 Pedestrian Safety Requirements*

The BSK Road passes through or adjacent to 19 settlements and serves communities with limited alternative access routes. Many residents — including children, elderly persons, and those with limited

mobility — walk along or across the road as part of daily life. The following requirements apply wherever construction activities create a hazard to pedestrians:

- A continuous, clearly delineated pedestrian route shall be maintained through every active work zone in a settlement. This route shall be separated from vehicle and plant movement by physical barriers (cones, barriers, hoarding) at all times.
- Where the pedestrian route must cross through or between active work areas, a designated and clearly marked crossing point shall be provided, controlled by a flagperson during working hours.
- Open excavations, trenches, and drop-offs adjacent to or crossing pedestrian routes shall be physically barricaded at all times. Excavations shall not be left open and unbarricaded overnight or during non-working periods.
- No construction vehicle shall reverse across a pedestrian route without a dedicated spotter controlling the movement.
- Construction plant shall not be left idling on or immediately adjacent to pedestrian routes in settlements.
- Pedestrian access to homes, schools, mosques, markets, and community facilities shall be maintained at all times. If direct access is temporarily obstructed, an alternative access shall be agreed with the affected household or facility and communicated by the SCLO before obstruction commences.

### *6.2 School and Community Facility Access*

SCHOOL ACCESS IS NON-NEGOTIABLE: Safe and continuous access for schoolchildren to schools along the BSK corridor must be maintained at all times. This is not subject to operational convenience. If works in the vicinity of a school cannot maintain safe pedestrian access, works in that location shall be suspended during school hours.

The Traffic Manager shall identify all schools, clinics, mosques, community halls, and market areas along the corridor at the outset of TMP development. [INSERT: list of community facilities and locations by chainage].

Works schedules shall be coordinated with school term dates and hours to avoid heavy vehicle movements past school gates during pupil arrival and departure.

The SCLO shall engage directly with school principals, clinic managers, and community leaders to agree specific access management measures before works commence in their vicinity.

Any temporary disruption to access for a school, clinic, or community facility shall be notified to the facility management and the local Jamoat at least 48 hours in advance.

### *6.3 Livestock and Agricultural Access*

Where works cross or block traditional livestock movement routes or agricultural field access tracks, temporary alternative access shall be agreed with affected landowners and farmers before works commence.

Haul truck drivers shall be briefed that livestock may be encountered on the road at any time and shall be instructed to slow to walking pace and stop if necessary when livestock are present.

The SCLO shall engage with the local Jamoat and farmers to understand seasonal agricultural activities — particularly irrigation, harvesting, and livestock transhumance — and incorporate these into works scheduling where practicable.

## 7. Haul Routes and Material Transportation

### 7.1 Haul Route Plan

Prior to commencement of any material transportation, the Contractor shall prepare and submit to the Engineer a Haul Route Plan. The Plan shall identify:

- All proposed routes for transportation of materials between borrow areas, quarries, processing plants, active work fronts, and spoil disposal sites;
- The estimated volume and frequency of heavy vehicle movements on each route;
- Any bridge, culvert, or structure on the haul route and confirmation of its load-bearing capacity for the proposed vehicle types;
- Community-sensitive sections of haul routes and the specific traffic controls that will be applied;
- Proposed haul hours for each route section;
- Access junction arrangements at borrow areas and spoil sites.

### 7.2 Haul Route Maintenance

The Contractor shall inspect all haul routes at least weekly and maintain them in good condition throughout the construction period. Potholes, rutting, and erosion shall be repaired promptly.

Wheel wash facilities shall be installed at all exits from borrow areas, quarries, spoil sites, and processing plants. Vehicles shall not leave these sites with mud or clay adhering to tyres. Mud deposited on public roads shall be removed by the Contractor within two hours.

Dust suppression shall be applied to unpaved haul routes at a frequency sufficient to prevent dust nuisance reaching settlements. Community complaints about haul route dust shall be responded to within 24 hours.

All vehicle loads shall be covered with tarpaulins before leaving any site onto the public road corridor.

## 8. Community Communication and Consultation

### 8.1 Pre-Works Community Notification

Before any works commence that will affect traffic flow, community access, or road conditions, the SCLO shall implement the following community communication measures:

- Direct engagement with the Jamoat (village administrative authority) and community representatives in each settlement at least 2 weeks before works are planned to reach that area;
- Posting of written notices at community gathering points (shops, mosques, schools, community halls) describing: the nature of works, the expected duration, the impact on access, and who to contact with questions or complaints;
- Notice through local administrative channels (Hukumat) where works will affect the main road for more than one day;

- Special notification to school principals, clinic managers, and market operators with specific access arrangements that will apply during works in their vicinity;
- A minimum 48-hour advance notice for any planned road closure or significant diversion.

### 8.2 Ongoing Communication

The SCLO shall be available to receive community concerns about traffic management and road access during all working hours, with a contact number posted at community notice boards.

Community complaints about traffic management, dust, noise, or access shall be recorded in the Project Grievance Register and responded to within 48 hours (for routine matters) or 24 hours (for access blockages affecting homes, schools, or clinics).

Any unplanned road closure or access disruption shall be communicated to the affected community as quickly as possible and by the most direct means available (direct contact with Jamoat, community phone trees).

A brief monthly traffic management update — covering works planned for the coming month and their expected traffic impacts — shall be shared with the Jamoat of each settlement in the active construction zone.

## 9. Monitoring, Inspections, and Reporting

### 9.1 Traffic Management Inspections

Inspection / Check	Frequency	Responsible Party
Visual inspection of all signage — condition, placement, visibility	Daily at start of each working day	Traffic Manager / Site Supervisor
Flagperson positioning and communication check	At start of each single-lane working period	Traffic Manager
Speed compliance spot-check (construction vehicles)	Minimum twice weekly, unannounced	Traffic Manager
Haul route condition inspection	Weekly	Site Supervisor
Pedestrian route integrity check through active work zones	Daily	Traffic Manager / SCLO
School zone check during school hours	Each school day when works are active within 500 m of a school	Traffic Manager
Community access complaints review	Weekly (all complaints reviewed with SCLO)	ESHS Manager , SCLO

Full TMP compliance audit	Monthly	ESHS Manager, reported to Engineer
---------------------------	---------	------------------------------------

### *9.2 Traffic Incident Reporting*

All traffic incidents — including collisions, near-misses, pedestrian close-calls, and livestock incidents — shall be recorded in the Traffic Incident Log on the day they occur.

Any incident involving a community member (vehicle collision, pedestrian injury, property damage) shall be reported to the Traffic Manager and ESHS Manager immediately, and to the Engineer within 4 hours.

A traffic incident involving a fatality or serious injury shall be reported to the Engineer and PIURR within 1 hour, and to the Traffic Police (102) immediately. The scene shall be secured pending police investigation.

Traffic incident data (number of incidents by type) shall be included in the quarterly ESHS Monitoring Report to the Engineer.

### *9.3 Non-Compliance and Enforcement*

Speed limit violations by construction vehicle drivers shall be recorded and subject to the Contractor's disciplinary procedure. Repeat violations shall result in the driver being removed from site.

Any construction vehicle found operating on the public road without a tarpaulin over a loose load shall be stopped and the load covered before it is permitted to continue.

Any flagperson found absent from their designated position during single-lane working shall be reported to the Traffic Manager. The single-lane section shall be immediately converted to a full temporary closure until flagperson control is restored.

Non-compliance with the TMP shall be recorded in the Non-Compliance Register and a corrective action plan submitted to the Engineer within 48 hours.

## **10. Driver and Worker Training**

All personnel whose activities may affect road safety — including all vehicle drivers, plant operators, flagpersons, and site supervisors — shall receive traffic management training during site induction. Training shall cover:

- The approved haul routes — permitted roads only, no deviation without Traffic Manager approval;
- Applicable speed limits by location, and how to recognise speed zone signs;
- The requirement for loads to be covered before leaving site;
- The requirement for reversing alarms and spotters;
- The prohibition on carrying unauthorised passengers;
- Flagperson procedures — how they work, the obligation to comply with flagperson instructions immediately;
- Community sensitivity — respectful behaviour toward community members, no aggressive driving in settlements;

- What to do in the event of an accident involving a community member or community property;
- How to recognise and respond to the presence of schoolchildren, elderly persons, or livestock on or near the road.

Flagpersons shall receive additional specific training in traffic control procedures, radio communication, and emergency vehicle priority before being deployed. Records of all training shall be maintained by the ESHS Manager.

## 11. Plan Development, Approval, and Amendment

This document is a Framework Outline. The Contractor shall develop it into a full, site-specific Traffic Management Plan before construction works commence. The full TMP shall include, as a minimum:

- Detailed traffic control layout drawings for each sensitive location and major work zone (to scale, showing sign positions, flagperson positions, barriers, pedestrian routes, and vehicle routes);
- A completed Sensitive Locations Register (Section 3.2) with all [INSERT] fields populated;
- A Haul Route Plan with route maps and structure load capacity confirmations;
- A community facility register with chainage references and agreed access management measures;
- The convoy schedule and timetable for confined valley sections;
- Traffic Police approval reference and contact details;
- An advance community notification log showing pre-works engagement completed.
- The full TMP shall be submitted to the Traffic Police authority for approval, and to the Engineer for review and approval, at least 14 days before any works affecting the existing road commence. PIURR shall receive a copy for information.

The TMP shall be reviewed and updated whenever: works advance to a new section or settlement; a new sensitive location is identified; a traffic incident reveals a gap in controls; or the Engineer requires a revision.

Prepared By (Contractor Traffic/ESHS Manager)	Reviewed & Approved By (Engineer)	Approved By (Traffic Police)
Name: Title: Signature: Date:	Name: Title: Signature: Date:	Name: Title: Signature: Date:

## Annex 4: Emergency Preparedness & Response Plan (Framework)

### Purpose and Scope

This Emergency Preparedness and Response Plan (EPRP) establishes the mandatory requirements, procedures, and response protocols that the Contractor shall implement to prepare for, respond to, and recover from emergency situations during construction of the Baljuvon – Sari Khosor (BSK) Road in Baljuvon District, Khatlon Region, Republic of Tajikistan.

The BSK Road Project presents a distinct and demanding emergency management context. The construction corridor runs for approximately 28 kilometres through a narrow, mountainous river valley along the Shurobdaryo River, traversing steep terrain with high landslide and rockfall risk, multiple river crossings, and active floodplain. Settlements are located throughout the corridor. The corridor's remoteness means that access to external emergency services — medical, fire, and rescue — may be significantly delayed. These conditions make comprehensive, site-specific emergency planning essential before any person is mobilised to site.

This Plan addresses the following principal emergency scenarios:

#	Emergency Scenario	Primary Hazard Drivers for BSK Road
1	Flood and Flash Flood	River corridor location; seasonal snowmelt peak flows (April–June); ephemeral tributary flash floods; rapid onset with limited warning time in confined valley sections.
2	Landslide, Rockfall, and Mudflow	Steep valley slopes; active mass movement throughout corridor; unconsolidated soils; seismic activity; rainfall-triggered failures; risk to personnel in cut sections and at river crossings.
3	Serious Worker Injury or Fatality	High-risk construction activities (earthworks, height works, river works, plant operation, explosive use); remote location with delayed emergency medical response times.
4	Fire or Explosion	Fuel storage at camps and work fronts; asphalt plant operations; electrical faults; bitumen handling; explosive use in rock excavation; camp fire risk.
5	Hazardous Material Spill	Fuel and lubricant storage adjacent to Shurobdaryo River; chemical handling; bitumen operations; risk of rapid contamination of river system.
6	Serious Traffic or Plant Accident	Heavy vehicle movements on narrow mountain roads; interaction with community traffic; reversing plant; steep gradients; river crossing operations.
7	Seismic Event (Earthquake)	Seismically active region; risk of triggered landslides, slope failures, structure collapse, and secondary hazards at active work sites and camps.



8	Severe Weather Event	Extreme snowfall (winter); ice; severe storms; high winds; road and access route closures trapping personnel in remote sections.
9	Community Safety Incident	Traffic accidents involving community members; community access to unguarded excavations, open water, or stored hazardous materials; SEA/SH incidents.

## 1. Legal and Policy Framework

Instrument	Relevance
Labour Code of the Republic of Tajikistan	Establishes occupational safety obligations including the duty to protect workers from foreseeable hazards and to investigate and report workplace accidents.
Law on Fire Safety (Tajikistan)	Sets legal requirements for fire prevention, fire-fighting equipment, evacuation procedures, and fire safety inspections at construction and camp facilities.
Law on Civil Protection and Emergency Situations (Tajikistan)	Establishes responsibilities of organisations during civil emergencies, including notification obligations and coordination with national and local civil protection authorities.
Regulation on Investigation and Registration of Workplace Accidents (Tajikistan)	Mandates formal investigation, registration, and reporting of occupational accidents to the relevant state labour authority.
EBRD Environmental and Social Policy (2024) – ESR2, ESR4	ESR2 (Labour and Working Conditions) and ESR4 (Community Health, Safety and Security) both require emergency preparedness measures appropriate to the level of risk and the remote nature of the project.
Project CESMP (Parent Document)	This Plan forms Annex 4 to the Contractor's CESMP. It must be read alongside the OHS Management Plan (Annex 1), the Community Health and Safety Plan (Annex 2), the Traffic Management Plan (Annex 3), and the Water Quality and Sediment Control Plan (Annex 7).

## 2. Emergency Organisation and Roles

### 2.1 Emergency Response Structure

The Contractor shall establish and maintain a clear emergency response command structure throughout construction. This structure shall be known to all personnel and posted at all camps and work fronts. The key roles are:

Role	Incumbent [INSERT]	Emergency Responsibilities
------	--------------------	----------------------------

Emergency Response Coordinator (ERC)	[Name, Mobile]	Overall command of emergency response. Makes decisions on evacuation, external notifications, resource deployment. Only person authorised to declare an all-clear. Reports to Project Manager and Engineer.
Deputy ERC	[Name, Mobile]	Assumes ERC role if ERC is unavailable or is the casualty. Must be equally briefed on all procedures and contact information.
ESHS Manager	[Name, Mobile]	Advises ERC on environmental and health/safety dimensions of the emergency. Manages spill response. Coordinates post-incident reporting and investigation. Liaison with Engineer on incident notifications.
First Aid Officer(s)	[Name(s), Mobile]	Provides immediate first aid to injured persons. Coordinates medical evacuation. Maintains first aid equipment. At least one qualified first aider shall be present on each active work front at all times.
Site Supervisors / Foremen	[Names, Mobiles]	Initiates initial emergency response at their work front. Accounts for all personnel in their area. Directs evacuation to assembly points. Communicates status to ERC.
Camp Manager	[Name, Mobile]	Manages emergency response within camp boundaries. Accounts for all camp occupants. Controls camp evacuation. Maintains camp emergency equipment and fire suppression systems.
Engineer (Supervision Consultant)	[Name, Mobile]	Receives immediate notification of all significant emergencies and incidents. Escalates to PIURR. May direct suspension of works if risk to personnel or community is deemed unacceptable.
PIURR Emergency Contact	[Name, Mobile]	Receives notification of fatalities, serious injuries, significant environmental incidents, and community emergencies. Coordinates with relevant national authorities.

## 2.2 Emergency Contact Numbers

CRITICAL REQUIREMENT: ALL fields below MUST be completed with verified, current telephone numbers before construction commences. These numbers shall be posted in both English and Tajik at every work front, construction camp, workshop, refuelling area, and in every site vehicle.

Service / Contact	Telephone Number(s)	Notes
-------------------	---------------------	-------

Emergency Response Coordinator (ERC)	[INSERT]	Primary emergency command contact
Deputy ERC	[INSERT]	
ESHS Manager	[INSERT]	
Nearest Hospital / Medical Facility	[INSERT – name, address, tel]	Confirm 24-hour A&E availability before listing
Nearest Clinic / Health Post (if hospital distant)	[INSERT]	[INSERT – distance and travel time from site]
Ambulance Service (Tajikistan national: 103)	103	Confirm local response capacity and ETA to site
Fire Service (Tajikistan national: 101)	101	Confirm nearest fire station location and ETA
Police (Tajikistan national: 102)	102	
Emergency Situations Committee (KOHs) – national emergency authority	[INSERT local/regional contact]	For flood, landslide, and natural disaster coordination
Baljuvon District Hukumat (local administration)	[INSERT]	For community emergency coordination
Committee for Environmental Protection (CEP) – regional	[INSERT]	For significant environmental incidents (spills to river)
Engineer (Supervision Consultant)	[INSERT]	
PIURR Emergency Contact	[INSERT]	
Fuel / Hazmat Spill Response Contractor	[INSERT]	[INSERT – confirm 24-hour availability]

### 3. General Emergency Response Protocol

Regardless of the specific emergency type, the following general response sequence applies to all emergencies on the BSK Road Project. Scenario-specific procedures (Section 4) supplement these steps with additional actions relevant to each hazard type:

Phase	Action	Details
-------	--------	---------

1	ALERT	Any person who discovers an emergency shall immediately alert their supervisor by radio, phone, or shouting. Raise the alarm. Do not attempt to manage the emergency alone.
2	PROTECT LIFE	The immediate safety of persons takes absolute priority over equipment, the environment, or project schedule. Evacuate personnel from the immediate danger zone to the designated Assembly Point. Account for all persons.
3	NOTIFY ERC	Site Supervisor notifies the Emergency Response Coordinator immediately. Provide: location, nature of emergency, number of persons involved, injuries, immediate hazards. The ERC takes command.
4	FIRST AID	First Aid Officer provides immediate first aid to any injured persons. Do not move seriously injured persons unless they are in immediate danger. Activate medical evacuation if required.
5	CALL EXTERNAL SERVICES	ERC contacts external emergency services (ambulance, fire, police, emergency authority) as required by the scenario. Use posted emergency contact numbers. Provide: location, access route, nature of emergency, number of casualties.
6	CONTAIN	Where safe to do so, contain the emergency to prevent escalation (spill containment, fire suppression with extinguishers only if safe, blocking hazard spread). Do not risk further life in containment actions.
7	NOTIFY ENGINEER & PIURR	ERC or ESHS Manager notifies the Engineer within 1 hour of the emergency. Engineer notifies PIURR. For fatalities, serious injuries, or significant environmental incidents, notification must be within 1 hour without exception.
8	SECURE SCENE	Following stabilisation, secure and preserve the incident scene for investigation. Do not move or disturb evidence unless required for life safety. Restrict access to authorised personnel only.
9	INVESTIGATE	ERC and ESHS Manager initiate incident investigation. Preliminary report to Engineer within 24 hours. Full root cause analysis report within 5 working days. Near-misses shall follow the same process.
10	ALL-CLEAR RETURN &	Only the ERC may declare an all-clear and authorise return to work following an emergency. Return shall not occur until the hazard is controlled and the scene is safe, confirmed in writing where the Engineer requires it.

### 3.1 Assembly Points

Designated Assembly Points (APs) shall be established at every work front and at each construction camp before works or camp occupation commence. Assembly Points shall be:

- Located away from the hazard zone — upslope of river and flood risk, away from cut slopes and rockfall zones, outside camp perimeter but accessible;
- Clearly marked with a visible assembly point sign in English and Tajik;
- Large enough to accommodate all personnel who could be working or residing at that location;
- Known to all personnel and practiced during emergency drills.

AP Ref	Location Description	GPS Coordinates	Chainage (km)	Notes / Hazard Context
AP-01	Main Construction Camp	[INSERT]	N/A	Fire evacuation point. Upwind/upslope of fuel storage area.
AP-02	Primary Bridge Works Area	[INSERT]	[INSERT]	Flood evacuation point. Must be above 1-in-100 flood level.
AP-03	[INSERT – work front]	[INSERT]	[INSERT]	[INSERT – away from cut slope, accessible in all weather]
AP-04,	[INSERT – additional points as required per work front]	[INSERT]	[INSERT]	

#### 4. Scenario-Specific Response Procedures

The following procedures supplement the General Emergency Response Protocol (Section 3) with actions specific to each foreseeable emergency scenario on the BSK Road Project. All Contractor personnel shall be trained on the procedures relevant to their work activities and location.

##### SCENARIO 1: FLOOD AND FLASH FLOOD

The BSK Road corridor is located adjacent to and within the active floodplain of the Shurobdaryo River for extended sections. Flash floods from tributary channels can occur with minimal warning, particularly during the April–June snowmelt peak and during intense summer rainfall events. This is the highest-priority natural hazard for the Project.

##### *Prevention and Early Warning*

The Contractor shall subscribe to weather forecasting services and monitor river level indicators on the Shurobdaryo River throughout the construction period. [INSERT: identify specific forecast sources and river monitoring arrangements available in Tajikistan / from weather services].

No in-stream works shall be undertaken when river flows are elevated or rising, or when rainfall is forecast within the next 6 hours.

All plant, equipment, and materials stored within 50 metres of the active channel shall be moved to higher ground at the start of each working day if high flow conditions are possible.

Life jackets shall be worn by all personnel working within 10 metres of any watercourse at all times.

Evacuation routes from all river-level work areas to higher ground Assembly Points shall be identified, cleared, and signed before works commence.

*Response Procedure*

STEP 1: Any person observing rapid river level rise, roaring sound from upstream, or significant increase in debris in the river shall immediately shout an alarm and activate the emergency radio/whistle signal.

STEP 2: ALL personnel in the flood risk zone shall immediately cease work and move to the designated upslope Assembly Point by the pre-identified evacuation route. Do not stop to collect equipment.

STEP 3: Site Supervisor accounts for all personnel at the Assembly Point. Notifies ERC immediately with headcount and status.

STEP 4: ERC notifies downstream work fronts and communities of flooding risk. Contacts Emergency Situations Committee (KOHS) if community flooding risk exists.

STEP 5: ERC notifies Engineer within 1 hour. If any person is missing or has not reached the Assembly Point, immediately activate search and rescue — contact police (102) and emergency authority.

STEP 6: Do not return to work until the ERC has confirmed the flood has passed, river levels are falling, and the site has been inspected for damage, undermining, and slope instability.

STEP 7: ESHS Manager conducts post-flood inspection of all drainage, erosion controls, and temporary structures. Completes incident record.

**SCENARIO 2: LANDSLIDE, ROCKFALL, AND MUDFLOW**

Mass movement — including rockfall from cut slopes, shallow slope failures, deep-seated landslides, and debris flows from tributary channels — represents a constant risk throughout the BSK corridor. Warning time can be seconds for rockfall and minutes for debris flows.

*Prevention*

- Daily inspection of all active cut slopes and embankments by a competent person before work commences and after any rainfall event.
- Exclusion zones (minimum 1.5x slope height from the crest) shall be enforced below all active cut slopes during excavation.
- No personnel shall work below an unsupported cut face exceeding 1.5 m height in soil or 3 m height in rock without slope support or netting.
- Debris flow risk zones from tributary channels shall be identified on site maps and exclusion zones applied during rainfall events and snowmelt periods.
- Warning Signs — Instruct All Workers to Recognise
- Cracking or bulging of slopes above or below work areas;
- Unusual sounds — cracking, rumbling, or rolling rocks from above;
- Sudden changes in groundwater seepage from cut faces;
- Visible displacement of previously stable ground.

*Response Procedure*

STEP 1: On hearing a warning sign or instability alarm: shout 'ROCKFALL!' and immediately move away from the slope base — move laterally and downslope away from the direction of movement, never upslope.

STEP 2: Site Supervisor accounts for all personnel. If anyone is missing or buried, do not enter the unstable area — notify ERC and call 102 (police) and 103 (ambulance) immediately.

STEP 3: ERC declares an exclusion zone around the affected area. No re-entry until a competent geotechnical assessment confirms stability.

STEP 4: First Aid Officer treats any injured persons at a safe distance from the slope. Activate medical evacuation if required.

STEP 5: ERC notifies Engineer within 1 hour. If slope failure has blocked the road or threatens a settlement, notify Baljuvon District Hukumat and KOHS.

STEP 6: ESHS Manager documents the event. Engineer arranges geotechnical assessment before works resume.

### **SCENARIO 3: SERIOUS WORKER INJURY OR FATALITY**

Given the remote location of the BSK corridor, external ambulance response times may be 30 minutes to several hours. Effective first aid and rapid medical evacuation capability are therefore critical to worker survival outcomes.

#### *Medical Preparedness Requirements*

- At least one certified first aider (trained to nationally recognised first aid standard) shall be present at each active work front and at each construction camp at all times.
- First aid kits — stocked to the standard in Section 5.1 — shall be maintained at every work front and in every site vehicle. Kits shall be inspected monthly and restocked immediately after use.
- A dedicated emergency vehicle (or clearly designated vehicle) suitable for patient transport shall be on-site and available for rapid medical evacuation at all times during working hours.
- Pre-agreed arrangements with the nearest hospital and/or clinic shall be established before construction commences. [INSERT: name of hospital, travel time, agreement reference].
- Helicopter landing zone locations shall be identified near the main construction areas and camp. [INSERT: GPS coordinates of LZs]. Air ambulance contact details shall be on the emergency contact list.

#### *Response Procedure*

STEP 1: Stop work immediately in the area. Shout for first aider and activate emergency radio call.

STEP 2: First Aid Officer provides immediate first aid. Do not move the patient unless immediate danger exists. Keep patient warm and conscious if possible.

STEP 3: Site Supervisor calls 103 (ambulance). Provide: exact location (GPS and chainage), access route, nature of injury, patient condition. Dispatch a vehicle to the site entrance to guide ambulance.

STEP 4: ERC activates medical evacuation vehicle. Decide based on injury severity whether to transport to nearest clinic or await ambulance.

STEP 5: ERC notifies Engineer immediately. If fatality or life-threatening injury: Engineer notified within 1 hour, PIURR notified within 1 hour.

STEP 6: Secure the scene for investigation. Do not disturb plant, equipment, or work area until ERC and Engineer have authorised resumption.

STEP 7: ESHS Manager completes incident record within 24 hours. Formal investigation report to Engineer within 5 working days.

#### **SCENARIO 4: FIRE OR EXPLOSION**

Fire risk is present at fuel storage areas, the asphalt plant, workshops, construction camps, and areas of explosive use. Rapid spread of fire is possible in dry summer conditions.

##### *Prevention*

- Fire extinguishers shall be maintained at all fuel storage areas, the asphalt plant, workshops, generator areas, camp kitchens, and camp dormitories. Extinguishers shall be inspected monthly.
- No smoking within 10 metres of any fuel storage, refuelling point, asphalt plant, or flammable material.
- Hot works (welding, cutting, grinding) shall be subject to a Permit to Work system and shall not be conducted within 15 metres of flammable materials without specific controls.
- Camp fire evacuation drills shall be conducted at least once per quarter.

##### *Response Procedure*

STEP 1: On discovering a fire: shout 'FIRE!' and activate the nearest fire alarm. Evacuate the immediate area immediately. Do not attempt to fight a fire that is not in its very early stages.

STEP 2: Only attempt to use a fire extinguisher if: the fire is small and contained; an escape route is clear behind you; you are trained in extinguisher use. If in doubt, evacuate.

STEP 3: Site Supervisor/Camp Manager activates full area evacuation to Assembly Point. Account for all persons.

STEP 4: ERC calls fire service (101). Provide: location, access route, nature of fire (fuel, asphalt, camp building), whether explosives are involved or nearby.

STEP 5: ERC notifies Engineer immediately. If fire threatens community property or persons, notify Baljuvon District Hukumat.

STEP 6: If explosion risk exists (fuel fire, explosive storage nearby), enforce a minimum 300-metre exclusion zone and await fire service.

STEP 7: Do not allow re-entry to fire-affected area until declared safe by fire service or ERC.

#### **SCENARIO 5: HAZARDOUS MATERIAL SPILL**

Fuel, lubricant, bitumen, and chemical spills reaching the Shurobdaryo River could cause rapid, severe environmental damage and affect downstream community water users. The river must be treated as the primary receptor to protect in any spill event.

##### *Response Procedure*

STEP 1: STOP the source of the spill. Turn off valves, upright overturned containers, stop pumps. If unsafe to approach, call ERC and do not enter.

STEP 2: CONTAIN the spill immediately using the nearest spill kit — deploy absorbent booms or granules, use earthen bunds or sand to prevent flow toward drainage or the river.



STEP 3: Notify ERC immediately. ERC deploys additional spill resources. ESHS Manager notified simultaneously.

STEP 4: ERC assesses whether spill has reached or is at risk of reaching the Shurobdaryo River or any tributary. If river reach is possible, notify CEP within 1 hour. Notify downstream communities if river contamination occurs.

STEP 5: Engineer notified within 1 hour. PIURR notified for any spill reaching a watercourse.

STEP 6: RECOVER spilled material. All contaminated absorbents, soil, and PPE are hazardous waste — bag, label, and store for licensed disposal (see Waste Management Plan, Annex 5).

STEP 7: ESHS Manager conducts post-spill water quality monitoring at nearest downstream monitoring station within 4 hours. Incident documented in Spill Register.

### **Bitumen Spills — Additional Specific Guidance**

Bitumen presents a distinct spill risk profile from liquid fuels. It is stored and transported at elevated temperatures (140–180°C), is highly viscous, and cannot be recovered using standard absorbent spill kits. Despite solidifying rapidly on cooling, solidified bitumen continues to leach PAHs and VOCs that are toxic to aquatic life. A bitumen spill reaching the Shurobdaryo must be treated as a severe contamination event regardless of apparent surface solidification.

**Containment:** Do NOT apply water to hot bitumen — steam explosion hazard. Use dry sand bunds or earthen berms only to arrest flow. Do not use absorbent granules on molten material. Allow surface to cool before manual recovery.

**Prevention:** Bitumen tankers shall not park or manoeuvre within 200 m of the Shurobdaryo or any tributary. Bitumen transfer operations shall take place only over impermeable bunded hardstanding. A dedicated dry sand bed (minimum 10 m<sup>2</sup>, 300 mm deep) shall be maintained at the asphalt plant and each major delivery point as emergency containment for a hose or coupling failure.

**Recovery:** Cooled/solidified bitumen shall be physically removed by excavation or scraping. All recovered material and contaminated soil shall be managed as hazardous waste per the Waste Management Plan (Annex 5). A specialist hydrocarbon remediation contractor shall be engaged if bitumen reaches the river channel.

### **SCENARIO 6: SERIOUS TRAFFIC OR PLANT ACCIDENT**

#### *Response Procedure*

STEP 1: Stop all traffic movement in the affected area. Assign a person to control traffic approach from both directions.

STEP 2: First Aid Officer provides immediate first aid. Call 103 (ambulance) immediately for any person trapped, seriously injured, or unconscious.

STEP 3: If a community member is involved: ERC notifies Baljuvon District Hukumat and police (102) immediately.

STEP 4: ERC notifies Engineer within 1 hour. Any traffic accident involving a fatality or serious community injury shall be notified to PIURR within 1 hour.

STEP 5: Do not move vehicles involved in the accident until police have attended, unless required for life safety.

STEP 6: ESHS Manager documents the incident. Full investigation report within 5 working days.

**SCENARIO 7: SEISMIC EVENT (EARTHQUAKE)***Response Procedure — During Shaking*

- If indoors or in a vehicle: stay in place. Drop, cover, and hold on. Do not attempt to run outside during shaking.
- If outdoors on open ground: move away from slopes, cut faces, and structures. Crouch low and protect your head.
- If working in a cut section or near a slope: immediately move away from the slope base — do not wait for instruction.

*Response Procedure — After Shaking Stops*

STEP 1: Site Supervisor accounts for all personnel. Treat injured persons.

STEP 2: ERC initiates site-wide inspection for: slope failures, rockfalls, structure damage, fuel/chemical leaks, river level changes, and blocked drainage.

STEP 3: ALL work remains suspended until ERC and a competent geotechnical/structural assessor have confirmed that the work area is stable. This may take several hours or days.

STEP 4: ERC notifies Engineer, who notifies PIURR. Notify KOHS if community infrastructure is damaged.

STEP 5: Conduct aftershock monitoring. Treat all slopes and cut faces as unstable until reassessed.

**SCENARIO 8: SEVERE WEATHER AND WINTER EVENTS***Response Procedure*

STEP 1: Weather monitoring is conducted daily. If severe snow, ice, or storm conditions are forecast, ERC determines whether to suspend work for the day or specific activities.

STEP 2: If personnel become stranded in remote sections due to road blockage (snow, rockfall, flood): Site Supervisor contacts ERC immediately. ERC coordinates rescue via available plant, emergency services, or helicopter if warranted.

STEP 3: Survival equipment (thermal blankets, food rations, water, communication devices) shall be maintained in all site vehicles operating in remote sections during winter months.

STEP 4: Camp facilities shall be designed and maintained to withstand winter conditions without heating failure. Backup heating arrangements shall be in place.

**5. First Aid and Medical Arrangements****5.1 First Aid Kit Contents — Minimum Standard**

First aid kits shall be maintained at every active work front, in every site vehicle, and at each construction camp. As a minimum each kit shall contain:

Item	Item
Sterile adhesive plasters (assorted sizes) × 20	Sterile eye wash (saline solution) × 2
Sterile non-adherent wound dressings (small, medium, large) × 6 each	Emergency foil blanket × 2

Bandages: triangular × 4, roller (crepe) × 6	Disposable gloves (nitrile) × 10 pairs
Wound closure strips × 10	CPR face shield × 1
Burn dressing (gel) × 2	Scissors and forceps (tweezers) × 1 each
SAM splint or equivalent limb immobilisation × 2	Tourniquet (commercial, e.g. CAT) × 1
Instant cold compress pack × 4	Antiseptic wipes × 20
First aid guidance card (laminated, in English and Tajik) × 1	Incident recording pad and pen × 1

## 5.2 Medical Evacuation Routes

Medical evacuation routes from each major work area to the nearest medical facility shall be identified and documented before construction commences. The Contractor shall confirm:

- Name and address of nearest hospital with emergency/trauma capability: [INSERT]
- Estimated travel time from main construction camp to hospital: [INSERT] minutes
- Estimated travel time from most remote work front to hospital: [INSERT] minutes
- Route: [INSERT — road numbers/names, key junctions, any road restrictions for heavy vehicles]
- Name and address of nearest clinic (if hospital is >30 minutes away): [INSERT]
- Pre-agreed hospital contact and agreement reference: [INSERT]
- Air ambulance / helicopter service contact (if travel time >45 minutes): [INSERT]
- Helicopter landing zone locations and GPS coordinates: [INSERT]

## 6. Emergency Equipment

The Contractor shall maintain the following emergency equipment in good working order at all times. Equipment shall be inspected monthly, and inspection records maintained:

Equipment	Required Locations	Inspection Frequency
Fire extinguishers (dry powder and CO <sub>2</sub> types)	All fuel storage areas, asphalt plant, workshops, camp kitchen, every site vehicle, office buildings	Monthly inspection; annual service by certified technician
Fire alarm system (manual break-glass or electric)	Each construction camp building; asphalt plant area	Monthly test; replace batteries every 6 months

Spill kits (absorbent granules, booms, PPE, bags)	All fuel storage areas, workshops, refuelling points, asphalt plant, in site vehicles; adjacent to all watercourse works	Weekly visual check; restock after every use
First aid kits	Every work front, every site vehicle, every camp	Monthly inspection; restock after every use
Life jackets / personal flotation devices	All works within 10 m of any watercourse; all boats or river crossing vessels	Before each use; monthly full inspection
Emergency radio / satellite communication device	Each active work front; each site vehicle operating in remote sections; main camp	Daily communication check; battery charged
Stretcher / patient carry board	Each construction camp; main work front areas	Monthly inspection
Emergency lighting (battery backup)	Each construction camp; offices; workshops	Monthly test
Medical evacuation vehicle (clearly designated)	On-site and available at all times during working hours	Daily check; fuelled; keys accessible
Survival packs (thermal blankets, rations, water) for remote winter operations	All vehicles operating in remote sections October–April	Before winter season; replace consumed items

## 7. Emergency Drills and Training

### 7.1 Training Requirements

All personnel shall receive emergency response training during site induction before commencing work. Training shall cover:

- The emergency response command structure and who the Emergency Response Coordinator is;
- Location of the nearest Assembly Point for their work area;
- The alarm signal for their work front (radio call, whistle, siren — [INSERT site-specific signal]);
- How to call external emergency services (posted numbers) and what information to provide;
- Basic first aid procedures: CPR basics, bleeding control, casualty position;
- Flood evacuation procedure — the route to high ground from their work area;
- Landslide/rockfall response — immediate action and exclusion zone;

- Fire response — how and when to use an extinguisher; evacuation procedure;
- Spill response — how to use the nearest spill kit; who to notify;
- The absolute rule: personal safety takes priority — do not risk your life for equipment or materials.

All first aid officers shall hold a current first aid certificate from a recognised training provider. First aid certificates shall be renewed at least every two years. Records of all training shall be maintained by the ESHS Manager.

### 7.2 Emergency Drill Schedule

Emergency drills shall be conducted according to the following minimum schedule. Drills shall be documented and any deficiencies identified shall be corrected before the next drill:

Drill Type	Minimum Frequency	Scope and Notes
Full site evacuation drill (all personnel)	Every six months	Simulate a general emergency requiring evacuation to Assembly Point. Time the response. Account for all personnel. Debrief immediately after.
Fire evacuation drill — construction camp	Every three months	Simulate fire alarm activation in camp. Evacuate all occupants to Assembly Point. Check fire extinguisher locations are known.
Flood evacuation drill — river corridor work fronts	Before the start of each spring season (March)	Simulate rapid evacuation from river-level work area to upslope Assembly Point. Walk the route with all personnel.
Spill response drill	Every six months	Simulate a fuel spill near a watercourse. Deploy spill kit. Practice containment and notification procedures.
Medical evacuation drill	Every six months	Simulate a serious injury. Practice first aid response, patient preparation for transport, and medical evacuation vehicle mobilisation.
Additional drills	Following any significant change in risk profile, after any actual emergency, or at Engineer's request	ERC schedules and documents additional drills as required.

## 8. Incident Notification and Reporting

### 8.1 Immediate Notification — Trigger Events

The Contractor shall immediately notify the Engineer (within 1 hour) and PIURR (within 1 hour) of any of the following:

- Any worker fatality on the Project;
- Any serious injury resulting in hospitalisation, loss of limb, or significant medical treatment;
- Any significant environmental incident — including any spill reaching a watercourse, uncontrolled release of hazardous material, or significant slope failure;
- Any community safety incident — including any road accident involving a community member, any community member injured as a result of construction activities;
- Any SEA/SH allegation or confirmed incident — to be reported confidentially and in line with survivor-centred protocols;
- Any significant natural hazard event (major flood, landslide) affecting the Project or nearby communities;
- Any fire or explosion causing injury, significant property damage, or potential community impact.

### 8.2 Reporting Timeline

Report Type	Timeline	Content Required
Immediate Notification	Verbal Within 1 hour	Basic facts: what, where, when, who, immediate response actions taken. Verbal / telephone only at this stage.
Preliminary Written Report	Within 24 hours	Incident description, timeline, persons involved, injuries or environmental damage, immediate response actions, status of scene.
Full Investigation Report	Within 5 working days	Root cause analysis, contributing factors, direct and underlying causes, corrective and preventive actions, timeline for implementation, lessons learned.
Near-Miss Report	Within 24 hours	Description of near-miss, potential consequences if it had resulted in an incident, immediate corrective action taken. Logged in incident register.
Quarterly Summary	Quarterly, in ESHS report	Summary statistics: incidents by type, severity classification, lost time, drills conducted, corrective actions status.

### 8.3 National Regulatory Reporting

In addition to the above, the Contractor shall fulfil all reporting obligations to national regulatory authorities:

- Workplace fatalities and serious injuries shall be reported to the State Labour Inspectorate in accordance with the Regulation on Investigation and Registration of Workplace Accidents, and a formal investigation facilitated as required by law.

- Significant environmental incidents (spills to watercourses) shall be reported to the Committee for Environmental Protection (CEP) regional office as required by the Law on Environmental Protection.
- Civil emergencies involving community impact shall be reported to the Emergency Situations Committee (KOHS) and local Hukumat as required.

### 9. Plan Approval, Testing, and Amendment

This Framework Plan shall be completed with all site-specific details — emergency contacts, assembly point locations, evacuation routes, medical facility agreements, equipment registers, and drill schedule — by the Contractor's ESHS Manager and submitted to the Engineer for approval before any person is mobilised to site.

Once approved, this Plan shall be reviewed and updated:

- Following any actual emergency or drill that reveals a deficiency in procedures or equipment;
- Whenever key personnel change, to ensure emergency contacts remain current;
- At the start of each spring season (March) to incorporate updated flood risk information;
- Whenever significant new work activities or locations are introduced that create new emergency scenarios;
- At the Engineer's request.

The Plan shall be resubmitted to the Engineer for re-approval following any significant revision. Updated emergency contact lists shall be immediately redistributed to all work fronts and camps.

Prepared By (Contractor ESHS Manager)	Reviewed By (Engineer)	Approved By (PIURR)
Name: Title: Signature: Date:	Name: Title: Signature: Date:	Name: Title: Signature: Date:

## Annex 5: Waste Management Plan (Framework)

### Purpose and Scope

This Waste Management Plan (WMP) establishes the mandatory requirements, procedures, and controls that the Contractor shall implement for the prevention, minimisation, segregation, storage, transportation, and disposal of all waste streams generated during construction of the Baljuvon – Sari Khosor (BSK) Road in Baljuvon District, Khatlon Region, Republic of Tajikistan.

Construction of the BSK Road will generate a range of waste streams from earthworks, road formation, pavement construction, bridge and drainage works, plant and equipment operations, construction camps, and worker welfare facilities. In a mountainous river valley setting with limited waste management infrastructure in the surrounding region, poor waste management can cause serious and long-lasting environmental damage — particularly contamination of the Shurobdaryo River, degradation of agricultural land, and harm to local communities along the corridor.

This Plan applies to all waste generated at:

- Road formation and earthworks areas;
- Bridge construction and culvert works;
- Asphalt plant, crusher, and aggregate processing areas;
- Borrow areas and quarries;
- Construction camps, offices, and welfare facilities;
- Workshops, vehicle maintenance areas, and fuel storage points;
- Material stockpile and laydown areas;
- Temporary access roads and haul routes.

### 1. The Waste Hierarchy

All waste management decisions under this Plan shall follow the waste hierarchy, in descending order of preference. The Contractor shall demonstrate at each step that higher-priority options have been genuinely considered before proceeding to a lower-priority option:

Priority	Tier	Action Required
1 – HIGHEST	Prevention	Avoid generating waste in the first place. Accurate material ordering, reuse of packaging, design choices that eliminate waste streams at source.
2	Minimisation	Where waste cannot be prevented, reduce the quantity generated. Efficient cutting of materials, precise earthwork quantities, avoiding over-ordering.
3	Reuse	Reuse materials without reprocessing. Reuse formwork, packaging, containers; direct reuse of excavated material as fill (see Annex 6).



4	Recycling	Recycle materials that cannot be reused. Recycle scrap metal, asphalt planings, cardboard, and other recyclable streams through licensed contractors.
5	Treatment	Treat waste to reduce hazard, volume, or environmental impact before disposal (e.g., oil-water separation, dewatering of sludge, neutralisation of concrete washwater).
6 – LOWEST	Disposal	Only as a last resort. Disposal must be to a licensed facility. Open dumping, burning, and disposal in watercourses are absolutely prohibited.

### 1.1 Legal and Policy Framework

Instrument	Relevance to this Plan
Law of the Republic of Tajikistan on Production and Consumption Waste	Primary national legislation governing waste classification, storage, transport, treatment, and disposal. Sets licensing requirements for waste handlers and disposal facilities.
Law on Environmental Protection (Tajikistan)	Prohibits contamination of soil, water, and air through improper waste disposal. Sets general environmental protection obligations applicable to construction.
Sanitary and Epidemiological Rules (Tajikistan)	Govern safe management of domestic and food waste at construction camps; requirements for sanitation and hygiene.
EBRD Environmental and Social Policy (2024) – ESR3	ESR3 (Pollution Prevention and Resource Efficiency) requires avoidance of unnecessary waste generation, safe management of hazardous materials, and disposal through licensed contractors and facilities only.
European Waste Catalogue (reference standard)	Applied as good international practice for waste classification and characterisation where national classification codes are insufficient.
Project CESMP (Parent Document)	This Plan forms Annex 5 to the Contractor's CESMP and must be read in conjunction with the Water Quality and Sediment Control Plan (Annex 7), the Materials, Spoil and Borrow Area Management Plan (Annex 6), and the Worker Accommodation and Camp Management Plan (Annex 10).

## 2. Roles and Responsibilities

Role	Waste Management Responsibilities
------	-----------------------------------

Contractor ESHS Manager	Overall accountability for this WMP. Approves site-specific waste management arrangements. Ensures licensed waste contractors are engaged before waste is transported. Signs waste transfer documentation. Reports waste data to Engineer.
Environmental Inspector (Contractor)	Conducts regular waste storage area and camp waste inspections. Verifies waste segregation compliance. Maintains Waste Register. Identifies and documents non-compliances. Verifies corrective actions are completed.
Site Supervisors / Foremen	Enforce waste segregation requirements at their work fronts. Ensure containers are labelled, covered, and not overflowing. Stop work if waste is observed being dumped outside designated areas.
Camp / Facilities Manager	Manages domestic and food waste collection from camps, welfare facilities, and offices. Coordinates regular removal. Ensures adequate provision of bins and segregation containers throughout camps.
Equipment / Workshop Manager	Responsible for correct management of hazardous workshop waste (used oil, filters, oily rags, contaminated spill materials). Maintains secondary containment in workshop areas. Coordinates collection by licensed hazardous waste contractor.
Engineer (Supervision Consultant)	Reviews and approves completed WMP. Audits waste management compliance during construction. Approves any change to licensed waste contractors or disposal facilities. Escalates material non-compliances to PIURR.
PIURR	Receives quarterly waste monitoring reports. Supports permit and licence acquisition. Receives notification of any significant waste-related incident (illegal dumping, hazardous spill from waste storage, etc.).

### 3. Waste Classification and Expected Waste Streams

All waste generated on the BSK Road Project shall be classified as either non-hazardous or hazardous. The Contractor shall not mix hazardous and non-hazardous waste streams. The following table identifies the principal expected waste streams, their classification, typical sources, and required disposition:

Waste Stream	Classification	Primary Sources	Required Disposition
NON-HAZARDOUS WASTE STREAMS			
General domestic waste (food, packaging, paper, cardboard)	Non-Hazardous	Construction camps, offices, welfare facilities	Segregate recyclables. Dispose of residual waste at licensed municipal landfill or approved waste disposal point. Collection minimum twice weekly from camps.

Scrap steel and metal (formwork off-cuts, reinforcement trimmings, old culvert sections)	Non-Hazardous	Bridge and culvert works, construction fabrication areas	Segregate and stockpile. Sell to licensed metal recycler or transfer to licensed waste contractor. Do not burn or bury.
Concrete waste (off-cuts, spillage, rejected batches)	Non-Hazardous	Concrete batching, bridge and culvert works	Concrete washout waste shall be collected in lined washout pits (see Annex 7). Hardened concrete waste may be crushed and reused as sub-base material where specification permits, or disposed at approved inert waste facility.
Timber and formwork waste	Non-Hazardous	Bridge construction, falsework, temporary structures	Maximise reuse of formwork. Dispose of waste timber at licensed facility. Open burning on-site is prohibited.
Asphalt planings and waste asphalt	Non-Hazardous	Milling of existing road surface, rejected asphalt loads	Maximise reuse in new road construction through recycling techniques (cold or hot mix recycling) where specification allows. Surplus disposed at licensed facility.
Vegetation clearance waste (shrubs, roots, grass)	Non-Hazardous	Site clearance, borrow area preparation, road formation	Chip and compost on-site where feasible, or remove to approved disposal location. Open burning is prohibited. Do not dispose in watercourses.
Excavated inert spoil and surplus material	Non-Hazardous	Earthworks, cut sections, borrow pit overburden	Manage under the Materials, Spoil and Borrow Area Management Plan (Annex 6). Not classified as waste where reused as structural fill.
Waste tyres	Non-Hazardous	Vehicle and plant operations	Transfer to licensed tyre recycler or waste contractor. Do not burn or bury. Stockpile in covered, designated area.
Sewage sludge from camp sanitation systems	Non-Hazardous	Construction camp sanitation facilities	Collected by licensed sewage contractor and transported to licensed treatment facility. Frequency to prevent overflow. Records to be maintained.
<b>HAZARDOUS WASTE STREAMS</b>			
Used lubricating oil and hydraulic fluid	Hazardous	Plant and equipment maintenance, workshops	Collect in sealed, labelled drums. Store in bunded hazardous waste store. Transfer to licensed oil recycler or hazardous

			waste contractor. Maintain transfer documentation.
Used oil filters, oily rags, and contaminated absorbents	Hazardous	Plant maintenance, spill response	Collect in sealed containers. Do not mix with general waste. Transfer to licensed hazardous waste contractor. Maintain transfer documentation.
Waste fuel, contaminated fuel, and fuel sludge	Hazardous	Fuel storage tanks, contaminated deliveries	Transfer to licensed hazardous waste or fuel recycling contractor. Do not pour onto ground or into drains.
Bitumen and bituminous waste (waste emulsion, cleaning residues)	Hazardous	Asphalt plant, road paving operations	Collect and store in sealed containers in a bunded area. Transfer to licensed hazardous waste contractor. Do not burn.
Contaminated soil (from spills or pre-existing contamination)	Hazardous	Spill response, unexpected contaminated ground	Quarantine on-site pending characterisation. Notify ESHS Manager and Engineer immediately. Manage as hazardous waste. Dispose at licensed hazardous waste facility. Do not mix with clean spoil.
Chemical containers, paint tins, solvent containers	Hazardous	Construction operations, camp maintenance	Triple-rinse where applicable and segregate. Store in bunded hazardous waste store. Transfer to licensed hazardous waste contractor.
Batteries (vehicle, equipment, generator)	Hazardous	Vehicles, plant, camp generators	Collect in sealed, acid-resistant containers. Transfer to licensed battery recycler. Do not crush or puncture.
Asbestos-containing materials (if encountered)	HAZARDOUS – Special	Demolition of existing structures, old culvert works	STOP WORK immediately on suspected ACM discovery. Notify ESHS Manager and Engineer. Manage under a site-specific Asbestos Management Procedure developed by a qualified person and approved by Engineer before works resume.

## 4. Waste Storage Requirements

### 4.1 General Storage Standards

All waste storage areas — at work fronts, processing plants, and construction camps — shall meet the following minimum standards:

- Waste shall never be stored directly on bare soil. All storage areas shall have an impermeable base (concrete, compacted hard-standing, or impermeable liner) of sufficient size and durability for the waste type.
- All waste containers shall be clearly and durably labelled with the waste type, hazard classification (where applicable), date of first filling, and the name of the Contractor. Labels shall be in both English and Tajik.
- Waste containers shall be covered to prevent rainwater ingress, wind dispersal, and access by vermin, birds, or animals. Containers for liquid waste shall be sealed.
- Hazardous waste storage areas shall be physically separated from non-hazardous waste storage, fenced, locked, and access restricted to authorised personnel.
- Liquid hazardous waste storage (used oil drums, chemical containers) shall be housed within a bunded secondary containment structure capable of containing 110% of the volume of the largest single container stored.
- No waste of any type shall overflow from containers. Removal frequency shall be sufficient to prevent overflow, unpleasant odours, or proliferation of insects, rodents, or other animals.
- No waste shall be stored within 100 m of any watercourse, within 500 m of a settlement, school, or health facility, or in any flood-prone location.
- Waste storage areas shall be inspected by the Environmental Inspector at least weekly and after any significant rainfall event.

#### 4.2 Waste Storage Area Locations

The Contractor shall establish waste storage areas at all major work fronts and at each construction camp. The precise locations shall be confirmed in the site-specific completion of this Plan, subject to the siting criteria in Section 4.1. Indicative minimum provision is shown below:

Ref	Location	Waste Streams Served	GPS Coordinates [INSERT]
WS-01	Main Construction Camp	Domestic waste, recyclables, sewage collection point, hazardous waste store (oil/chemicals from camp)	[INSERT]
WS-02	Main Workshop / Plant Area	Used oil, filters, oily rags, contaminated absorbents, scrap metal, waste tyres, batteries	[INSERT]
WS-03	Asphalt Plant Area	Bituminous waste, chemical containers, general construction waste	[INSERT]

WS-04	Bridge / Major Works Area [INSERT chainage]	Concrete waste, scrap steel, formwork waste, general construction waste	[INSERT]
WS-05,	Additional satellite points at each active work front	General construction waste, minimal domestic waste from site welfare	[INSERT as sites established]

### 4.3 Segregation Requirements

As a minimum, the following separate waste streams shall be maintained at all storage areas where the relevant waste types are generated. Combined streams are prohibited unless specifically approved:

- General domestic waste (food waste, non-recyclable packaging);
- Dry recyclables (cardboard, paper, plastic bottles, glass — to the extent local recycling facilities are available);
- Scrap metal;
- Used oil and liquid hydrocarbons;
- Other hazardous solid waste (oily rags, filters, contaminated absorbents);
- Chemical containers and empty drums;
- Waste tyres;
- Batteries;
- Concrete and inert construction waste (if not reused on-site);
- Asphalt waste (if not recycled on-site).

## 5. Waste Transport and Disposal

### 5.1 Licensed Contractors

All waste transported off-site shall be handled by a licensed waste carrier and disposed of at a licensed waste facility. No unlicensed individual or company shall be engaged to remove or transport waste from the Project. Prior to engaging any waste contractor, the Contractor shall:

Obtain copies of the contractor's current national waste carrier licence and any relevant permits for the specific waste types they will handle;

Obtain evidence that the proposed disposal facility is licensed to receive the specific waste types being transferred (licence or permit copy, or documented pre-audit by the Contractor);

Submit copies of all licences and facility approvals to the Engineer for review before waste transfer commences;

Ensure all licences and permits remain valid throughout the construction period. Expired licences are not acceptable.

### 5.2 Licensed Waste Contractors Register

The Contractor shall maintain a register of all licensed waste contractors and disposal facilities used during construction. This register shall be kept up to date and submitted to the Engineer quarterly:

Ref	Contractor / Facility Name	Waste Types Accepted	Licence / Permit Ref	Expiry Date
LC-01	[INSERT]	Used oil / hazardous liquid waste	[INSERT]	[INSERT]
LC-02	[INSERT]	General non-hazardous solid waste / landfill	[INSERT]	[INSERT]
LC-03	[INSERT]	Scrap metal / recycling	[INSERT]	[INSERT]
LC-04	[INSERT]	Sewage / sanitary waste collection	[INSERT]	[INSERT]
LC-05	[INSERT – if required]	Asbestos / specialist hazardous waste	[INSERT]	[INSERT]

### 5.3 Waste Transfer Documentation — Duty of Care

The Contractor shall implement a documented system of waste transfer to fulfil its duty of care obligations and provide a complete audit trail for all waste generated on the Project. For every waste transfer off-site, the following documentation shall be completed and retained:

- A Waste Transfer Note or Waste Consignment Note (for hazardous waste) completed in full before the waste leaves the site, recording: waste description, classification, quantity (by weight or volume), date of transfer, transporter name and licence number, and receiving facility name and licence number;
- Signed acceptance confirmation from the receiving licensed facility (receipt or weighbridge ticket);
- Copies of all waste transfer documents retained in the Waste Register and made available for inspection by the Engineer or PIURR on request.
- For hazardous waste, the consignment note system shall track the waste from point of generation through transport to final disposal. The Contractor shall not release hazardous waste to a transporter without confirmed pre-booking at an appropriate licensed disposal facility.

## 6. Waste Register

The Contractor shall establish and maintain a Waste Register from the date of mobilisation to site. The Register shall be available for inspection by the Engineer, PIURR, or EBRD representatives at any time. The Register shall record, at a minimum:

- Waste type (using the classification in Section 3);

- Monthly quantity generated (by weight in kg or tonnes, or volume in litres/m<sup>3</sup> as appropriate);
- Cumulative quantity generated to date;
- Disposition method (reuse, recycling, treatment, disposal) and actual destination;
- Date(s) of off-site transfer;
- Name and licence number of transporter;
- Name and licence number of receiving facility;
- Waste Transfer Note reference number;
- Any incidents (spillage during storage or transport, illegal dumping observed, rejected waste).

The Waste Register shall be reported to the Engineer as part of the quarterly ESHS Monitoring Report. A summary of waste volumes generated, recycled, and disposed shall be included in each report.

## 7. Absolute Prohibitions

The following waste management practices are absolutely prohibited at all times and under all circumstances on the BSK Road Project. Any worker or subcontractor found responsible for any of the following will be subject to disciplinary action, up to and including removal from site:

	PROHIBITED PRACTICE
X	Open burning of any waste on or adjacent to the construction site, including vegetation clearance waste, timber offcuts, packaging, domestic waste, and tyres.
X	Disposal of any waste — of any type — in or within 100 metres of the Shurobdaryo River, its tributaries, irrigation channels, springs, or any other watercourse.
X	Discharge of untreated wastewater, concrete washwater, sewage, or any liquid waste to any watercourse, drainage ditch, or uncontrolled area.
X	Dumping of waste — including construction debris, domestic waste, or excavated material — on agricultural land, in riverbeds, in sensitive habitats, or at any location that has not been approved as a waste disposal point.
X	Pouring of used oil, fuel, chemicals, or any liquid waste onto the ground, into drains, or into watercourses.
X	Mixing of hazardous waste with non-hazardous waste, or mixing of different hazardous waste streams, in a manner that would impede safe management or increase disposal cost or risk.
X	Transfer of any waste to an unlicensed individual, vehicle, or facility.
X	Abandonment of any waste on-site at project completion or demobilisation.

## 8. Construction Camp and Domestic Waste Management



Construction camps present a concentrated source of domestic, food, and sanitary waste. The volume of waste generated by camp facilities is directly proportional to the number of workers accommodated. The Contractor shall ensure adequate waste management infrastructure is in place before workers are accommodated at any camp.

Sufficient colour-coded, lidded waste bins shall be provided throughout all camp areas — in dormitories, canteens, offices, and welfare areas. As a minimum, separate containers shall be provided for: food waste, dry recyclables (paper/cardboard/plastic), and non-recyclable general waste.

Food and organic waste shall be collected and removed from camp areas at a minimum frequency of every two days. Longer storage periods are unacceptable due to odour, vermin attraction, and hygiene risks.

General domestic waste shall be collected and removed to a licensed disposal facility at a minimum frequency of once per week, or more frequently as volumes demand.

No food waste or domestic rubbish shall be buried, burned, or disposed of in any unauthorised location.

Camp canteen and kitchen areas shall be maintained in a clean condition. Grease traps shall be installed and regularly cleaned on all kitchen drainage. Grease trap waste shall be collected by a licensed contractor.

Camp latrines, septic systems, or portable sanitation units shall be maintained, inspected, and emptied at a frequency sufficient to prevent overflow. Records of emptying shall be maintained. Sewage contractors shall be licensed.

Standing water in camp areas (from poor drainage or waste water accumulation) shall be prevented and remediated promptly to avoid mosquito breeding and disease risk.

## 9. Special Procedures for Hazardous Waste

### 9.1 Used Oil Management

All used engine oil, hydraulic fluid, transmission fluid, and gear oil shall be drained from equipment only at designated, bunded workshop areas with impermeable hard-standing.

Used oil shall be collected in clearly labelled, sealed steel drums (minimum 200-litre capacity). Drums shall be stored in the bunded hazardous waste store at the workshop area.

Used oil shall not be used for dust suppression, burned as fuel (unless in a specifically designed waste oil burner approved by the Engineer), or poured onto the ground under any circumstances.

Collection of used oil by the licensed contractor shall occur at a minimum frequency of once per month, or more frequently as drum capacity demands. Collection records shall be maintained.

### 9.2 Asbestos-Containing Materials (ACM)

Although no asbestos-containing materials will be introduced to the site as part of new construction, ACM may be encountered during the demolition or removal of existing structures, culverts, or drainage infrastructure along the existing road corridor. Workers shall be trained to recognise potential ACM.

Before the demolition or removal of any existing structure, culvert, or drainage infrastructure — particularly those of Soviet-era construction — a visual inspection shall be conducted by a qualified person to identify potential asbestos-containing materials. Where asbestos is suspected following the visual inspection, a licensed asbestos inspector shall conduct a formal assessment before demolition commences. The results of the pre-demolition inspection shall be recorded and submitted to the Engineer

before works commence at each structure. Where no ACM is suspected following the visual inspection, this shall also be recorded and submitted to the Engineer.

If any material suspected of containing asbestos is encountered during works, the Contractor shall immediately: stop work in the affected area; prevent worker access; notify the ESHS Manager and Engineer within four hours.

The ESHS Manager shall arrange sampling and laboratory analysis to confirm whether ACM is present before any further work in the affected area proceeds.

If ACM is confirmed, all subsequent management — including removal, packaging, transportation, and disposal — shall be undertaken by a suitably qualified specialist in accordance with a site-specific Asbestos Management Procedure, subject to Engineer approval, and in compliance with applicable national regulations and EBRD guidance.

No ACM shall be broken, cut, drilled, or otherwise disturbed without appropriate respiratory protection and containment measures.

### *9.3 Spill Response Waste*

All contaminated materials generated during spill response (absorbents, contaminated soil, PPE) shall be classified as hazardous waste and managed accordingly.

Spill response waste shall be collected in clearly labelled, sealed containers and stored in the bunded hazardous waste store pending transfer to a licensed facility.

The volume and type of waste generated during each spill response shall be recorded in both the Spill Register (Annex 7) and the Waste Register.

## **10. Monitoring, Inspections, and Reporting**

### *10.1 Inspection Schedule*

Inspection / Activity	Frequency	Responsible Party
Visual inspection of all waste storage areas, containers, and segregation compliance at work fronts	Weekly (minimum)	Environmental Inspector
Inspection of camp waste bins, food waste collection, and sanitation facilities	Twice weekly	Camp Manager / Environmental Inspector
Inspection of hazardous waste store (bund integrity, container condition, labelling)	Weekly	Environmental Inspector
Formal monthly ESHS Manager review of Waste Register and licensed contractor compliance	Monthly	ESHS Manager
Update and submit Waste Register data to Engineer	Quarterly (in ESHS Monitoring Report)	ESHS Manager

Audit of licensed waste contractor licences and disposal facility approvals	Six-monthly and upon any contractor change	ESHS Manager
Final site waste clearance inspection before site handover	At demobilisation	ESHS Manager , Engineer

### 10.2 Non-Compliance Response

Any non-compliance with this Plan — including improper waste storage, unlicensed disposal, open burning, or illegal dumping — shall be recorded in the Non-Compliance Register within 24 hours of discovery.

The ESHS Manager shall investigate the cause, implement immediate corrective action, and submit a written corrective action plan to the Engineer within 48 hours.

Incidents involving illegal dumping in a watercourse or agricultural area, or disposal of hazardous waste at an unlicensed location, shall be reported to the Engineer and PIURR within 24 hours, and to the relevant national regulatory authority as required by law.

## 11. Worker Awareness and Training

All workers shall receive waste management training during site induction, before commencing work. Training shall be delivered in Tajik and/or Russian as appropriate and shall cover:

- The project waste hierarchy — prevention first, disposal last;
- How to identify and correctly segregate each waste stream (with reference to labelled containers);
- The absolute prohibition on burning, dumping in watercourses, or disposal at unauthorised locations;
- The location of waste storage areas for their work front or camp;
- What to do if a spill of hazardous material occurs;
- What to do if asbestos or unexpectedly contaminated material is encountered;
- Who to report waste management concerns or observed illegal dumping to.

Waste management awareness shall be reinforced through toolbox talks at a minimum frequency of once per month throughout the construction period. Records of all training and toolbox talks shall be maintained by the ESHS Manager.

## 12. Demobilisation and Site Clearance

Prior to final demobilisation, the Contractor shall ensure that all waste generated during construction is appropriately managed and that the site is left free of waste contamination. Demobilisation requirements include:

- All waste storage areas cleared, containers removed or decontaminated, and impermeable liners removed;
- All hazardous waste transferred to licensed facilities with transfer documentation completed;
- All general waste removed from site to licensed disposal facilities;

- Workshop and fuel storage areas inspected for soil contamination, with any contaminated soil removed and managed as hazardous waste;
- Camp areas cleared of all domestic waste and sanitation facilities properly decommissioned;
- All litter, small debris, and scattered construction waste collected from the road corridor, borrow areas, haul routes, and spoil sites;
- A final Waste Register summary prepared, covering total waste generated by stream and disposition over the construction period;
- Final site waste inspection conducted jointly by the ESHS Manager and the Engineer, with written sign-off prior to Taking-Over Certificate.

### 13. Plan Approval and Amendment

This Framework Plan shall be completed with site-specific details — including waste storage area locations, licensed contractor details, and a site waste layout plan — by the Contractor's ESHS Manager and submitted to the Engineer for approval before construction activities and camp establishment commence.

The Plan shall be reviewed and updated if: a new waste stream is identified; a licensed waste contractor is changed; a significant waste-related incident occurs; or monitoring data indicates that existing controls are not effective. Any revisions require Engineer approval and shall be notified to PIURR.

Prepared By (Contractor ESHS Manager)	Reviewed By (Engineer)	Approved By (PIURR)
Name: Title: Signature: Date:	Name: Title: Signature: Date:	Name: Title: Signature: Date:

## Annex 6: Materials, Spoil & Borrow Area Management Plan (Framework)

### Purpose and Scope

This Materials, Spoil and Borrow Area Management Plan (MSBMP) sets out the mandatory requirements, procedures, and controls that the Contractor shall follow for the sourcing, handling, transportation, stockpiling, and disposal of construction materials, excavated spoil, and borrow material throughout construction of the Baljuvon – Sari Khosor (BSK) Road in Baljuvon District, Khatlon Region, Republic of Tajikistan.

The BSK Road Project will require significant volumes of fill material for embankment construction, pavement base layers, drainage works, slope stabilisation, and riverbank protection. The mountainous terrain of the Shurobdaryo valley means that earthworks will generate both large volumes of surplus spoil from cut sections and large volumes of material demand for fill sections. Poor management of these

material flows can cause land degradation, slope instability, river sedimentation, and damage to agricultural land — all of which are particular concerns along this sensitive corridor.

This Plan applies to all activities related to:

- Identification, approval, operation, and closure of borrow areas and quarries;
- Operation of material processing facilities (crushers, screening plants, asphalt plant);
- Excavation, classification, and reuse or disposal of cut material and spoil;
- Management and reinstatement of spoil disposal sites;
- Handling, storage, and transportation of all construction materials;
- Topsoil stripping, storage, and reinstatement;
- Access and haul road management associated with material movements;
- Final rehabilitation and closure of all borrow and disposal sites.

## 1. Legal and Policy Framework

Instrument	Relevance to this Plan
Law of the Republic of Tajikistan on Subsoil	Governs extraction of mineral and construction materials. All borrow area operations require a licence from the State Committee on Investment and State Property Management or relevant authority prior to commencement.
Land Code of the Republic of Tajikistan	Governs temporary and permanent land use changes associated with borrow pits, spoil sites, and haul routes. Land use authorisation required.
Law on Environmental Protection (Tajikistan)	Requires environmental impact assessment and prevention of land and water degradation from extractive and disposal activities.
Water Code of the Republic of Tajikistan	Prohibits disposal of spoil or excavated material within river corridors or floodplains without specific authorisation.
EBRD Environmental and Social Policy (2024) – ESR3, ESR5, ESR6	ESR3 (Pollution Prevention and Resource Efficiency); ESR5 (Land Acquisition, Restrictions on Land Use and Involuntary Resettlement); ESR6 (Biodiversity and Natural Resources). All apply to borrow and spoil management.
Project CESMP (Parent Document)	This Plan forms Annex 6 to the Contractor's CESMP and must be read in conjunction with the Water Quality and Sediment Control Plan (Annex 7), Waste Management Plan (Annex 5), and the Biodiversity Management Framework (Annex 8).

## 2. Roles and Responsibilities

Role	Materials, Spoil & Borrow Area Responsibilities
------	---

Contractor ESHS Manager	Overall accountability for this Plan. Reviews and approves site-specific borrow and spoil site assessments. Signs off on site opening and closure. Ensures permits are obtained before operations commence. Reports to Engineer.
Geotechnical / Civil Engineer (Contractor)	Prepares stability assessments for borrow pits and spoil sites. Designs drainage and slope protection measures for all extraction and disposal areas. Signs off on engineered placement plans for spoil.
Site Supervisors / Foremen	Day-to-day supervision of borrow extraction, spoil placement, topsoil management, and haul road condition. Stop-work authority if conditions are unsafe or controls are failing.
Environmental Inspector (Contractor)	Conducts regular inspections of all borrow areas, spoil sites, stockpiles, and haul routes. Records non-compliances and verifies corrective actions. Maintains site register and photographic records.
Plant and Equipment Manager	Ensures extraction and haulage equipment is maintained and operated within approved extraction limits. Coordinates scheduling of material movements to minimise haul road impacts.
Engineer (Supervision Consultant)	Reviews and approves borrow and spoil site assessments. Audits compliance. Approves site closure and rehabilitation sign-off. Escalates non-compliance to PIURR.
PIURR	Project Implementation Unit. Receives monitoring reports. Supports regulatory engagement for permits and land authorisations. Receives notification of any material non-compliance.

### 3. Material Sourcing and Borrow Area Management

#### 3.1 Material Requirements and Balance

Prior to construction commencement, the Contractor shall prepare a Materials Balance Plan identifying:

- The estimated volumes of cut material generated at each road section, classified by material type (suitable fill, unsuitable, rock, topsoil);
- The estimated fill material demand at each section by material type and specification;
- The potential for direct reuse of cut material as fill, avoiding the need for external borrow where practicable;
- The net surplus (spoil) volumes requiring disposal, and the net deficit volumes requiring external borrow;
- The proposed borrow sources and spoil disposal locations for each deficit and surplus respectively;
- Haul distances and routes for all material movements.

The Contractor shall seek to maximise reuse of cut material as fill wherever material specifications permit, minimising both the volume requiring external borrow and the volume requiring disposal. The Materials Balance Plan shall be submitted to the Engineer for review prior to construction commencement.

### 3.2 Borrow Area Selection Criteria

All borrow areas (whether from commercial quarries or project-specific sites) must satisfy the following selection criteria before approval. The Contractor shall complete a Borrow Area Suitability Assessment for each proposed site using the criteria below:

Selection Criterion	Requirement	Status [INSERT]
Distance from watercourses	Minimum 100 m setback from the active channel of the Shurobdaryo River and major tributaries; greater setback required in floodplain areas	[Compliant / Non-Compliant / N/A]
Flood exposure	Site must not be located within the 1-in-25 year floodplain. Geotechnical assessment required to confirm.	[Compliant / Non-Compliant / N/A]
Slope stability	No extraction on slopes >30° or within 50 m of existing landslide scarps or areas of active erosion.	[Compliant / Non-Compliant / N/A]
Sensitive habitats / biodiversity	Avoidance of riparian vegetation, wetlands, areas identified as potential confirmed priority biodiversity features (see Biodiversity Management Framework, Annex 8).	[Compliant / Non-Compliant / N/A]
Agricultural land	Avoidance of high-value agricultural land (irrigated arable, orchards) wherever practicable. Any use of agricultural land requires documented landowner consent and compensation in line with EBRD ESR5.	[Compliant / Non-Compliant / N/A]
Settlement proximity	Minimum 500 m from the nearest residential dwelling, school, or health facility, or as agreed with the Engineer based on a noise and dust assessment.	[Compliant / Non-Compliant / N/A]
Cultural heritage	No extraction within or within 100 m of a known cultural heritage site, cemetery, or sacred area. Chance Find Procedure (Annex 11) applies during extraction.	[Compliant / Non-Compliant / N/A]
Legal authorisation	Extraction licence obtained from the relevant authority. Land use consent in place. Environmental permit obtained if required.	[Permit Ref: INSERT / Pending]

### 3.3 Borrow Area Register

The Contractor shall maintain a Borrow Area Register listing all approved borrow sources. The Register shall be updated as sites are opened, modified, or closed, and shall be included in the quarterly ESHS Monitoring Report to the Engineer.

Ref	Location / Name	Material Type	GPS Coords	Approved Volume (m <sup>3</sup> )	Permit Licence Ref /	Status
B-01	[INSERT]	[e.g. Granular fill]	[INSERT]	[INSERT]	[INSERT]	[Active / Closed]
B-02	[INSERT]	[e.g. Rock / armourstone]	[INSERT]	[INSERT]	[INSERT]	[Active / Closed]
B-03	[INSERT – commercial quarry]	[e.g. Crushed aggregate]	[INSERT]	[INSERT]	[INSERT]	[Active / Closed]

### 3.4 Borrow Area Operational Controls

#### 3.4.1 Pre-Extraction Requirements

A topsoil stripping programme shall be implemented before extraction commences at each borrow area. Topsoil shall be stripped to the full depth of the A-horizon and stored in dedicated, clearly demarcated stockpiles within or adjacent to the borrow area for later reinstatement. Topsoil stockpiles shall not exceed 2 metres in height and shall be seeded or otherwise stabilised if left for more than four weeks.

Perimeter drainage channels shall be established around each borrow area before extraction commences to intercept clean runoff and direct it away from the extraction zone, preventing clean water becoming contaminated with sediment.

The extraction limit shall be clearly marked with stakes or fencing prior to commencement. Extraction shall not proceed beyond the approved licence area boundary under any circumstances.

A site-specific extraction plan (layout, haul routes, drainage, drainage channels, staging sequence) shall be prepared by the Contractor's civil engineer and approved by the Engineer prior to commencement.

#### 3.4.2 Operational Controls During Extraction

Extraction shall proceed in planned stages from the face, maintaining safe working slopes as determined by the geotechnical assessment. Oversteepening of extraction faces is prohibited.

Working slopes in granular material shall not exceed 1:1.5 (Vertical:Horizontal) without engineer-approved rock face design. Slopes in rock may be steeper subject to structural geological assessment.

Dust suppression by water spraying shall be applied to unpaved haul roads and active extraction areas during dry and windy conditions. Dust suppression water shall not be drawn from protected water sources without authorisation.



Progressive rehabilitation of exhausted areas of each borrow pit shall be undertaken concurrent with active extraction, rather than leaving all rehabilitation until the end. Completed bays or benches shall be re-contoured, drained, and seeded as extraction advances.

Riverbed extraction is strictly prohibited unless specifically authorised in writing by the Engineer and relevant regulatory authority, and only in locations and quantities expressly permitted. In-channel extraction is recognised as having high potential for bank destabilisation and habitat destruction along the Shurobdaryo River.

## 4. Spoil and Surplus Material Management

### 4.1 Material Classification

All excavated material shall be assessed and classified by the Contractor's engineer as follows before disposal or reuse decisions are made:

Classification	Description	Disposition
Class A – Suitable Fill	Granular or cohesive material meeting specification for embankment fill. Uncontaminated. Structurally sound.	Prioritise direct reuse as structural fill on road embankments. Transport to fill areas for immediate use where possible.
Class B – Acceptable Stockpile	Material suitable for fill but not immediately required. Uncontaminated. May include rock or granular material.	Stockpile in approved areas for later use. Mark and record volumes. Protect with drainage and sediment controls.
Class C – Unsuitable Fill	Material failing fill specification due to plasticity, compressibility, or frost susceptibility. Uncontaminated.	Dispose at approved spoil disposal site. Must not be used as structural fill.
Class D – Contaminated / Hazardous	Material with suspected contamination (e.g. from fuel spills, oil staining, chemical contact). Requires assessment.	Do not mix with other materials. Quarantine on-site. Notify ESHS Manager and Engineer immediately. Dispose as hazardous waste in line with Waste Management Plan (Annex 5).
Topsoil	Organic topsoil stripped from borrow areas, road formation, and temporary work areas.	Stockpile separately for reinstatement. Never use as structural fill. Do not mix with Class C or D material.

### 4.2 Spoil Disposal Site Selection Criteria

All spoil disposal sites must be approved by the Engineer prior to use. No spoil shall be deposited at any location that has not been formally approved. The following exclusion criteria apply absolutely:

No disposal within the active channel, banks, or floodplain of the Shurobdaryo River or any permanent or seasonal tributary without written authorisation from the relevant water authority and the Engineer;

No disposal within 100 metres of any watercourse;

No disposal on slopes exceeding 25° or in areas of active mass movement or landslide risk;

No disposal on productive agricultural land without documented landowner consent, compensation, and an agreed reinstatement plan;

No disposal within or within 100 m of ecologically sensitive habitats, including riparian vegetation, wetlands, or areas identified under the Biodiversity Management Framework;

No disposal within 100 m of any known cultural heritage site, cemetery, or sacred area;

No disposal within 500 m of a settlement, school, or health facility without specific Engineer approval and community notification.

#### 4.3 Spoil Disposal Site Register

Ref	Location / Name	GPS Coords	Approved Capacity (m <sup>3</sup> )	Volume Received (m <sup>3</sup> )	Reinstatement Status
S-01	[INSERT]	[INSERT]	[INSERT]	[Ongoing record]	[Active / Completed / Closed]
S-02	[INSERT]	[INSERT]	[INSERT]	[Ongoing record]	[Active / Completed / Closed]
S-03	[INSERT]	[INSERT]	[INSERT]	[Ongoing record]	[Active / Completed / Closed]

##### 4.4.1 Engineered Placement

All spoil shall be placed and compacted in engineered layers not exceeding 500 mm compacted thickness. Random tipping of spoil is prohibited at all sites.

Spoil shall be placed in a manner that achieves a stable finished landform with slopes not exceeding 1:2 (V:H) unless a steeper slope is approved by the Contractor's geotechnical engineer with supporting stability calculations.

A drainage plan shall be prepared for each spoil site, showing perimeter diversion drains, surface drainage channels on the placed spoil mass, and any required sedimentation controls at the outlet. Drainage works shall be installed progressively as disposal operations proceed.

The toe of each spoil embankment shall be protected by an engineered toe bund, gabion wall, or riprap blanket where there is any risk of instability or erosion from surface runoff or seepage.

##### 4.4.2 Stability and Monitoring

A geotechnical stability assessment shall be carried out for each spoil disposal site with a total capacity exceeding 5,000 m<sup>3</sup>, signed off by a qualified geotechnical engineer, prior to disposal commencing. The assessment shall be updated if site conditions change or if placed volumes exceed original design assumptions.

The ESHS Manager or Environmental Inspector shall conduct a visual stability inspection of all active spoil sites after each significant rainfall event (>25 mm/24 hours) and following any seismic event. Evidence of settlement, tension cracking, seepage, or slope movement shall be reported to the Engineer immediately and may trigger suspension of disposal pending further assessment.

No spoil shall be placed on top of pre-existing landslide deposits or areas of historical mass movement.

## 5. Material Processing Facilities

### 5.1 Crusher and Screening Plants

Where the Contractor operates mobile or fixed crushing and screening facilities, the following controls shall apply:

Plant shall be sited on level, stable ground with a minimum 500 m separation from the nearest settlement or sensitive receptor, or as agreed with the Engineer based on a site-specific noise and dust assessment.

Plant shall not be located within 200 m of any watercourse. Stormwater drainage from plant areas shall be directed to a sedimentation basin before any discharge.

Dust suppression (water spraying or enclosure) shall be applied to crushing, screening, and conveyor transfer points during operation. Dust levels shall be monitored at the site boundary and at the nearest sensitive receptor.

Plant areas shall have an impermeable base layer in equipment maintenance and fuel storage zones, with secondary containment bunding and an oil-water separator on drainage outlets.

All required environmental and operating permits (including air emission permits) shall be obtained before plant commissioning. Permit copies shall be retained on-site.

### 5.2 Asphalt Plant

Asphalt plant siting shall be determined in consultation with the Engineer considering prevailing wind direction, proximity to settlements, access logistics, and bitumen delivery routes.

Bitumen storage tanks shall be bunded with an impermeable secondary containment capable of holding 110% of the largest tank. All bitumen handling areas shall be provided with fire suppression equipment and spill kits.

Hot mix asphalt operations shall comply with Tajik air emission standards. The Engineer's approval of the plant location, operating hours, and emission controls is required prior to commissioning.

Waste bitumen, used filter materials, and contaminated asphalt shall be managed as hazardous waste in accordance with the Waste Management Plan (Annex 5) and disposed of through a licensed contractor.

## 6. Material Transportation and Haul Routes

### 6.1 Haul Route Management

Given the narrow, mountainous corridor of the BSK Road and the proximity of settlements along the Shurobdaryo valley, material haulage represents a significant risk to community safety, road condition, and dust nuisance. The following controls apply to all haulage operations:

Prior to commencement of haulage, the Contractor shall identify and submit to the Engineer a Haul Route Plan showing all proposed routes for material transport between borrow areas, processing plants, work fronts, and spoil disposal sites.

Heavy vehicle movements through settlements shall be minimised. Where haul routes pass through or close to settlements, speed limits of 20 km/h shall apply and shall be enforced. Designated flagmen or traffic management personnel shall be stationed at pinch points.

All vehicle loads of fine materials (soil, aggregate, crusher dust) shall be covered with tarpaulins or sheets during road transport to prevent dust and spillage.

Wheel wash facilities shall be installed at all site exits from borrow pits, quarries, spoil sites, and processing plants. Vehicles shall not leave sites with mud or clay adhering to tyres and bodywork.

Vehicle loads shall not exceed the approved axle load for haul routes crossing existing bridges or culverts. The Contractor shall survey all existing structures on haul routes and confirm suitability before heavy haulage commences.

Haul route surfaces shall be inspected and maintained by the Contractor throughout construction. Potholes, ruts, and erosion features on haul routes shall be repaired promptly. Dust suppression shall be applied to unpaved haul routes on a frequency sufficient to prevent nuisance dust reaching settlements.

## 6.2 Material Stockpile Management

All material stockpiles (fill, aggregate, topsoil, crushed stone) shall be located within approved designated stockpile areas shown on the site layout plans. No unauthorised stockpiling shall occur within the road corridor, on agricultural land, or within 30 m of any watercourse.

Stockpile areas shall be clearly delineated and labelled by material type to prevent mixing.

Stockpiles shall be protected from wind-blown dust using water spraying during dry conditions and from erosion using perimeter silt fences or bunding on their downslope sides.

Topsoil stockpiles shall not be mixed with subsoil or rock and shall be seeded or covered with hessian if they are to remain in place for more than four weeks, to preserve soil biology and prevent erosion.

Maximum stockpile heights shall not exceed 3 m for granular material or 2 m for topsoil, unless supported by a stability assessment.

## 7. Rehabilitation and Closure of Borrow and Spoil Sites

### 7.1 Progressive Rehabilitation

Rehabilitation of all borrow areas and spoil disposal sites shall be undertaken progressively during construction, not deferred entirely to the post-construction period. The Contractor shall include a progressive rehabilitation schedule in the site-specific completion of this Plan, showing anticipated rehabilitation milestones for each site over the construction programme.

Progressive rehabilitation actions include:

- Re-contouring of exhausted borrow pit areas and disposal site areas to stable landforms;
- Re-spreading of stored topsoil to re-contoured areas at an adequate depth to support vegetation;
- Seeding with a locally appropriate seed mix to re-establish ground cover and prevent erosion;
- Installation of permanent drainage channels and outlet protection on rehabilitated areas;
- Removal of temporary perimeter drainage, silt fences, and construction debris from completed areas.

### 7.2 Final Closure Requirements

Prior to formal closure and sign-off of any borrow area or spoil disposal site, the following requirements shall be verified and documented:

- All extraction or disposal operations have ceased within the approved boundary;
- Extraction faces and spoil slopes have been re-graded to stable gradients (not steeper than 1:2 V:H for spoil or as per approved design for borrow areas);
- Drainage has been installed and is functioning effectively across the entire rehabilitated area;

- Topsoil has been re-spread and seeded across all disturbed areas. Seed establishment has been confirmed by inspection;
- All temporary structures, plant, equipment, and construction waste have been removed from the site;
- All perimeter haul roads and access tracks specific to the site have been closed, ripped to break compaction, and seeded;
- The site has been inspected and approved by both the Contractor's ESHS Manager and the Engineer;
- Final photographs and a written closure report have been submitted to PIURR;
- The site has been handed back to the landowner or relevant authority with documented confirmation.

### *7.3 Post-Closure Monitoring*

Following formal closure, each borrow area and spoil disposal site shall be subject to a minimum of two post-closure inspections: one at six months and one at twelve months after closure, or as stipulated by permit conditions.

Post-closure inspections shall assess vegetation establishment, drainage performance, slope stability, and any evidence of erosion or instability. Findings shall be documented and reported to the Engineer.

Any remedial actions identified during post-closure inspections shall be completed by the Contractor within the defects liability period.

## **8. Record-Keeping, Inspections, and Reporting**

### *8.1 Required Records*

- Borrow Area Register (maintained and updated continuously, see Section 3.3);
- Spoil Disposal Site Register (maintained and updated continuously, see Section 4.3);
- Materials Balance Plan and periodic updates showing actual versus planned volumes;
- Extraction licence and land use permit copies for all borrow areas;
- Spoil site approval documents and any regulatory correspondence;
- Topsoil stripping and stockpile management records (location, volumes, condition);
- Rehabilitation progress records for each site (photographic and written, updated monthly);
- Borrow and spoil site inspection records (weekly during active operation);
- Haul route inspection and maintenance records;
- Material classification records for all excavated material.

### *8.2 Inspection Schedule*

Inspection Type	Frequency	Responsible Party
-----------------	-----------	-------------------

Active borrow area visual inspection	Weekly during active extraction	Environmental Inspector
Active spoil site visual inspection	Weekly during active disposal	Environmental Inspector
Post-rainfall inspection of all active borrow and spoil sites	Within 24 hours of >25 mm/24 hr rainfall	Environmental Inspector / Site Supervisor
Stockpile and haul route condition check	Weekly	Site Supervisor
Formal monthly ESHS Manager review of all sites	Monthly	ESHS Manager
Pre-closure inspection by Engineer	Prior to each site closure	Engineer , ESHS Manager
Post-closure inspection	6 months and 12 months post-closure	ESHS Manager, notified to Engineer

### 8.3 Reporting

Borrow and spoil site status, volumes extracted and disposed, and rehabilitation progress shall be reported to the Engineer quarterly as part of the Contractor's ESHS Monitoring Report.

Any exceedance of approved extraction volumes, use of an unauthorised disposal location, or significant slope stability event shall be reported to the Engineer within 24 hours.

Final closure reports for each site shall be submitted to the Engineer and PIURR within 30 days of site closure.

## 9. Worker Awareness and Training

All personnel involved in borrow area operations, spoil disposal, earthworks, and material haulage shall receive induction training on the requirements of this Plan before commencing relevant work. Training shall cover:

- The approved borrow area and spoil disposal locations — the prohibition on using unauthorised sites;
- The ban on riverbed extraction and spoil disposal in river corridors or floodplains;
- The importance of topsoil stripping and separate storage for later reinstatement;
- Correct wheel wash procedures before leaving site;
- Load covering requirements for haulage vehicles;
- The Chance Find Procedure (Annex 11) — actions required if archaeological or cultural material is encountered during excavation;

- How to identify and report slope instability at borrow pits or spoil sites;
- The requirement for progressive rehabilitation — why it is required and who is responsible.

Training shall be delivered in Tajik and/or Russian as required. Attendance records shall be maintained by the ESHS Manager.

## 10. Plan Approval and Amendment

This Framework Plan shall be completed with site-specific details — including site locations, permit references, site layout drawings, extraction or disposal capacities, and rehabilitation schedules — by the Contractor's ESHS Manager and submitted to the Engineer for approval prior to commencement of any borrow extraction, spoil disposal, or material stockpiling activities.

The Plan shall be reviewed and updated if: any new borrow area or spoil disposal site is proposed; approved volumes at any site are revised; a significant change in construction methodology occurs; or a compliance incident at a borrow or spoil site requires corrective action. Any revisions shall be approved by the Engineer and notified to PIURR

Prepared By (Contractor ESHS Manager)	Reviewed By (Engineer)	Approved By (PIURR)
Name:	Name:	Name:
Title:	Title:	Title:
Signature:	Signature:	Signature:
Date:	Date:	Date:

## Annex 7: Water Quality & Sediment Control Plan (Framework)

### Purpose and Scope

This Water Quality and Sediment Control Plan (WQSCP) establishes the mandatory requirements, procedures, and controls that the Contractor shall implement to protect the surface water quality and aquatic environment of the Shurobdaryo River and its tributaries during construction of the Baljuvon – Sari Khosor (BSK) Road in Baljuvon District, Khatlon Region, Republic of Tajikistan.

The Shurobdaryo River corridor is the dominant hydrological feature of the Project alignment. The road runs adjacent to or within the active floodplain for extended sections, crosses multiple tributary streams and drainage channels, and requires the rehabilitation or construction of bridges, culverts, and riverbank protection works. Construction activities therefore present significant risks of sedimentation, pollution, and hydrological disruption to an already sensitive mountain river system.

This Plan applies to all construction activities within the BSK Road Project area of influence, including:

- All earthworks, excavation, grading, and embankment construction activities;
- Bridge construction, rehabilitation, and riparian works;
- Culvert installation and drainage structure works;
- Borrow area and quarry operations within or adjacent to watercourses;
- Construction camps, workshops, fuel storage, and equipment maintenance areas;
- Spoil disposal sites, material stockpiles, and aggregate processing areas;
- Access roads and haul routes crossing or adjacent to watercourses;
- Slope stabilisation and erosion control works;
- Concrete batching, mixing, and washing activities.

### 1. Legal and Policy Framework

This Plan has been developed in accordance with the following legal and policy requirements:

Instrument	Relevance
Water Code of the Republic of Tajikistan	Regulates water use, abstraction permits, and discharge restrictions. Article 74.1 requires a special water use permit for any wastewater discharge.
Law on Environmental Protection (Tajikistan)	Sets general obligations to prevent pollution of natural water bodies.
Mineral Resources Law (Tajikistan)	Regulates groundwater abstraction. Tajikgeology permission required for borehole or special water use.
EBRD Environmental and Social Policy (2024)	ESR3 (Pollution Prevention), ESR4 (Community Health and Safety), ESR6 (Biodiversity and Natural Resources) apply.



EU Water Framework Directive (reference standard)	Applied as good international practice for water quality management.
Project CESMP (Parent Document)	This Plan forms Annex 7 to the Contractor's CESMP and must be read in conjunction with all other CESMP provisions.

## 2. Roles and Responsibilities

Clear assignment of responsibilities is essential for effective implementation of this Plan. The following personnel shall have defined roles throughout the construction phase:

Role	Water Quality and Sediment Control Responsibilities
Contractor ESHS Manager	Overall accountability for implementation of this WQSCP. Approves site-specific procedures, oversees monitoring, and reports to Engineer. Shall be present on-site or contactable at all times during active works near watercourses.
Site Supervisors / Foremen	Responsible for day-to-day enforcement of water protection controls at their respective work fronts. Conduct daily visual inspections of sediment barriers and drainage. Stop work in the event of a spill or control failure.
Environmental Inspector (Contractor)	Conducts routine and event-triggered environmental inspections. Collects water quality monitoring samples or oversees collection. Maintains inspection and monitoring records. Reports non-compliances to ESHS Manager.
Equipment/Fuel Manager	Responsible for ensuring all refuelling, maintenance, and fuel storage activities comply with bunding and spill prevention requirements. Maintains fuel log and ensures spill kits are stocked.
Engineer (Supervision Consultant)	Reviews and approves the site-specific completed WQSCP prior to construction. Audits implementation. Approves any deviation from Plan controls. Escalates non-compliance to PIURR.
PIURR	Project Implementation Unit of the Road Reconstruction Department. Receives monitoring reports and non-compliance notifications. Liaisons with national regulatory authorities regarding water use permits.

## 3. Water Quality Risks and Key Protection Measures

### 3.1 Identified Water Quality Risks

The following activities present the primary risks to surface water quality along the BSK Road corridor:

Construction Activity	Water Quality Risk	Key Control Measures
-----------------------	--------------------	----------------------

Earthworks, cutting, and grading	Elevated turbidity and suspended sediment loading in Shurobdaryo River and tributaries during rainfall events	Sediment barriers, silt fences, check dams, staged earthworks, progressive revegetation
Bridge and culvert construction	Direct physical disturbance to active channel; turbidity; temporary flow diversion	In-stream work exclusion periods, cofferdams, turbidity curtains, controlled dewatering
Fuel and chemical storage and handling	Hydrocarbon and chemical contamination of surface and groundwater from spills	Bunded storage $\geq 200$ m from watercourses, secondary containment, spill kits, no maintenance within 50 m of rivers
Concrete batching and washing	Alkaline wash water causing pH exceedance; cement slurry contamination	Concrete washout pits, settlement and neutralisation, no direct discharge to waterways
Construction camp wastewater and sewage	Nutrient and bacterial contamination of surface or groundwater	Septic or portable sanitation systems, no direct discharge to watercourses, regular emptying
Borrow pit and quarry operations	Fine sediment and silt runoff to streams; acidic or alkaline leachate	Perimeter drainage, sedimentation ponds, avoid riverbed extraction, controlled drainage
Access road construction and vehicle movement	Channelled runoff carrying sediment and hydrocarbons to watercourses	Wheel wash, road drainage controls, temporary crossings with appropriate culverts

### 3.2 Sediment Control Measures – General Requirements

The Contractor shall implement the following sediment control measures across all work fronts where there is a risk of sediment runoff to watercourses:

#### 3.2.1 Perimeter and Linear Controls

- Silt fences shall be installed at the downslope perimeter of all active earthworks areas within 100 metres of any watercourse. Fences shall be trenched into the ground by a minimum of 200 mm and maintained in good condition throughout the works.
- Straw wattles or rock check dams shall be installed in drainage channels and swales where runoff velocities may cause erosion or sediment transport to receiving waters.
- Temporary earth bunds or diversion channels shall redirect clean upslope runoff around active work areas, preventing clean water from becoming contaminated with excavated material.
- All stockpiles of excavated material, topsoil, or aggregate shall be located at least 30 metres from any watercourse and protected with silt barriers, covers, or haybales on their downslope sides.

### 3.2.2 Staged Earthworks and Progressive Stabilisation

- The extent of simultaneously disturbed soil area shall be minimised. No more area shall be cleared or stripped than can be actively worked and stabilised within the same construction season.
- Completed earthwork sections shall be progressively stabilised through seeding, hydroseeding, stone pitching, or other approved methods as works proceed, rather than waiting until project completion.
- Prior to any forecast heavy rainfall or seasonal high-flow periods (spring snowmelt, April–June), all exposed slopes, embankments, and stockpiles shall be covered, seeded, or otherwise protected.
- Topsoil shall be stripped separately and stockpiled in clearly demarcated areas for later reinstatement. Topsoil stockpiles shall not exceed 2 metres in height and shall be protected from erosion.

### 3.2.3 Sedimentation Ponds

- Where runoff from large disturbed areas drains to a single point, the Contractor shall install a temporary sedimentation pond prior to any discharge point, sized to allow adequate particle settlement.
- Sedimentation ponds shall be regularly de-sludged and inspected. Accumulated sediment shall be disposed of at an approved spoil site.
- Discharge from sedimentation ponds to natural watercourses is only permitted once visual turbidity indicates acceptable clarity. Where discharge standards are required by permit, monitoring shall be conducted prior to discharge.

### 3.3 In-Stream and Riparian Works

Works involving direct entry into watercourses or within the active riparian zone of the Shurobdaryo River or its tributaries require specific controls, as follows:

- In-stream works (bridge piers, culvert installation, bank protection) shall be planned to minimise the duration of active channel disturbance. Where practicable, works shall be scheduled during low-flow periods (late summer to early autumn, July–October).
- In-stream works shall not be undertaken during the fish spawning and egg incubation restriction period (1 November - 28 February). See Annex 8, Section 6.2 for full requirements.
- Cofferdams or temporary berms shall be used to isolate active work zones within the channel from flowing water. Dewatering from cofferdams shall be pumped to a settlement area and shall not be discharged directly to the river.
- Turbidity curtains shall be deployed downstream of in-stream works wherever practicable to contain suspended sediment.
- No excavated material, spoil, aggregate, or waste shall be stockpiled within the active channel or on gravel bars forming part of the active floodplain.
- Riparian vegetation within the corridor of works shall not be cleared beyond the minimum required footprint. A minimum 10-metre undisturbed buffer shall be maintained along the banks of the Shurobdaryo River and major tributaries wherever the road alignment permits.

- Bank protection works (gabions, riprap, embankment reinforcement) shall be designed by a qualified engineer and shall not constrict the active channel cross-section below design flood capacity.

### 3.4 Hydrocarbon and Chemical Pollution Prevention

- All fuel and chemical storage facilities (tanks, drums, lubricant stores) shall be located at a minimum of 200 metres from any watercourse. Where site constraints require a lesser setback, the Engineer's written approval and enhanced secondary containment shall be required.
- All fuel storage areas shall be enclosed in a bunded secondary containment structure with an impermeable lining (concrete or HDPE) capable of containing 110% of the largest vessel stored.
- Vehicle and equipment refuelling shall only take place at designated bunded refuelling points. Refuelling within 50 metres of any watercourse is strictly prohibited.
- Equipment maintenance and oil changes shall only be conducted in designated, bunded workshop areas. Used oil and lubricants shall be collected and disposed of through licensed waste contractors.
- Spill kits (absorbent materials, containment booms, PPE) shall be maintained at all refuelling points, workshops, chemical stores, and concrete batching areas. Kits shall be restocked immediately after use.
- Any spill reaching or threatening a watercourse shall be reported immediately to the ESHS Manager, who shall activate the emergency spill response procedure (Section 5) and notify the Engineer within one hour.

### 3.5 Concrete and Cement Works

- Concrete trucks and equipment shall be washed out only at designated concrete washout areas with impermeable lining and settlement chambers. Concrete washwater is highly alkaline and is classified as polluting discharge.
- No concrete washwater shall be discharged to any watercourse, drain, or soil within 50 metres of a watercourse.
- Residual concrete and cement slurry shall be collected and disposed of as construction waste at an approved disposal facility.
- Concrete batching plants shall be located at minimum 200 metres from watercourses. Drainage from batching areas shall pass through a settlement pond before any discharge.

## 4. Water Abstraction and Resource Management

The Contractor's use of water for construction activities (concrete mixing, dust suppression, equipment washing, camp water supply) must be managed to avoid conflict with community water users and to comply with Tajik water law.

- Prior to commencement of works, the Contractor shall conduct an audit of all water sources (rivers, streams, springs, irrigation channels) along the route and document community dependencies on those sources.

- The Contractor shall calculate total water demand for construction activities and submit a Water Demand Schedule to the Engineer. The Schedule shall quantify water required for: concrete production, dust suppression, equipment washing, potable water supply, and camp facilities.
- Any abstraction of water from the Shurobdaryo River, its tributaries, or from groundwater boreholes shall require a Water Use / Water Protection Permit from the relevant water authority or the Committee for Environmental Protection (CEP) prior to abstraction commencing.
- Community water supplies (springs, irrigation intakes, domestic water points) shall not be disrupted by construction activities. Where temporary disruption is unavoidable, the Contractor shall provide an alternative supply of equivalent quality and quantity within 24 hours of disruption commencing.
- Water meters shall be installed at all abstraction points and consumption recorded monthly. Abstraction records shall be reported to the Engineer quarterly.
- The Contractor shall implement water efficiency measures to minimise total abstraction, including: reuse of treated grey water for dust suppression where permissible, use of water-efficient equipment, and avoidance of unnecessary water use.
- Before any embankment raising, bank protection, or river training works commence in each section, the Contractor shall survey and record all points at which landholders currently access the Shurobdaryo or any tributary directly for irrigation abstraction. The survey shall be GPS-referenced and shall identify the landholder, the irrigated area, and the season of use. Where active irrigation access points are confirmed within the construction footprint, the Contractor shall incorporate a passage through the embankment or bank protection structure — such as a culvert, pipe sleeve, or maintained access gap — to preserve equivalent post-construction river access. Where this is not technically feasible, the matter shall be referred to PIURR for resolution through the RP framework before works at that location commence.

## 5. Emergency Spill Response Procedure

### 5.1 Spill Prevention

All reasonable measures shall be taken to prevent spills. Prevention is the primary defence. Daily inspection of bunds, fuel connections, and chemical stores shall be conducted and recorded.

### 5.2 Emergency Response Steps

In the event of a spill of any hazardous material (fuel, oil, chemicals, concrete washwater, sewage):

Step	Action
1	STOP the source of the spill immediately if safe to do so. Alert the Site Supervisor.
2	CONTAIN the spill using absorbent materials from the nearest spill kit. Place booms or earthen bunds to prevent movement toward drainage channels or watercourses.
3	NOTIFY the ESHS Manager immediately. The ESHS Manager shall notify the Engineer within 1 hour and PIURR within 24 hours.

4	ASSESS whether the spill has reached, or is at risk of reaching, a watercourse. If so, notify the CEP and relevant local authorities as required by national law.
5	RECOVER spilled material using appropriate equipment. Contaminated soil and absorbents shall be removed and disposed of as hazardous waste.
6	REINSTATE the affected area once contaminated material is removed. Conduct post-incident water quality monitoring at the nearest downstream monitoring point.
7	DOCUMENT the incident in the Spill Register (date, location, volume, material, cause, response actions, outcome). Submit written incident report to Engineer within 48 hours.

Emergency contact numbers shall be posted at all work fronts, camp notice boards, fuel storage areas, and within vehicle cabs. [Contractor to INSERT site-specific emergency contact list prior to construction commencement.]

## 6. Water Quality Monitoring Programme

### 6.1 Monitoring Objectives

The monitoring programme shall detect any deterioration in water quality associated with construction activities and provide early warning of control failures. Monitoring data shall be used to verify compliance with applicable standards and to inform adaptive management decisions.

### 6.2 Monitoring Parameters

The following parameters shall be monitored at all surface water monitoring stations during construction:

Parameter	Rationale	Applicable Standard
pH	Concrete and cement operations can cause alkaline pollution	6.5 – 8.5 (national MAC / EU WFD reference)
Turbidity / Total Suspended Solids (TSS)	Primary indicator of sediment pollution from earthworks	[INSERT applicable MAC or reference standard]
Dissolved Oxygen (DO)	Indicator of organic pollution and aquatic health	≥6 mg/L (reference good status)
Biochemical Oxygen Demand (BOD)	Indicator of organic waste / sewage contamination	[INSERT national MAC]
Petroleum Hydrocarbons (TPH)	Indicator of fuel/oil spill contamination	[INSERT national MAC]

Nitrate and Phosphate	Indicator of sewage or fertiliser contamination	[INSERT national MAC]
Faecal Coliforms	Indicator of sewage contamination from camp facilities	[INSERT national drinking water standard]
Visual observation (colour, odour, sheen)	First indicator of spills or contamination events	No visible sheen, unusual colour or odour

### 6.3 Monitoring Station Locations

Monitoring stations shall be established at a minimum of the following locations. The Contractor shall populate the precise GPS coordinates and chainage references prior to construction commencement:

Ref	Location Description	Waterbody	GPS Coordinates	Chainage (km)
W-01	Upstream reference station – Shurobdaryo River, upstream of all construction activity	Shurobdaryo River	[INSERT]	Upstream
W-02	Downstream of major bridge works – Shurobdaryo River	Shurobdaryo River	[INSERT]	[INSERT]
W-03	Downstream of primary borrow area / construction camp	[INSERT tributary]	[INSERT]	[INSERT]
W-04	At community water abstraction point / irrigation intake (downstream)	[INSERT]	[INSERT]	[INSERT]
W-05	Final downstream monitoring point – Shurobdaryo River	Shurobdaryo River	[INSERT]	Downstream
W-06,	Additional stations at each major tributary crossing as works progress – locations to be finalised	[INSERT]	[INSERT]	[INSERT]

### 6.4 Monitoring Frequency

Baseline monitoring shall be conducted prior to construction commencement to establish pre-construction reference conditions at all monitoring stations. During construction the following schedule shall apply:

- Routine monitoring: Quarterly (minimum). The Contractor is encouraged to increase frequency to monthly during active high-risk works.
- High-risk period monitoring: Monthly during spring snowmelt season (April–June) when peak flows and sediment loads are highest.
- Event-triggered monitoring: Immediately following any major rainfall event (>25 mm/24 hours), visible turbidity increase, or spill incident at or near a watercourse.
- Post-spill monitoring: Water quality sampling at the nearest downstream monitoring station within 4 hours of any reported spill reaching or threatening a watercourse, and at 24-hour intervals thereafter until parameters return to baseline.

### *6.5 Monitoring Methodology and Reporting*

- Water quality samples shall be collected using appropriate field sampling equipment and procedures. Chain of custody documentation shall be maintained for all samples submitted to an accredited laboratory.
- Field parameters (pH, turbidity, DO) shall be measured in-situ using calibrated field meters. Calibration records shall be maintained.
- Monitoring results shall be reported to the Engineer quarterly as part of the Contractor's ESHS Monitoring Report, including a comparison against applicable standards and against baseline pre-construction values.
- Any exceedance of applicable water quality standards shall be reported to the Engineer within 24 hours of receiving laboratory results, accompanied by a proposed corrective action plan.
- All monitoring data, field sheets, laboratory certificates, and chain of custody records shall be retained by the Contractor and made available for audit by the Engineer, PIURR, or EBRD representatives upon request.

## **7. Construction Camp and Wastewater Management**

Construction camps and associated facilities represent a potential source of wastewater, sewage, and grey water contamination if not managed properly. The following requirements apply to all camp and facility wastewater:

- All wastewater generated by construction camps (grey water from cooking, washing, cleaning) shall be collected and managed through an appropriate wastewater treatment system approved by the Engineer. No untreated grey water shall be discharged to the ground within 50 metres of a watercourse.
- Sanitary facilities (toilets, showers) shall be connected to a properly designed septic system, sealed portable sanitation units, or a sewage collection and removal arrangement with a licensed contractor. Open defecation near watercourses is strictly prohibited.
- All sanitary wastewater shall undergo treatment to meet applicable national Maximum Allowable Concentrations (MAC) before any discharge is permitted. A Discharge Permit shall be obtained from the relevant authority prior to any discharge to receiving waters or soil.
- Generator and vehicle washing areas within camps shall be provided with impermeable paved surfaces, oil-water separators, and secondary containment. Separator performance shall be inspected daily and maintained in working order.



- Camps shall include clearly marked and separate waste segregation areas for general waste, hazardous waste (used oil, chemicals), and recyclables. No waste shall be disposed of near watercourses or in drainage channels.

## 8. Record-Keeping and Compliance Monitoring

### *8.1 Required Records*

The Contractor shall maintain the following records as a minimum:

- Water quality monitoring field sheets and laboratory reports;
- Spill Register (date, location, material, volume, cause, response, outcome for all spill incidents);
- Water abstraction log (daily readings from abstraction meters by location);
- Discharge permit copies and permit conditions tracking;
- Sediment control inspection records (daily visual inspection of silt fences, check dams, and barriers during active earthworks);
- Non-compliance register and corrective action tracking;
- Training records for workers on water quality awareness and spill response.

### *8.2 Internal Inspections*

- The Contractor's Environmental Inspector shall conduct weekly inspections of all active earthwork areas, in-stream work zones, fuel storage areas, and camp facilities to verify compliance with this Plan.
- A formal monthly inspection shall be conducted by the ESHS Manager and documented. The monthly inspection report shall be included in the quarterly ESHS Monitoring Report submitted to the Engineer.
- Following any rainfall event exceeding 25 mm/24 hours, a specific post-event inspection of all sediment control measures shall be conducted within 24 hours and any damaged or blocked controls reinstated immediately.

### *8.3 Non-Compliance Response*

In the event of any non-compliance with this Plan:

- The ESHS Manager shall investigate the cause and document findings in the Non-Compliance Register;
- A corrective action plan shall be developed within 48 hours for minor non-compliances, and within 24 hours for significant non-compliances involving risk to watercourses;
- Corrective actions shall be implemented, verified, and recorded. Close-out evidence shall be maintained;
- Repeat non-compliances shall be reported to the Engineer with root cause analysis.

## 9. Worker Awareness and Training

All construction workers whose activities may affect water quality shall receive induction training on the requirements of this Plan before commencing work. Training shall cover:

- The importance of protecting the Shurobdaryo River and its tributaries for aquatic ecology and downstream community water use;
- The requirements for sediment control – how to install, maintain, and inspect silt fences and check dams;
- Correct refuelling and fuel storage procedures;
- How to respond to a spill – immediate steps and who to contact;
- Prohibition on washing equipment, vehicles, or concrete trucks in or adjacent to watercourses;
- The ban on disposing of any waste, soil, or materials in watercourses or riparian areas.

Training shall be delivered in Tajik and/or Russian as required. Attendance records shall be maintained by the ESHS Manager.

## 10. Plan Approval and Amendment

This Framework Plan shall be completed with site-specific details by the Contractor's ESHS Manager and submitted to the Engineer for approval prior to the commencement of any construction activity involving earthworks, in-stream works, or fuel storage.

The Plan shall be reviewed and updated if there is any significant change to the scope of works, if a water quality incident occurs, or if monitoring data indicates that existing controls are not effective. Any revisions shall be approved by the Engineer and notified to PIURR.

Prepared By	Reviewed By	Approved By
Name: Title: Signature: Date:	Name: Title: Signature: Date:	Name: Title: Signature: Date:

## Annex 8: Biodiversity Management Plan Framework

---

### 1. Purpose and Scope

#### 1.1 Purpose and Legal Basis

This Biodiversity Management Plan (BMP) sets out the mandatory measures that the Contractor shall implement to avoid, minimise, mitigate, and compensate for impacts on biodiversity, habitats, and species during construction of the Baljuvon – Sari Khosor (BSK) Road Project. It translates the requirements of the Environmental and Social Impact Assessment (ESIA) and the EBRD Environmental and Social Requirement 6 (ESR6) into practical, site-level operational measures.

The Plan is focused entirely on contractor obligations and operational procedures. Biodiversity baseline description, the Critical Habitat Assessment, and the no net loss assessment for confirmed PBFs are the responsibility of the ESIA team and PIURR; this Plan responds to those findings and implements the measures they require. Where pre-construction surveys have not yet confirmed specific PBF locations, the Contractor shall apply the precautionary measures set out here until more specific requirements are established.

#### 1.2 Status and Update Obligations

This Plan is a Framework document issued prior to completion of the full ESIA biodiversity survey programme. It must be updated — and submitted to the Engineer and PIURR for written approval — at each of the following trigger points:

1. On receipt of the final ESIA biodiversity survey results: the Sensitive Feature Register (Section 4) and species-specific measures shall be updated with confirmed feature locations, buffer distances, and management protocols;
2. On any significant change to the project footprint, works programme, or construction method that could affect PBFs identified in the Register;
3. At the direction of the Engineer or PIURR.

**IMPORTANT: No vegetation clearance, ground disturbance, or earthworks shall commence in any section of the corridor without a current, approved version of this Plan in force and a valid Pre-Clearance Certificate issued by the Ecologist for that specific section (see Section 5.1).**

#### 1.3 Mitigation Hierarchy

All biodiversity management under this Plan applies the mitigation hierarchy in strict sequence. The Contractor shall not proceed to a lower level of the hierarchy without demonstrating in writing — and with the agreement of the Ecologist — that the higher level has been genuinely considered and is not achievable:

Step	Action	Application to BSK Road Project
1	AVOID	Do not disturb sensitive habitats where any alternative exists. Riparian buffer zones are no-go areas for non-essential works. Camp, borrow area,

		and plant locations are sited away from riparian and sensitive habitats. Works scheduling avoids ecologically critical seasons.
2	MINIMISE	Limit clearing to the approved footprint only. Apply dust, noise, and light controls to reduce indirect impacts on adjacent habitats. Use erosion and silt controls at all watercourse crossings. Confine construction traffic to designated access routes.
3	REHABILITATE	Reinstate all temporarily disturbed areas using locally appropriate native seed mixes. Restore riparian margins with riparian-adapted species. Rehabilitate borrow areas to stable, vegetated landform. Translocate Red Book plants before clearance where confirmed within the footprint.
4	OFFSET	Where residual impacts on confirmed Priority Biodiversity Features cannot be addressed through avoidance, minimisation, or restoration, biodiversity offsets to achieve No Net Loss of those features are required under ESR6. No Critical Habitat is present on this project, so a formal net gain requirement does not apply; the obligation is No Net Loss of confirmed PBFs. The offset programme will be defined by PIURR and the ESIA team following quantification of residual impacts. The Contractor implements the programme as directed — see Section 10.

#### 1.4 Key Definitions

Term	Definition as Used in this Plan
Critical Habitat	Habitat meeting one or more of the five criteria defined under EBRD ESR6: (1) presence of Critically Endangered or Endangered species; (2) restricted-range or endemic species; (3) migratory or congregatory species; (4) highly threatened or unique ecosystems; (5) areas associated with key evolutionary processes. The Critical Habitat Assessment (CHA, Rev01, April 2026) has determined that no Critical Habitat is present within the BSK project area of influence under any of the five ESR6 criteria. Priority Biodiversity Features are confirmed present. The formal CHA is the responsibility of the ESIA team, not the Contractor.
Priority Biodiversity Feature (PBF)	A species, habitat, or ecological process of particular conservation significance that is at risk from project activities. PBFs are identified through ESIA surveys and listed in the Sensitive Feature Register (Section 4) of this Plan.
IUCN Red List	The IUCN Red List of Threatened Species, established in 1964, is the world's most comprehensive inventory of the global conservation status of biological species. Often called the "Barometer of Life," it tracks the health of the world's biodiversity and informs conservation action and policy.
Red Book species	Species listed in the Red Book of the Republic of Tajikistan — the national list of rare and threatened species afforded legal protection. Unauthorised disturbance, collection, or damage to Red Book-listed species is prohibited under national law.

IBAT (Integrated Biodiversity Assessment Tool)	The Integrated Biodiversity Assessment Tool (IBAT) is a web-based map and reporting platform that provides decision-makers with integrated access to three of the world's most authoritative global biodiversity datasets. It is maintained by the IBAT Alliance—a partnership between BirdLife International, Conservation International, IUCN, and UNEP-WCMC. It has been designed to help organizations identify biodiversity risks and opportunities at the earliest stages of project planning.
Riparian buffer	A strip of land maintained in a vegetated, undisturbed state along each bank of the Shurobdaryo River and its named tributaries. Default buffer width is 15 m (main river) and 10 m (tributaries) measured from the bankfull channel edge, unless modified by specific ESIA survey findings.
Sensitive Feature Register	The location-specific table maintained by the Ecologist (Section 4 and Appendix A) that records all identified Priority Biodiversity Features (PBF's), chainage references, buffer distances, and applicable management measures.
Pre-Clearance Certificate	A written authorisation issued by the Contractor's Ecologist confirming that a specific section of the works corridor has been inspected and cleared, subject to any stated conditions. Required before clearance machinery enters any section.
No-go zone	An area within or adjacent to the project footprint that is off-limits to all construction plant, vehicles, workers, and materials. No-go zones are physically demarcated by the Ecologist with barrier tape and signage and are enforced by Site Supervisors.
Tugai	Tugai are rare and highly threatened at the Central Asian scale. Classic lowland tugai is considered unlikely within the project corridor at elevations of 1,200–2,000 m. Fragmented riparian scrub and bankside poplar-willow communities are present along the corridor and are protected through the riparian buffer and bankside clearance minimisation measures in Sections 5 and 7.

## 2. Regulatory and Institutional Framework

### 2.1 National Legislation

Environmental protection in the Republic of Tajikistan is governed by a framework of primary laws, sectoral legislation, and technical regulations. The following instruments are directly applicable to biodiversity management on the BSK Road Project. The Contractor shall comply with all of these requirements, and where national requirements are less stringent than EBRD ESR6, the higher standard applies.

Legislation	Relevance to Contractor Biodiversity Obligations
Law on Environmental Protection (2011)	Framework environmental law. Establishes the general duty of care for all persons and organisations to protect the natural environment, and the obligation to compensate for environmental damage caused. Applies to all construction activities on the Project.

Law on Specially Protected Natural Areas (1994, as amended)	Governs Tajikistan's system of protected areas, including the Sari Khosor Nature Park located approximately 5 km from the BSK corridor at its closest point. Prohibits activities that damage protected area values or integrity. Construction within or in the buffer zone of a protected area requires specific authorisation.
Law on Wildlife (2004, as amended)	Prohibits the unauthorised hunting, capture, injury, killing, or disturbance of wild animals, including all vertebrates and many invertebrates. Applies to all fauna along the project corridor regardless of conservation status. Violation is a criminal or administrative offence under Tajik law.
Law on Flora (1997, as amended)	Prohibits the unauthorised collection, uprooting, damage, or destruction of wild plants. Applies with particular force to species listed in the Red Book. Translocation of Red Book plant species requires prior authorisation from the Committee for Environmental Protection.
Red Book of the Republic of Tajikistan	Lists rare and threatened plant and animal species requiring legal protection under national law. At least 20 plant species from the Red Book are recorded in the Sari Khosor tract within the project area of influence. The distribution of these species relative to the project footprint is being confirmed through ESIA botanical surveys.
Water Code of Tajikistan	Regulates use, protection, and management of water resources. Establishes water protection zones along rivers and watercourses, within which land use is restricted to protect water quality and aquatic ecology. The Shurobdaryo River and its tributaries are subject to water protection zone requirements.
Land Code of Tajikistan	Governs land use, including the obligation to restore disturbed land to a condition suitable for its intended use. Temporary land acquisition for construction must be restored on completion.

## 2.2 EBRD Environmental and Social Requirement 6 (ESR6)

The Project is financed by the EBRD and is required to comply with the EBRD Environmental and Social Policy (2024). ESR6 — Biodiversity Conservation and Sustainable Management of Living Natural Resources — is the primary lender standard governing the Contractor's biodiversity obligations. The key ESR6 requirements that this Plan implements are:

ESR6 Requirement	How This Plan Responds
Mitigation hierarchy — all biodiversity impacts	Section 1.3 establishes the four-step hierarchy (avoid - minimise – rehabilitate – offset) as the governing principle for all works. Every section of this Plan applies the hierarchy in sequence.
Protection of natural habitats — avoidance and minimisation of	Section 5 (Pre-Construction Measures) establishes riparian buffer zones, no-go areas, and pre-clearance inspection requirements.

significant conversion or degradation	Section 7 sets controls for vegetation clearance, aquatic habitat protection, and construction disturbance.
Critical Habitat — no measurable adverse impact on confirmed PBFs; No Net Loss required under ESR6. The CHA (Rev01, April 2026) confirms no Critical Habitat is present within the project area of influence. Priority Biodiversity Features are confirmed present. This Plan applies PBF-level protection across all works (Sections 5–9). Section 10 sets out the Contractor's No Net Loss obligations for confirmed PBFs.	Critical Habitat — no measurable adverse impact on confirmed PBFs; no net loss required under ESR6. The CHA (Rev01, April 2026) confirms no Critical Habitat is present within the project area of influence. Priority Biodiversity Features are confirmed present. This Plan applies PBF-level protection across all works (Sections 5–9). Section 10 sets out the Contractor's no net loss obligations for confirmed PBFs.
Priority Biodiversity Features — specific management	Section 4 (Sensitive Feature Register) records all identified PBFs with location-specific management measures. Species-specific protocols in Section 7 address the principal PBFs identified through ESIA screening: IUCN Red List, Red Book plants, migratory fishes and IBAT-identified threatened species.
Supply chain — where living natural resources are used	The Project does not involve harvesting of living natural resources as a primary activity. Borrow area extraction and vegetation clearance are addressed under Sections 5 and 8.
Biodiversity monitoring and reporting	Section 11 (Monitoring and Reporting) establishes a monitoring programme with defined indicators, frequencies, and reporting obligations to the Engineer and PIURR.

#### CHA DETERMINATION — NO CRITICAL HABITAT PRESENT:

The Critical Habitat Assessment (CHA, Rev01, April 2026) has determined that no Critical Habitat is present within the BSK project area of influence under any of the five ESR6 criteria. The following Priority Biodiversity Features are confirmed present and govern the Contractor's obligations under this Plan: migratory brook trout (*Salmo trutta oxianus*) with confirmed autumn spawning migration; nationally threatened Eurasian Otter (*Lutra lutra*, EN); six IUCN Red List PBF species including Bukhara Urial (CR) and Eastern Imperial Eagle (VU); thirteen national Red Book PBF species; and two river gravel bank habitat types (C3.62 and C3.55). The Contractor shall implement the PBF-level measures set out in this Plan from Day 1 of mobilisation.

#### 2.3 Competent Authorities and Institutional Contacts

The following authorities have regulatory or supervisory roles in biodiversity management on the BSK Road Project. The Contractor shall not communicate directly with national regulatory authorities on biodiversity matters without the knowledge and coordination of PIURR, except in the case of an emergency that requires immediate notification.

Authority	Role	Contact / Notification Route
Committee for Environmental Protection (CEP), Republic of Tajikistan	Principal environmental regulatory authority. Issues State Ecological Expertise (SEE) conclusions. Competent authority for protected species permits — including any authorisation required for translocation of Red Book plant species or disturbance to protected fauna.	Via PIURR. Contractor submits requests through PIURR for forwarding to CEP. [INSERT: PIURR contact for CEP coordination]
State Establishment for Specially Protected Natural Areas (under CEP)	Manages Tajikistan's protected areas network including Sari Khosor Nature Park. Supervises the Bukhara deer breeding farm at Dashtaro village. Provided official confirmation of the Nature Park location and the deer farm as a sensitive receptor.	[INSERT: Contact name and telephone — to be confirmed by PIURR before mobilisation]
Sari Khosor Nature Park Administration	Day-to-day management of the Nature Park and its associated facilities including the Bukhara deer breeding farm. First point of contact for questions about the deer farm and for coordination on indirect impacts of improved road access.	[INSERT: Park Director — name and telephone]
PIURR (Project Implementing Unit for Road Rehabilitation)	Employer representative and overall responsible body for ESIA compliance and ESR6 implementation at programme level. Coordinates with CEP and the ESIA team on the no net loss programme for confirmed PBFs. Receives biodiversity monitoring reports. Receives biodiversity monitoring reports.	[INSERT: PIURR Project Manager — name and telephone]
Engineer (Supervision Consultant)	Reviews and approves this Plan and updates to it. Audits biodiversity compliance during site visits. Receives monthly Ecologist reports and approves Pre-Clearance Certificates for works in sensitive areas.	[INSERT: Resident Engineer — name and telephone]



### 3. Roles and Responsibilities

The following roles carry specific biodiversity management responsibilities on the BSK Road Project. All personnel involved in ground-disturbing or vegetation-clearing activities must understand their own biodiversity responsibilities before works commence.

Role	Biodiversity Responsibilities
<p>Contractor Ecologist</p> <p><i>Full-time during site establishment and all vegetation clearance; available on call at all other times during construction</i></p> <p><i>[INSERT: Name, qualifications — minimum degree-level ecology with demonstrable Central Asian field survey experience and implementation of EBRD Environmental and Social Requirements]</i></p>	<p>The Ecologist is the primary owner of this Plan and is personally responsible for:</p> <ul style="list-style-type: none"> <li>• Completing all [INSERT] fields in the Sensitive Feature Register (Section 4) from ESIA survey data before clearance commences;</li> <li>• Conducting pre-clearance ecological inspections and issuing Pre-Clearance Certificates for every new section of works;</li> <li>• Establishing, marking, and periodically inspecting all no-go zones and sensitive area buffers;</li> <li>• Attending and directing all wildlife encounter responses;</li> <li>• Overseeing and documenting all Red Book plant translocation activities;</li> <li>• Approving the native seed mix and supervising all reinstatement and revegetation works;</li> <li>• Delivering biodiversity induction training and monthly toolbox talks;</li> <li>• Maintaining the Biodiversity Register and preparing the monthly Ecologist Monitoring Report;</li> <li>• Updating this Plan following ESIA survey completion and at other trigger points listed in Section 1.2.</li> </ul>
<p>ESHS Manager (Contractor)</p> <p><i>[INSERT: Name]</i></p>	<p>Integrates biodiversity requirements into overall ESHS management. Reviews and countersigns the Ecologist's monthly monitoring report before submission to the Engineer. Escalates biodiversity non-compliances to the Project Manager. Ensures biodiversity performance is included in quarterly ESHS monitoring reports to PIURR. Approves this Plan and its updates jointly with the Ecologist.</p>
<p>Contractor Project Manager</p>	<p>Ultimate accountability for BMP implementation within the Contractor's organisation. Signs off this Plan and ensures adequate resourcing of the Ecologist and biodiversity management activities. Receives escalated non-compliance reports from the ESHS Manager and takes corrective action. Notifies the Engineer of any significant biodiversity incident within 24 hours.</p>
<p>Site Supervisors / Foremen</p>	<p>First line of biodiversity compliance enforcement at the work-face. Responsible for: checking that a valid Pre-Clearance Certificate is held before instructing any vegetation clearance to begin; enforcing no-go zone boundaries daily — no plant or workers cross the tape without Ecologist approval; stopping works and notifying the Ecologist immediately when a wildlife encounter, unexpected find, or potential sensitive feature is discovered; enforcing the prohibition on hunting, fishing, and wildlife</p>

		collection. A Site Supervisor who instructs works to proceed over a confirmed sensitive feature without Ecologist approval is personally in breach of this Plan.
All Construction Workers		Every worker on the Project is individually responsible for: not entering no-go zones; reporting unusual wildlife encounters or unexpected finds to the Site Supervisor immediately; complying with the prohibition on hunting, trapping, fishing, and plant collecting; not disturbing, feeding, or keeping wild animals; reporting any observed violation of these rules to the Site Supervisor or ESHS Manager. Biodiversity responsibilities are covered in the site induction (see Section 7.6) and the Code of Conduct (Annex 12).
Engineer (Supervision Consultant)		Reviews and approves this Plan and all subsequent updates before clearance commences in new sensitive areas. Reviews Pre-Clearance Certificates for works at confirmed or PBFs. Reviews the Ecologist's monthly monitoring reports. Audits biodiversity compliance during site visits, including spot-checks of the Sensitive Feature Register, no-go zones, and the Biodiversity Register. Approves or rejects any proposed deviation from seasonal timing restrictions. Notifies PIURR of material biodiversity non-compliances.
PIURR		Receives and reviews quarterly ESHS monitoring reports including biodiversity section. Coordinates with CEP and the ESIA team on the no net loss programme for confirmed Priority Biodiversity Features. Approves this Plan and updates. Has authority to require corrective action or suspend works in the event of material biodiversity non-compliance. Approves this Plan and updates. Has authority to require corrective action or suspend works in the event of material biodiversity non-compliance.

**ECOLOGIST QUALIFICATION REQUIREMENT:** The Contractor shall not commence any vegetation clearance or ground disturbance without a qualified Ecologist in post. Minimum qualifications: degree-level training in ecology, zoology, botany, or environmental science; demonstrable experience of ecological field surveys in Central Asia; familiarity with EBRD ESR6 and critical habitat assessment. The Ecologist's CV shall be submitted to the Engineer for approval before mobilisation. The Engineer may reject a nominee who does not meet this standard.

#### 4. Sensitive Feature Register

**PLACEHOLDER — TO BE COMPLETED BEFORE CLEARANCE COMMENCES:** This section will contain the Sensitive Feature Register — the central operational reference for all biodiversity management on site. It will record every Priority Biodiversity Feature (PBF) confirmed through the Critical Habitat Assessment (CHA, Rev01, April 2026) and ESIA biodiversity surveys, with GPS coordinates, chainage reference, a description of the feature, the applicable buffer or exclusion distance, the management measures that apply, and the seasonal period during which heightened restrictions are in force. The Register is maintained by the Contractor's Ecologist and updated as survey data become available. It must be completed, reviewed by the Engineer, and approved by PIURR before any vegetation clearance or ground disturbance commences in any section of the corridor.

The CHA has confirmed a number of PBFs for which management measures are already established in this Plan. Additional PBF locations, buffer distances, and management requirements will be confirmed and spatially defined by ESIA field surveys and entered into the full Register in Appendix A. The Register below sets out the current state of knowledge — entries marked [INSERT] require field survey completion before the Register can be finalised.

Ref	Feature Type	GPS / Chainage	Buffer / Exclusion	Key Management Measures	Seasonal Restriction
1	Riparian buffer — Shurobdaryo River (full corridor length)	Full corridor length 0+000 to 56+000	15 m from bankfull edge — default; may be widened where pre-construction survey confirms higher sensitivity	No-go for all non-essential works; no materials storage; no vehicle access; no vegetation clearance	Enhanced during fish spawning (Nov–Feb) — see Section 6.2
2	Riparian buffers — named tributary crossings	[INSERT from pre-construction survey — before crossing works commence]	10 m from bankfull edge — default	As above. River Works Method Statement required before any crossing works commence	Nov–Feb restriction applies
3	Red Book plant populations — species of Tulipa, Eremurus, Juno/Iris, Allium and others confirmed in Sari Khosor area by Latifi (2026)	[INSERT from pre-construction botanical survey — before clearance commences in rocky slope and scrub habitats]	5 m minimum around each confirmed population boundary	Pre-clearance botanical inspection Mar–May; translocation before clearance where within footprint; monitoring of translocated individuals at 3, 12, and 24 months	Clearance inspection required Mar–May before works in areas with confirmed or potential Red Book plant species — see Section 6.5
4	Bukhara Deer ( <i>Cervus hanglu bactrianus</i> , CR) breeding farm, Dashtaro village, km 54	Dashtaro village, approximately km 54 — confirmed by government letter (Appendix 2 of CHA)	[INSERT from pre-construction site assessment — to be confirmed before works reach km 50]	48-hour notice to Farm Manager before blasting, piling, or heavy earthworks within agreed buffer. Daily monitoring of farm perimeter for animal distress when works active within buffer. See Section 7.8	Calving season heightened controls (likely April–May — confirm with Farm Manager before works reach km 50) — see Section 6.4
5	Confirmed bird nesting sites — cliff-nesting raptors, riparian scrub, trees	[INSERT from pre-construction nest survey — February each year before 1 March restriction begins]	Per minimum exclusion distance (section 6.4)	No clearance or blasting within agreed exclusion distance of active nests during nesting season	1 Mar–30 Sep — see Section 6.3

Ref	Feature Type	GPS / Chainage	Buffer / Exclusion	Key Management Measures	Seasonal Restriction
6	European Glass Lizard ( <i>Pseudopus apodus</i> , EN nationally) — rocky slope and scrub habitats along corridor	[INSERT from pre-construction reptile survey — April–September before clearance commences in rocky slope and scrub habitats]	[INSERT from pre-construction reptile survey]	Pre-construction reptile survey April–September before clearance commences. If confirmed within footprint, displacement programme under Ecologist supervision before clearance. Slow, sectional clearance of rocky scrub to allow displacement. See Section 5.1	Active season April–September — pre-construction survey must be completed before clearance in rocky slope and scrub habitats
7	Riparian bankside vegetation — poplar-willow-sea buckthorn scrub along Shurobdaryo corridor	Full corridor length — 0+000 to 56+000	Captured within 15 m riparian buffer (Row 1). No additional exclusion required	Bankside clearance limited to minimum footprint necessary. Clearance from road side only. Reinstated with riparian-adapted native species mix. See Sections 7.2 and 8.2	Avoid bankside clearance Nov–Feb where disturbance could affect river channel
8	Eurasian Otter ( <i>Lutra lutra</i> , NT globally / EN nationally) — Shurobdaryo River corridor	[INSERT from pre-construction otter survey — full corridor length before bankside clearance or in-river works commence]	50 m exclusion zone around each confirmed holt during breeding season (Dec–Jun)	Pre-construction survey for holts and otter signs along full corridor before bankside or in-river works. 50 m holt exclusion Dec–Jun where confirmed. Bankside clearance from road side only. Hydrocarbon management throughout — no refuelling within 50 m of river. Post-construction monitoring two seasons. See Section 7.9	50 m holt exclusion Dec–Jun where holts confirmed. Nov–Feb in-river restriction also applies — see Section 6.2
9	Turkestan Barbel ( <i>Barbus capito conocephalus</i> , VU globally / Red Book nationally) — Shurobdaryo River	[INSERT from pre-construction targeted aquatic survey before in-river works commence]	Captured within general in-river works controls and Nov–Feb exclusion window	Pre-construction targeted aquatic survey to confirm presence or absence. Confirmed by Latifi (2026) in broader area; not recorded by Shamsiddinov (2025) in project river. Silt and turbidity controls at all in-river works regardless of confirmation. See Sections 6.2 and 7.2	Nov–Feb in-river exclusion applies regardless of confirmation status
10	[Additional features to be	[INSERT]	[INSERT]	[INSERT]	[INSERT]

Ref	Feature Type	GPS / Chainage	Buffer Exclusion /	Key Management Measures	Seasonal Restriction
	added from pre-construction survey results]				

**NOTE:** The full Sensitive Feature Register, with GPS coordinates, photographs, chainage references, and confirmed management measures for each feature, is maintained as Appendix A of this Plan. The Ecologist updates Appendix A as ESIA survey data become available and notifies the Engineer of any new entries within 5 working days of confirmation.

## 5. Pre-Construction Measures

The measures in this section must be in place before any vegetation clearance, ground disturbance, or earthworks commences anywhere on the project corridor or at any ancillary facility. They are not one-time actions at mobilisation — they apply progressively as each new section of the works programme enters the active phase.

### 5.1 Pre-Clearance Ecological Inspection

Before any vegetation clearance or ground disturbance commences in any section of the corridor or at any ancillary facility, the Ecologist shall carry out a walk-over inspection of the proposed clearing limit for that section. The purpose is to identify any PBFs present within or immediately adjacent to the footprint that require protection or management before clearance begins.

The inspection shall check for:

- IUCN Red List and Red Book species, or any other confirmed PBFs; presence of Red Book plant species or other rare or protected flora within the clearing limit;
- Active bird nests, bat roosts, mammal dens or burrows within the footprint or within the applicable buffer distance;
- Reptiles or signs of reptile activity within or adjacent to the footprint;
- Any watercourse, drainage feature, or seasonal wetland not already marked on the Sensitive Feature Register;
- Any apparent encroachment of the proposed clearing limit into a designated no-go zone or buffer area.

Following the inspection the Ecologist shall issue one of the following:

Outcome	Meaning and Required Action
Pre-Clearance Certificate — CLEAR	No PBFs identified within the clearing limit. Clearance machinery may enter the section. Certificate states the date of inspection, the chainage extent covered, and any standard conditions (e.g. topsoil stripping requirements).

Pre-Clearance Certificate — CONDITIONAL	PBFs identified, but clearance can proceed subject to stated conditions being met first — for example, translocation of Red Book plants before clearance; establishment of exclusion buffer around a nest; or timing restriction on clearance of a specific subsection. Clearance may not begin until the Ecologist confirms conditions have been satisfied.
Pre-Clearance Certificate — HOLD	Sensitive feature identified that requires referral to the Engineer before clearance can proceed — for example, a feature not previously captured in the Sensitive Feature Register, , or a species requiring a CEP permit before disturbance. Clearance is suspended in the affected section until the Engineer has reviewed and issued written direction.

**MANDATORY:** No vegetation clearance or ground disturbance shall begin in any section without a signed Pre-Clearance Certificate from the Ecologist held by the Site Supervisor for that section. A verbal clearance is not sufficient. The template for the Pre-Clearance Certificate is at Appendix B.

### 5.2 No-Go Zone and Buffer Establishment

Before any clearance machinery enters a section, the Ecologist shall physically demarcate all no-go zones and sensitive feature buffers applicable to that section, using the Sensitive Feature Register (Section 4) as the reference. Demarcation shall use high-visibility barrier tape (orange or pink) and posted signage in Tajik and Russian at intervals of no more than 25 metres.

The following buffers apply as defaults across the full corridor. They may be widened — but not narrowed — where ESIA survey findings indicate higher sensitivity:

Feature	Default Buffer	Conditions
Shurobdaryo River — bankfull channel edge	15 m each bank	No vegetation clearance, soil disturbance, materials storage, vehicle movement, or waste disposal within this strip. Works within the buffer (e.g. river protection works, bridge abutments) require a site-specific method statement approved by the Engineer.
Named tributaries — bankfull channel edge	10 m each bank	As above. Culvert installations and minor crossing works may occur within the buffer only under an approved method statement with silt controls in place.
Confirmed Red Book plant populations	5 m minimum around each population boundary	Ecologist marks boundary with GPS-logged pins and tape. Plants within the approved clearing limit are translocated before clearance — not excluded from clearance.
Active bird nests	Per minimum exclusion distance (section 6.4)	Distance varies by species. Ecologist specifies exclusion distance on the Pre-Clearance

		Certificate for the section. Nesting season restriction in Section 6.2 also applies.
Bukhara deer breeding farm, Dashtaro village	As determined by Ecologist, minimum 50 m	Confirmed by Engineer and PIURR following ESIA assessment. Ecologist monitors for signs of disturbance when works are active within the agreed buffer.
Confirmed reptile habitat exclusion zones	[INSERT — to be confirmed by additional ESIA reptile surveys]	Requires physical fencing, not tape alone. Exact areas confirmed by ESIA surveys and entered in the Sensitive Feature Register.

The Ecologist checks the condition of all no-go zone markers and buffer tape weekly and after any significant rainfall event or vehicle movement near sensitive areas. Damaged or displaced markers are restored within 24 hours. Any encroachment into a no-go zone by plant, vehicles, or workers is reported to the ESHS Manager and Engineer as a non-compliance within 24 hours.

### 5.3 Camp, Borrow Area, and Plant Siting

Decisions about where to locate camps, borrow areas, plant areas, spoil sites, and access tracks have significant biodiversity consequences, since these are often larger footprints than the road works themselves and are located off the existing disturbed corridor. Ecological constraints must be assessed before any location is finalised, not after.

The following constraints apply to all ancillary facility locations. The Ecologist must review and confirm — in writing — that a proposed facility location is acceptable before any site preparation work commences:

Constraint	Requirement
Watercourse setback	No camp, borrow area, plant area, or spoil site shall be located within 100 m of the bank of the Shurobdaryo River or any named tributary. Where terrain constrains location, any lesser distance requires written Engineer approval and a site-specific environmental risk assessment.
Riparian and natural vegetation	No ancillary facility shall be established within an area of intact or semi-natural vegetation — including riparian scrub, shrubland, or grassland — where a disturbed or degraded alternative is available within a reasonable distance. The Ecologist confirms classification of proposed locations before establishment.
PBF	No ancillary facility shall be placed within any buffer or no-go zone identified in the CHA or Sensitive Feature Register as a PBF. All proposed locations are checked against the Register before approval.
Flood risk	Consistent with the requirement in the Camp Management Plan (Annex 10), no facility shall be sited within the 1-in-100-year flood extent of the Shurobdaryo or any tributary. This constraint serves both

	safety and ecological purposes — flood-prone areas are typically the most ecologically sensitive in this valley landscape.
Preference for already-disturbed ground	Where a choice exists, facilities shall be sited on already-disturbed ground — existing road formation, degraded agricultural land, or previously cleared areas — in preference to undisturbed or semi-natural land. The Ecologist documents the basis for location selection in the Sensitive Feature Register.

**BORROW AREA NOTE:** Each borrow area requires a Borrow Area Rehabilitation Plan submitted to the Engineer before extraction commences. The Plan must include: pre-extraction ecological survey results; topsoil strip and stockpile arrangements; reinstatement landform and drainage; and native seed mix for revegetation. See also Section 8.3 (Borrow Area Rehabilitation).

**EARLY ENGAGEMENT:** The Ecologist shall be consulted during the preliminary identification of all ancillary facility locations — ideally at the same time as engineering and logistical assessments — so that ecological constraints can be factored into location decisions from the outset rather than discovered after a preferred location has been committed to.

## 6. Seasonal and Timing Restrictions

The following restrictions are mandatory. They are not advisory scheduling preferences — they are non-negotiable constraints that must be built into the construction programme from the outset. Any request to deviate from a restriction must be submitted in writing to the Ecologist and Engineer; both must approve in writing before any affected works proceed.

### PROGRAMME PLANNING NOTE:

Two distinct and separately grounded constraints apply to in-stream works on this project and must not be conflated.

The **November–February restriction** (X in the calendar) is an ecological protection measure covering the brook trout spawning migration and the subsequent egg incubation period, during which fertilised eggs develop within the riverbed gravel until hatching in early spring. Direct disturbance of the riverbed or banks during this period is not permitted without specific written approval from the Engineer and PIURR.

The **April–June conditional flag** (■ in the calendar) reflects the national fishing ban under Tajik fisheries regulations (approximately 1 April to 15 June), during which fishing in Tajikistan's rivers is prohibited to protect spring-spawning species. This signals a period of heightened regulatory and ecological sensitivity for the river system. The flag does not constitute a prohibition on in-river construction works, but works during this period must be managed through the River Works Method Statement to demonstrate that aquatic habitat and water quality impacts are adequately controlled (see Section 6.2).

The **confirmed permitted in-stream works window is March and July–October**, representing five months available for in-channel working. March is permitted under standard controls. July–October represents the preferred window given consistently lower flows and more reliable access. The April–June period carries a conditional flag reflecting the national fishing ban and heightened ecological sensitivity — works during this period may proceed subject to the River Works Method Statement demonstrating adequate management of aquatic habitat and water quality impacts (see Section 6.2).

### 6.1 Summary Restrictions Calendar



The table below summarises all seasonal restrictions by activity type across the calendar year. Colour coding: green = works permitted; amber = works permitted with conditions or heightened vigilance; red = works not permitted (restriction in force). Refer to subsections 6.2–6.5 for the detailed requirements behind each restriction.

Activity	J	F	M	A	M	J	J	A	S	O	N	D
In-stream and near-channel works (bridge piling, culvert installation, river protection, bank works)	X	X	✓	■	■	■	✓	✓	✓	✓	X	X
Vegetation clearance, tree felling, and cliff face works at confirmed bird nesting locations	✓	✓	X	X	X	X	X	X	X	✓	✓	✓
General vegetation clearance (outside confirmed nesting locations) — subject to pre-clearance certificate	✓	✓	■	■	■	✓	✓	✓	✓	✓	✓	✓
Works within agreed buffer of Bukhara deer breeding farm, Dashtaro village	✓	✓	■	■	■	✓	✓	✓	✓	✓	✓	✓

✓	Permitted — standard controls apply	■	Conditional — heightened vigilance or specific requirements apply (see subsection)	X	Restriction in force — works not permitted without specific written approval from Ecologist and Engineer
---	-------------------------------------	---	--	---	--

## 6.2 Aquatic Works — Fish Spawning Season Restriction

Confirmed migratory fish populations — including brook trout — undertake upstream spawning migrations in the Shurobdaryo River in late autumn. Spawning fish select and prepare gravel redds in areas of clean, well-oxygenated riverbed. Following spawning, fertilised eggs incubate within the gravel substrate through winter until hatching in early spring. Sedimentation, vibration, and direct physical disturbance from in-channel construction works during both the spawning and incubation periods can

destroy redds, kill developing eggs, and reduce recruitment in future seasons. This restriction is grounded in the project's own Aquatic Biology Report, which documents the autumn upstream spawning migration of trout in the Shurobdaryo catchment, and is required under the Law of the Republic of Tajikistan on Fauna.

Element	Requirement
Restriction period	1 November – 28 February (annually), covering both the spawning migration and the egg incubation period
Works affected	All works involving active disturbance of the river channel, riverbed, or banks within the bankfull channel — including: bridge piling and foundation works; culvert installation and removal; bank protection works; dredging or gravel extraction from the channel; temporary in-channel structures; and cofferdams. Works on the floodplain that could generate silt runoff directly to the channel are also subject to heightened controls during this period.
Works not affected	Works on the road formation, embankments, and structures set back from the bankfull channel edge are not directly restricted by this clause — but erosion and silt controls remain in force throughout the year (see Section 7.2).
Preferred in-stream works window	July – October: low to moderate flow, above-zero temperatures, accessible terrain. Contractors should programme all in-river works to maximise use of this four-month window. The April–June period carries a conditional flag and may be used subject to the requirements of the River Works Method Statement (see below and Section 6.1 note).
Flexibility through the River Works Method Statement	To provide programme flexibility and maximise productivity, the Contractor shall prepare a River Works Method Statement (RWMS) prior to commencement of any in-river or bankside works (see Section 7.2.1). To the extent consistent with the ecological objective of this restriction, the RWMS may propose: (i) phasing of works to maximise productivity within the July–October window; (ii) use of isolation methods such as cofferdams, temporary diversions, or bunded working areas to allow works to continue within the restricted period where direct channel disturbance can be demonstrably avoided; and (iii) site-specific adjustment of the restriction timing at individual structures, subject to hydraulic and ecological verification by the Ecologist and written approval by the Engineer. For works programmed during April–June, the RWMS shall additionally address management of elevated hydraulic risk and sediment sensitivity during the snowmelt and high-flow period. Any proposed adjustment to the restriction timing must demonstrate that spawning activity has not commenced or has concluded at the specific location, that egg incubation is not active in the affected riverbed area, and that the proposed works will not disturb spawning gravel beds or impair fish passage. Adjustment shall not be agreed on grounds of programme or cost alone.
Deviation procedure	If in-river works cannot be completed before 1 November due to unforeseen circumstances, the Contractor shall submit a written request to the Engineer and PIURR at least 14 days before the restriction date. The request must include: the reason completion was not possible, the specific works remaining, the duration required, and proposed mitigation to minimise spawning and incubation impacts. Works may continue into the restricted period only with written approval from both the Engineer and PIURR. Approval is not automatic and PIURR may require consultation with CEP.

### 6.3 Bird Nesting Season Restriction

Several confirmed and potential bird species of conservation concern — including cliff-nesting raptors such as Saker Falcon (*Falco cherrug coatsi*, EN nationally) and Egyptian Vulture (*Neophron percnopterus*, EN nationally) confirmed as PBFs in the Critical Habitat Assessment (CHA, Rev01, April 2026) — are sensitive to vegetation disturbance and physical works during the breeding season.

Element	Requirement
Restriction period	1 March – 30 September (annually)
Works affected	At confirmed nesting locations only: vegetation clearance, tree felling, scrub removal, and excavation or blasting of cliff faces. The restriction applies within the exclusion distance specified by the Ecologist for each nesting site in the Sensitive Feature Register.
Pre-season requirement	During February — before the restriction period begins — the Ecologist shall carry out a pre-season nest check survey of all locations identified in the Sensitive Feature Register and any additional potential nesting habitat within the proposed clearing limits. Any newly confirmed nesting locations are added to the Register and the relevant exclusion distances marked before 1 March. Works on cliff faces and in areas of dense shrub cover that have not yet been surveyed shall not commence in March without a site-specific check.
General clearance outside nesting locations	Vegetation clearance in areas not recorded in the Sensitive Feature Register as nesting sites may proceed during March–September, subject to a pre-clearance inspection. If the Ecologist identifies active nesting during that inspection, a temporary exclusion applies to that specific location until the nest is vacated.
Preferred clearance window	October – February: outside nesting season, all confirmed nesting locations accessible

The above restrictions apply to cliff-nesting raptors and scrub-nesting species. Ibisbill (*Ibidorhyncha struthersii*, nationally EN) requires separate management as it nests directly on open unvegetated gravel bars within the active river channel — the same substrate disturbed by in-river works. The following additional requirements apply:

Before any in-river or bankside works commence in each section, the Ecologist shall survey all gravel bars within the works footprint for Ibisbill nesting activity. The survey shall be conducted within two weeks of works commencing in each section and repeated following any break of more than two weeks during the March–July nesting period. Where active nests are confirmed, a 100 m exclusion zone shall be established around each nest, physically marked with buoys or bankside stakes, and no in-river or bankside works shall take place within that zone until the nest is confirmed inactive by the Ecologist in writing. Works on gravel bars shall not commence during March–July without a written Ecologist clearance statement confirming no active Ibisbill nests are present within the works footprint. All survey results, exclusion zones, and clearance statements shall be recorded in the Sensitive Feature Register and reported to the Engineer monthly.

The following minimum exclusion distances apply to confirmed active nests of cliff-nesting raptor and other PBF bird species. These distances are derived from the Critical Habitat Assessment (CHA, Rev01, April 2026) and are binding minimum requirements from the date a nest is confirmed. The Ecologist records the location of each confirmed nest and the applied exclusion distance in the Sensitive Feature Register before works commence in the relevant section. Where site-specific conditions — including nest position, topography, prevailing noise levels, or observed behavioural sensitivity — indicate that a greater distance is warranted, the Ecologist may increase the exclusion distance and shall record the basis for doing so. Exclusion distances may not be reduced below the minima in the table below without written approval from the Engineer and PIURR.

Species	Minimum Exclusion Distance
Egyptian Vulture	250 m
Bearded Vulture	250 m
Saker Falcon	250 m
Barbary Falcon	250 m
Eastern Imperial Eagle	250 m
Yellow-eyed Pigeon	75 m

#### 6.4 Bukhara Deer Breeding Farm — Calving Season

The Bukhara Deer (*Cervus hanglu bactrianus*) breeding farm at Dashtaro village. The species is classified as Critically Endangered (CR) on the IUCN Red List. The facility is a confirmed PBF receptor explicitly flagged by the State Institution for Specially Protected Natural Territories (Appendix 2 of the CHA). Precautionary mitigation measures are required to avoid impacts on the managed population, particularly during calving when animals are most sensitive to disturbance.

Element	Requirement
Calving period	[INSERT — to be confirmed through pre-construction site assessment and liaison with Sari Khosor Nature Park Farm Manager before works reach km 50. For <i>Cervus hanglu bactrianus</i> , calving typically occurs April–June — confirm exact period with Farm Manager at mobilisation.]
Initial assessment	Before start the Ecologist shall conduct a pre-construction site visit to the breeding facility to establish a baseline population count and assess the facility's sensitivity to noise and vibration. The baseline count is recorded in the Biodiversity Register and provides the reference point for detecting any population-level impact during construction monitoring."
Restriction	During the confirmed calving period, no works generating elevated noise, vibration, or dust shall be undertaken within the agreed buffer distance of the farm boundary. The buffer distance is to be confirmed by the ESIA site assessment and entered in the Sensitive Feature Register.
Year-round requirement	Regardless of calving season, the Farm Manager shall be notified at least 48 hours before any blasting, piling, or other works likely to generate significant noise or vibration within [INSERT] metres of the farm. The Ecologist shall record the notification and any response from the Farm Manager in the Biodiversity Register.

Monitoring	When works are active within the agreed buffer, the Ecologist — or a delegated staff member trained by the Ecologist — shall monitor the farm perimeter at the start and end of each working day for signs of animal distress. Any concerns are reported immediately to the ESHS Manager and Farm Manager.
------------	--

### 6.5 Red Book Plant Communities — Clearance Timing

Several of the Red Book plant species potentially present in the Sari Khosor region — including species of Tulipa, Eremurus, and Juno/Iris — are spring ephemerals that emerge, flower, and set seed between approximately February and May, then die back and become virtually invisible above ground for the rest of the year. Clearance of these species outside their visible season risks undetected destruction of protected plants.

Element	Requirement
Sensitive clearance window	March – May: Red Book spring ephemerals are above ground and identifiable
Requirement during March–May	In sections of the corridor where ESIA botanical surveys have identified or flagged the potential presence of Red Book plant species, vegetation clearance during March–May shall proceed only after the Ecologist has conducted a botanical check of the specific clearing limit and confirmed (a) the absence of Red Book species, or (b) that any individuals present have been translocated to an agreed receptor site before clearance begins.
Requirement outside March–May	In sections with confirmed Red Book plant records, even outside the visible season, the Ecologist shall apply a precautionary approach: topsoil in these sections shall be stripped carefully and stockpiled separately, and any bulb or corm material encountered during stripping shall be collected and relocated by the Ecologist rather than discarded with general spoil.
Where pre-construction botanical surveys are not yet completed	— Until pre-construction botanical surveys confirm the distribution of Red Book plant species relative to the footprint, the Ecologist shall apply the March–May inspection requirement to all sections of the corridor passing through shrubland, grassland, or rocky slope habitats — consistent with the habitat types in which Red Book species of Tulipa, Eremurus, Juno/Iris, and Allium are recorded by Latifi (2026).

### 6.6 Procedure for Deviation Requests

Programme pressure or unforeseen circumstances may occasionally make it difficult to comply with a seasonal restriction. The following procedure applies in all cases:

- The Contractor submits a written Deviation Request to the Ecologist and Engineer at least 14 days before the restriction date, or as soon as the need becomes apparent if less notice is available;
- The request must state: the specific restriction, the works affected, the reason completion within the permitted window was not possible, the proposed alternative timing, the duration of the deviation, and the specific additional mitigation measures that would be applied to reduce ecological impact;
- The Ecologist prepares a written ecological assessment of the request within 5 working days, recommending approval, conditional approval, or refusal;
- The Engineer reviews the Ecologist's assessment and makes the final decision. For deviations affecting confirmed PBFs, PIURR approval is also required;
- Approval of a deviation does not reduce the Contractor's liability for any ecological damage that results.

**COST OF NON-COMPLIANCE:** Seasonal restrictions exist because the ecological harm from working in the wrong season can be irreversible — a destroyed redd, an abandoned nest, or a dead Red Book plant cannot be remedied after the fact. The Contractor is responsible for programming works to respect these windows. Where non-compliance occurs — whether through poor programming or deliberate disregard — the Contractor bears full responsibility for any resulting ecological damage and for any remediation or compensation measures required by the Engineer, PIURR, or CEP.

## 7. Construction Phase Mitigation Measures

This section sets out the operational biodiversity controls that apply during all ground-disturbing and vegetation-clearing activities. The measures are organised by activity type and apply from the first day of construction through to final site restoration. They complement — and do not replace — the controls set out in the Water Quality and Sediment Control Plan (Annex 7), which should be read alongside this section for works near watercourses.

### *7.1 Vegetation Clearance and Topsoil Management*

- Clearance is limited strictly to the approved construction footprint. Machinery operators are briefed on staked clearing limits before entering any section, and no instruction to clear beyond those limits shall be given or followed.
- A valid Pre-Clearance Certificate (Section 5.1) must be held by the Site Supervisor before any clearance machinery enters a section.
- Where individual mature trees fall within the approved footprint, the Ecologist confirms whether they carry any roosting, nesting, or other wildlife value before felling is instructed. Trees with confirmed wildlife value are felled outside the nesting season (Section 6.3) unless no practicable alternative exists.
- Topsoil is stripped to the base of the rooting zone — typically 200–300 mm in this valley landscape — before earthworks begin in any area of temporary disturbance. Topsoil is stockpiled separately from subsoil and spoil, in clearly labelled and protected bunds, for reuse in reinstatement.
- Topsoil stockpiles stored for longer than two months are seeded with a temporary grass cover crop to prevent erosion, weed invasion, and structural degradation of the soil profile.

- No topsoil is placed in the riparian buffer zone or any watercourse, used as fill material, or mixed with subsoil or spoil.
- Cleared vegetation is not burned within 50 m of any riparian buffer, sensitive habitat, or settlement. Where burning is used for disposal elsewhere, it requires ESHS Manager approval and is conducted under controlled conditions with fire suppression equipment present.

## 7.2 Aquatic Habitat Protection

**CROSS-REFERENCE:** Detailed aquatic construction controls — including drainage design, erosion and sediment control specifications, water quality monitoring, and spill response — are set out in the Water Quality and Sediment Control Plan (Annex 7). This section focuses on the biodiversity-specific requirements that apply to works at and near the Shurobdaryo River and its tributaries.

### 7.2.1 River Works Method Statement

A River Works Method Statement (RWMS) is required before any works commence within or immediately adjacent to the bankfull channel of the Shurobdaryo River or any tributary crossing. The RWMS is prepared by the Contractor, reviewed by the Ecologist, and approved in writing by the Engineer before works begin. It must address:

- The sequence and timing of works and how they fit within the permitted in-stream works window (Section 6.2);
- Plant access routes to the channel and measures to prevent bank damage outside the approved footprint;
- Silt and turbidity control measures — type, location, and installation sequence — including silt fences, turbidity curtains, and sediment traps downstream of all active works;
- Concrete and cement handling — confirming that no mixing, washing, or disposal occurs within 50 m of the bankfull channel;
- Fuel storage and refuelling arrangements — confirming that no refuelling occurs within 100 m of the channel and that spill kits are positioned at the work site;
- Dewatering arrangements for any cofferdam or temporary exclusion (see 7.2.4);
- Fish passage maintenance provisions for the construction period (see 7.2.3);
- Evidence that the section of river bank within the working area has been surveyed for otter holts and active signs, and confirmation of the outcome and any resulting exclusion zones.
- Restoration of any temporary bank works on completion.

### 7.2.2 Silt and Turbidity Controls

- Silt fences and sediment traps are installed downstream of all active in-channel or floodplain works before machinery enters the water. Controls are checked at the start of each working day and after any rainfall event.
- Turbidity at a point 500 m downstream of active works is visually monitored daily. If visible turbidity plume extends beyond 500 m, works are stopped and the Ecologist is notified. Works resume only when the cause has been identified and rectified and the Engineer has agreed resumption in writing.

- Disturbed banks are stabilised progressively as works advance — temporary exposed bank faces are not left unsecured overnight if rain is forecast.
- No concrete, cement, grout, or other alkaline material is mixed, washed, or disposed of within 50 m of any watercourse. A designated concrete washout area with a lined bund is established at each bridge and culvert work site.

### *7.2.3 Fish Passage at Crossings*

- All temporary crossings — whether ford, Bailey bridge, or culvert — are designed and installed to maintain continuous fish passage throughout the construction period. The Ecologist confirms that each temporary crossing design is passable for the fish species present before installation is approved.
- Temporary culverts are sized to pass normal flows without backwater effects that would impede fish movement. Where a temporary ford is used, flow depth at the crossing point is maintained at a minimum of 150 mm during low-flow conditions.
- The permanent bridge and culvert designs at the main Shurobdaryo crossing and all tributary crossings are confirmed by the Ecologist to maintain aquatic connectivity for the fish species present before construction of permanent works proceeds.

### *7.2.4 Dewatering*

- Water pumped from cofferdams, excavations, or any temporary exclusion structures is discharged to a lined settling pond before release — direct pumping to the river or to uncontrolled land is prohibited.
- Settling pond dimensions are confirmed by the Ecologist to provide sufficient retention time to achieve visible clarity before overflow is discharged.
- If fish are found in a cofferdam or dewatered section during pump-down, pumping is slowed to allow the Ecologist to assess and, where possible, rescue fish by net and release them to the river downstream of works.

## *7.3 IUCN Red List and Red Book Plant Translocation Protocol*

Where Latifi (2026) records or pre-construction botanical surveys confirm the presence of Red Book plant species within the approved clearing limit, and avoidance by footprint adjustment is not practicable, the Ecologist shall arrange translocation of affected individuals to a pre-agreed receptor site before clearance begins. Translocation is not a substitute for avoidance — it is applied only when avoidance within the approved footprint is not feasible. If translocation is not possible, the matter shall be escalated to the Engineer and PIURR for direction, and the impact shall be accounted for in the No Net Loss assessment.

- Any translocation Plan of PBF's should be agreed and supervised together with expert stakeholders prior to its development.
- Receptor sites — areas of appropriate habitat outside the project footprint and not at risk from construction disturbance — are identified by the Ecologist and agreed with the Engineer before translocation commences. CEP authorisation is obtained via PIURR where required under national law.
- Translocation is carried out by the Ecologist or under their direct supervision and associated to previous experiences with the same or similar taxa. Plants are lifted with as much root and



associated soil as practicable, moved promptly, and planted without delay at the receptor site at the same depth and aspect as the source location.

- Spring-flowering species (tulips, irises, Eremurus) are translocated during their active growing season where possible — not as dormant bulbs unless the Ecologist confirms that dormant translocation is technically appropriate for the species in question.
- Each translocation event is recorded in the Biodiversity Register (Appendix D): species, number of individuals, source GPS, receptor GPS, date, method, and condition of plants at the time of translocation.
- Translocated individuals are monitored during a complete biological cycle for post-translocation for survival, establishment, and where possible reproduction. Monitoring results are reported to the Engineer and included in the quarterly ESHS report.

**NOTE:** Translocation success rates for bulbous geophytes vary and cannot be guaranteed. The primary obligation is to avoid disturbance of Red Book plants through footprint design. Where translocation is the only option, it must be executed carefully and its outcomes honestly monitored and reported.

#### 7.4 Wildlife Encounter Procedures

All workers are briefed at induction on what to do when they encounter wildlife on site. The following procedures apply by species group. In all cases, the Site Supervisor is notified immediately and the Ecologist attends as soon as practicable. All encounters are logged in the Biodiversity Register.

Encounter Type	Required Response
Red Book plant found during clearance	Stop clearance machinery in the immediate area. Do not uproot or damage the plant. Notify the Ecologist immediately. The Ecologist inspects, confirms the species, and either: (a) confirms the plant is outside the clearing limit and marks an exclusion; or (b) arranges translocation before clearance resumes. Clearance in the affected sub-section does not resume without Ecologist sign-off.
Reptile — any species	Stop machinery in the immediate area. Do not handle the animal. Notify the Ecologist. The Ecologist identifies the species: if a Red Book or restricted-range species, the find is logged as a Priority Feature and management measures are reviewed. In all cases the Ecologist safely moves the animal clear of the work area if it cannot move itself to safety. All reptile encounters are logged with species (if identifiable), location, and outcome.
Small mammal — hedgehog, hare, porcupine	Slow machinery and allow the animal to move away of its own accord. If an animal is found trapped in a trench or excavation, stop works and notify the Ecologist, who will arrange safe removal. Open trenches and excavations are ramped at one end each evening to allow any animal that falls in overnight to escape.
Large mammal — bear, wolf, wild boar	Stop all works in the immediate vicinity. Do not approach or attempt to chase the animal. Maintain a safe distance (minimum 100 m for bear). Notify the Site Supervisor and Ecologist. Resume works only once the animal has moved away of its own accord and the Ecologist confirms it is safe to do so. Repeated sightings of large predators near active works are reported to the Engineer.

Bird — active nest discovered during works	Stop works within 50 m of the nest. Do not disturb the nest. Notify the Ecologist immediately. The Ecologist determines the species and establishes an appropriate exclusion distance. Works within the exclusion do not resume until the Ecologist confirms the nest has been vacated and the nesting cycle is complete. If the nest is found during the nesting season restriction period (Section 6.3), this also constitutes a restriction breach to be reported.
Otter or otter signs (spraints, holts, slide marks)	Otter activity near the watercourse is a strong indicator of elevated ecological sensitivity. Stop riparian works in the immediate area. Notify the Ecologist, who will assess for active use and determine whether the riparian buffer or no-go zone in that section should be widened. Log all signs of otter activity in the Biodiversity Register.
Fish in distress during dewatering or in-channel works	Slow or stop pumping. Notify the Ecologist. Where it is safe to do so, the Ecologist nets distressed or stranded fish and releases them to the main channel downstream of the works. Document species and estimated numbers in the Biodiversity Register.

**GENERAL PRINCIPLE:** Workers are not expected to identify species. The rule is simple: if you see something unusual — stop, step back, tell your supervisor. No one will be criticised for halting works to report an animal or plant. Workers who damage or remove wildlife without reporting it are in breach of this Plan and of national law.

### *7.5 Prohibition of Hunting, Poaching, Fishing, and Collecting*

**ZERO TOLERANCE:** The following prohibitions apply to all Contractor and subcontractor personnel at all times during their employment on the Project — including rest days, evenings, and weekends — within the project area of influence. Violation is grounds for immediate dismissal and referral to national wildlife authorities.

- No hunting, trapping, snaring, or poisoning of any wild animal — including birds, reptiles, fish, and mammals — anywhere in the project area of influence;
- No fishing from construction sites, camps, access tracks, or bridge structures by Project workers at any time;
- No collection, uprooting, cutting, or removal of any wild plant — particularly Red Book-listed species — for any purpose including personal use, medicinal use, or sale;
- No keeping of wild animals as pets or camp mascots;
- No feeding of wild animals, which habituates them to human presence and increases the risk of human-wildlife conflict and poaching;
- No supply or consumption of wild-caught bushmeat or wild-caught fish in construction camps — catering suppliers are prohibited from sourcing wild animals or birds;
- Workers who observe any colleague hunting, trapping, or collecting wildlife are expected to report it to the Site Supervisor or ESHS Manager. Reporting is protected — no worker is penalised for making a good-faith report.

These prohibitions are covered in the biodiversity induction delivered to all workers (see below) and are reinforced in monthly toolbox talks. They are also reflected in the Code of Conduct (Annex 12), which all workers sign before commencing work on the Project.

#### 7.5.1 Biodiversity Induction and Toolbox Talks

- All workers engaged in ground-disturbing or vegetation-clearing activities receive a biodiversity induction before commencing work on site, delivered by the Ecologist in Tajik and/or Russian as appropriate;
- The induction covers: what Priority Biodiversity Features are present on the Project; the no-go zones and why they exist; the wildlife encounter procedure; the hunting and collecting prohibition and its legal consequences; and who to contact if they see something unusual;
- Attendance at induction is recorded by the Ecologist. No worker commences ground-disturbing activity without completing the induction;
- The Ecologist delivers a biodiversity toolbox talk at monthly intervals throughout construction, updating workers on any new PBFs identified, any wildlife encounters recorded, and any changes to no-go zones or restrictions.

#### 7.6 Invasive Species Prevention and Control

Construction activities — particularly the movement of plant, vehicles, and soil between different parts of the corridor — can introduce and spread invasive or aggressive weed species that displace native vegetation and degrade habitat quality. The following measures apply:

- All plant and vehicles arriving from outside the project corridor are inspected and cleaned of adhering soil, seeds, and plant material before entering the site. Particular attention is given to wheel arches, undercarriages, and tracked running gear;
- The Ecologist identifies any invasive or problematic weed species present along the corridor during pre-clearance inspections and flags sections where the risk of spread is elevated;
- Topsoil and fill material imported from outside the corridor is sourced from areas confirmed to be free of invasive species by the Ecologist, or inspected and approved before use;
- Spoil containing the roots, rhizomes, or seeds of invasive plants is not reused as topsoil or fill. It is segregated and disposed of to a licensed facility or otherwise treated as directed by the Ecologist;
- Reinstated areas are seeded as quickly as possible after disturbance — bare ground is the primary vector for invasive species colonisation. The native seed mix (Section 8.1) is applied promptly to close the window for weed establishment;
- The Ecologist monitors all reinstated areas for invasive species establishment at each quarterly inspection during the first two years post-reinstatement and prescribes remediation where required.

#### 7.7 Dust, Noise, and Light Controls near Sensitive Habitats

Dust, noise, and artificial light from construction activities can cause indirect harm to adjacent habitats and species — suppressing vegetation, disturbing wildlife, and disrupting natural behaviour patterns — even where the physical footprint does not directly enter a sensitive area. The following controls apply in the vicinity of the riparian buffer or PBFs:

Impact	Controls
Dust	Access tracks and active work areas within 200 m of the riparian buffer or any sensitive feature identified in the Register are watered or otherwise dust-suppressed at least three times daily in dry conditions. Haulage of aggregates or fine materials past riparian areas uses covered or sheeted vehicles. The Ecologist monitors for visible dust deposition on riparian vegetation and reports to the ESHS Manager if suppression is inadequate.
Noise	Particularly noisy activities — piling, blasting, rock-breaking — are not conducted adjacent to the riparian buffer or identified PBFs outside of normal working hours without specific Engineer approval. Where works are active within the agreed buffer of the Bukhara deer breeding farm, the Site Supervisor monitors for any visible signs of animal disturbance and notifies the Ecologist immediately if observed. See also Section 7.8.
Artificial light	Where night works are required near the riparian buffer or any sensitive feature, artificial lighting is directed inward and downward, away from the river and adjacent habitat. Broad-spectrum or blue-rich lighting (which disorients nocturnal insects and small vertebrates) is avoided near sensitive areas in favour of directional, warmer-spectrum fittings where the choice exists. Lighting rigs are not left operating unattended through the night if works have concluded.

### 7.8 Bukhara Deer Breeding Farm — Construction Disturbance Management

The Bukhara Deer (*Cervus hanglu bactrianus*, CR) breeding farm at Dashtaro village is a confirmed PBF receptor throughout the construction period, not only during calving season (see Section 6.4). The following measures apply whenever works are active within the agreed buffer distance of the farm boundary:

- The Farm Manager is notified at least 48 hours in advance of any works generating significant noise or vibration — including piling, blasting, rock-breaking, and heavy earthmoving — within the agreed buffer distance. The Ecologist records the notification and any response from the Farm Manager in the Biodiversity Register;
- At the start and end of each working day when active works are within the buffer, the Ecologist or a designated trained staff member carries out a brief visual check of the farm perimeter for signs of animal distress — including unusual clustering, agitation, or fence-pushing behaviour. Any concerns are reported to the Farm Manager and ESHS Manager immediately;
- If the Farm Manager reports that animals are showing signs of disturbance attributable to construction activities, the Contractor pauses the relevant works and discusses alternative scheduling or methods with the Engineer and Farm Manager before resuming;
- Dust suppression on access tracks and work areas within the buffer is maintained as per Section 7.7;
- No construction traffic uses access routes that pass immediately adjacent to the farm enclosure without prior agreement with the Farm Manager and inclusion in the Traffic Management Plan (Annex 3).

**RELATIONSHIP MANAGEMENT:** The Farm Manager is a key stakeholder in construction management around Dashtaro. The Ecologist should establish a working relationship with the Farm Manager at mobilisation — introducing the BMP, explaining what to expect during construction, and agreeing a direct communication channel for concerns. A collaborative approach is more effective than a purely reactive one.

### *7. Eurasian Otter — Construction Disturbance Management*

The Eurasian Otter (*Lutra lutra*, NT globally / EN nationally) is one of the most sensitive indicators of river ecological integrity. It requires clean water, abundant fish prey, undisturbed bankside cover, and secure holt sites. It is highly sensitive to sedimentation, bankside disturbance, and hydrocarbon contamination — precisely the impacts generated by in-channel and bankside road construction works. The following measures apply throughout the construction period wherever works are active within or adjacent to the riparian buffer.

#### **Pre-construction survey**

Before any bankside clearance or in-river works commence on any section of the corridor, the Ecologist shall conduct a survey of that section for evidence of otter presence — including holts, spraints, footprints, and slide marks. The survey shall cover the full length of both banks within the works influence zone. Survey results are recorded in the Sensitive Feature Register with GPS coordinates for all confirmed signs. Where holts or active signs are confirmed, a 50 m exclusion zone is established around each holt and marked with barrier tape before works commence in that section.

#### **Holt exclusion zone**

Where a holt is confirmed, no bankside clearance, ground disturbance, in-river works, or machinery movement shall occur within 50 m of the holt entrance during the breeding season (December–June). Outside the breeding season the exclusion distance may be reduced at the Ecologist's discretion, based on evidence of current use. The exclusion zone is physically marked and inspected weekly. Any evidence of otter activity within an active works area is treated as a wildlife encounter under Section 7.4 and works in the immediate area are stopped pending Ecologist assessment.

#### **Bankside clearance**

Bankside vegetation clearance shall be conducted from the road side only. Direct machinery access to the river bank is prohibited except at designated crossing points confirmed in the River Works Method Statement (Section 7.2.1). Clearance of bankside vegetation shall proceed in sections, with the Ecologist checking for otter signs in each section before clearance machinery enters.

#### **Hydrocarbon management**

The following hydrocarbon controls apply throughout construction in addition to those in the Water Quality and Sediment Control Plan (Annex 7): no refuelling of any machinery within 50 m of the bankfull channel edge; all fuel and oil storage within the riparian influence zone to be in bunded containers; spill kits to be carried on all machinery operating within 100 m of the river; any hydrocarbon spill reaching or at risk of reaching the river to be reported to the Ecologist and Engineer immediately and treated as an environmental incident under the Incident Reporting procedure.

#### **Monitoring**

The Ecologist records all otter signs observed during construction in the Biodiversity Register — location, type of sign, date, and any action taken. Post-construction monitoring of otter activity along the full corridor shall be conducted for a minimum of two seasons following practical completion of works, with

results reported to PIURR in the quarterly ESHS report. Monitoring shall assess whether otter activity has returned to pre-construction levels along sections where bankside works were undertaken.

## 8. Reinstatement and Revegetation

All areas disturbed by construction activities — whether within the permanent road corridor or at ancillary facilities — shall be reinstated and revegetated to a stable, ecologically functional condition on completion of works in that area. Reinstatement is a progressive obligation throughout construction, not a single end-of-project activity. Areas released from construction use shall be reinstated promptly rather than left as bare ground until the end of contract.

### 8.1 Native Seed Mix and Topsoil Reinstatement

The choice of seed mix is critical to the ecological outcome of reinstatement. A seed mix containing non-native or commercially sourced agricultural cultivars can actively damage the ecological character of the corridor by displacing native plant communities and providing poor-quality habitat for native invertebrates and birds. The Ecologist is responsible for specifying the seed mix.

- The Ecologist specifies the native seed mix for each habitat type present along the corridor — at minimum distinguishing between: (a) general slope and embankment mix for dry, well-drained ground; (b) riparian margin mix for moist ground adjacent to watercourses; and (c) a fast-establishing nurse crop for temporary erosion stabilisation where longer-term reinstatement will follow. The approved seed mixes are recorded in Annex E of this Plan.
- All seed mixes use locally sourced native species wherever commercially available — consistent with the local flora as established by Latifi (2026) and pre-construction botanical surveys. No introduced or cultivar species are used in the standard mix without specific Ecologist approval.
- Topsoil previously stripped and stockpiled from the reinstated area is respread to a minimum depth of 150 mm over the prepared subsoil before seeding. Where the stockpile surface has degraded during storage, the top 50–100 mm is removed before reuse and disposed of appropriately.
- Seeding is carried out as soon as practicable after topsoil reinstatement, and in any case within two weeks of topsoil placement. Where seasonal conditions make immediate seeding impracticable — for example where the area is released from use during winter — a temporary erosion protection mat is applied to the topsoil until seeding conditions are suitable.
- Seeded surfaces are not trafficked by construction plant after seeding. Where access through a reinstated area is unavoidable, a designated crossing point is established and all other areas are protected.

**SEED MIX [INSERT]:** Annex E of this Plan contains the Ecologist-specified native seed mixes for each habitat type. This appendix must be completed by the Ecologist — drawing on ESIA botanical survey results and local horticultural knowledge — before any reinstatement seeding commences. The Engineer must approve the seed mixes before they are procured.

### 8.2 Riparian Margin Restoration

Riparian margins — the strips of vegetation along the banks of the Shurobdaryo and its tributaries — are the most ecologically sensitive habitats within the project corridor. Where these margins are disturbed by

bank protection works, culvert installation, or works within the riparian buffer zone, their restoration requires a different approach to general slope reinstatement.

- Riparian margin reinstatement uses a riparian-adapted native species mix specified by the Ecologist, which may include native shrub species (such as willow, sea buckthorn, or tamarisk where locally native) in addition to grasses and forbs. The standard embankment seed mix is not used in the riparian zone.
- Where intact riparian vegetation exists immediately upstream or downstream of a disturbed section, the Ecologist considers whether natural regeneration from adjacent seed sources is likely to be sufficient, or whether active seeding or planting is needed to establish cover within a reasonable timeframe.
- On steeper or more exposed bank faces where seed alone is unlikely to establish quickly, biodegradable erosion control matting is used to stabilise the surface and support early vegetation establishment. Plastic or synthetic matting that could fragment and enter the watercourse is not used.
- The riparian buffer zone (Section 5.2) is maintained during reinstatement works — machinery used for bank reinstatement operates from within the approved footprint and does not re-enter undisturbed buffer areas.
- Riparian reinstatement works on any section are completed before the onset of the high-flow season (typically April) to allow vegetation to establish before the river rises.

### 8.3 Borrow Area Rehabilitation

Each borrow area requires a Borrow Area Rehabilitation Plan submitted to the Engineer for approval before extraction commences. Rehabilitation should proceed progressively — worked-out sections are rehabilitated as extraction moves to new areas, rather than the whole area being left until the end of the extraction programme.

The Rehabilitation Plan for each borrow area shall address:

Element	Requirement
Pre-extraction survey	Ecological survey of the borrow area by the Ecologist before extraction begins, to identify PBFs present and confirm the area is ecologically appropriate for extraction. Results recorded in the Sensitive Feature Register.
Topsoil strip and stockpile	Topsoil stripped separately from subsoil and overburden before extraction begins, stockpiled within the approved area, protected from erosion and contamination, and reserved for use in reinstatement.
Final landform	The extracted area is graded to a stable landform with safe slopes — no overhanging faces, no unstable benches — that will not require ongoing maintenance and will not create drainage problems or safety hazards. Final contours are agreed with the landowner and confirmed by the Engineer.



Drainage restoration	Natural drainage patterns across the borrow area are restored. No reinstatement landform creates ponding or diverts runoff in a way that increases erosion or flooding risk for adjacent land.
Topsoil reinstatement and seeding	Stored topsoil is respread and the area seeded with the Ecologist-approved native seed mix as soon as the landform is stable. Seeding is not deferred to the end of the extraction programme where progressive rehabilitation is possible.
Landowner agreement	Final reinstatement condition is agreed with the landowner before the area is handed back. Where the borrow area is agricultural land, the reinstatement standard is productive soil condition equivalent to the pre-construction state — including restoration of any irrigation channels or drainage features that were disturbed.

#### 8.4 Success Criteria and Adaptive Management

Reinstatement is not complete when seed is sown — it is complete when vegetation is established to a standard that demonstrates ecological recovery and long-term stability. The following criteria apply to all reinstated areas other than agricultural land, which is governed by the pre-construction productive condition standard:

Timepoint	Target	Assessment Method
6 months post-seeding	Visible germination across at least 60% of the seeded area; no significant rill or sheet erosion on the reinstated surface	Ecologist walk-over of reinstated area, with photographic record from fixed viewpoints established at time of seeding.
12 months	70% cover by native species	Ecologist assessment using standard percentage cover estimation. Invasive species presence also recorded.
24 months	80% cover by native species; no dominant invasive species	As above. This is the primary sign-off criterion. Where achieved, the Ecologist issues a Reinstatement Completion Certificate for the area. Where not achieved, the adaptive management response applies.

Where the 80% cover target is not met at 24 months, the Ecologist diagnoses the reason — whether inadequate topsoil depth, poor seed mix choice, invasive species pressure, erosion, or grazing — and prescribes a remediation response. Remediation options include additional seeding, spot-planting of native species, targeted invasive species control, or supplementary topsoil. Remediation is carried out at the Contractor's cost within the defects liability period.

**DEFECTS LIABILITY PERIOD:** Reinstatement monitoring obligations (6, 12, and 24-month assessments) extend beyond the typical construction contract end date. The Contractor and Engineer should confirm



at contract stage that the defects liability period covers the full 24-month monitoring programme for all reinstated areas, or that a separate arrangement is in place for post-handover monitoring and remediation.

**PROGRESSIVE REINSTATEMENT:** The most effective reinstatement is that which starts earliest. Areas released from temporary construction use should be reinstated within weeks, not months. Bare ground is vulnerable to erosion, weed colonisation, and compaction. Every month of delay makes the eventual reinstatement harder and the ecological outcome poorer. The Ecologist tracks the reinstatement status of all disturbed areas in the Biodiversity Register and flags any section where reinstatement is overdue to the ESHS Manager.

## 9. Operation Phase Biodiversity Measures

**SCOPE OF CONTRACTOR OBLIGATIONS:** The Contractor's direct biodiversity obligations during the operation phase are limited to two areas: design and construction of fauna crossing provisions as part of the permanent works, and hand-over of the road verge in a condition suitable for ecologically sound maintenance.

Broader operational biodiversity risks — including the indirect effects of improved road access on hunting pressure, poaching of PBF species, collection of Red Book plants, and increased access toward the Sari Khosor Nature Park — are the responsibility of PIURR and the road operator. These risks are assessed in the Cumulative and Operational Phase Impacts section of the CHA (Rev01, April 2026), which sets out specific recommendations for wildlife enforcement engagement, signage, community awareness, and large mammal monitoring during the first operational years. PIURR is responsible for ensuring these recommendations are incorporated into the ESIA commitments register and implemented by the road operator.

### 9.1 Fauna Passages and Road-Kill Reduction

An upgraded, surfaced road through a previously remote mountain valley will inevitably increase vehicle speeds and traffic volumes relative to the existing unsealed track. For slow-moving species — particularly reptiles such as tortoises and snakes — this significantly increases road-kill risk. Where ESIA surveys confirm the presence of such species along the corridor, fauna crossing provisions shall be incorporated into the permanent works design.

- The ESIA will identify, by chainage, any sections of the corridor where road-kill risk for confirmed species is elevated — based on habitat type, confirmed species presence, and movement patterns identified during surveys. The Contractor implements fauna crossing provisions at the locations and to the specifications confirmed by the Engineer following ESIA review.
- Where culverts are identified as potential fauna crossing structures — consistent with the approach used on comparable EBRD-financed road projects in the region — the Contractor installs directional guiding elements (L-shaped kerb stones or equivalent) on both approaches to guide animals into the culvert opening. Guiding elements extend a minimum of 50 m on each side of the culvert entrance unless terrain or drainage conditions preclude this.
- Culvert dimensions used as fauna crossings are confirmed by the Ecologist to be passable for the target species — in terms of internal dimensions, substrate, light penetration, and hydraulic conditions during normal flow.

- All fauna crossing provisions — locations, culvert references, guiding element lengths, and construction specifications — are recorded in the as-built documentation and handed over to PIURR and the road operator at practical completion.

**LOCATIONS [INSERT]:** Culvert reference numbers and chainage locations for fauna crossing provisions are to be confirmed by the Engineer following ESIA survey completion and incorporated into this section and the construction drawings before works at the relevant locations commence.

### *9.2 Road Verge — Hand-Over Condition*

The road verge — the strip of reinstated ground between the carriageway edge and the toe of cut or top of fill slopes — forms a linear habitat feature running the full length of the corridor. Its ecological value in the long term depends significantly on how it is established during construction. The Contractor's obligation is to hand over the verge in a condition that supports ecologically sound maintenance by the road operator.

- Road verges are seeded with the Ecologist-approved native seed mix (Section 8.1) at the time of embankment and slope reinstatement. The verge is not seeded with agricultural grass cultivars or other non-native species that would require intensive management or suppress native flora.
- Chemical herbicides are not used on road verges during construction or during the reinstatement monitoring period. Where weed control is required, mechanical methods are used and approved by the Ecologist.
- At practical completion, the Contractor provides the road operator with a Verge Management Note prepared by the Ecologist — a brief document describing the seed mix used, any PBFs present adjacent to the verge (including Sensitive Feature Register entries in the vicinity), and recommended maintenance practices to sustain the native vegetation established during reinstatement. This is not a detailed management plan — it is the information the operator needs to avoid inadvertently undoing the ecological reinstatement work.

## **11. No Net Loss — Contractor Obligations**

---

**ESR6 REQUIREMENT:** The CHA (Rev01, April 2026) confirms that no Critical Habitat is present within the BSK project area of influence. Priority Biodiversity Feature habitats are confirmed present — specifically C3.62 Unvegetated River Gravel Banks and C3.55 Sparsely Vegetated River Gravel Banks along the Shurobdaryo corridor. Under EBRD ESR6, where PBFs are confirmed but no Critical Habitat is present, the project must demonstrate No Net Loss of those features. A formal net gain requirement does not apply. The NNL assessment and design of any offset programme are the responsibility of the ESIA team and PIURR. This section defines the Contractor's obligations in implementing those requirements.

Completion of pre-construction biodiversity surveys — including targeted surveys for PBF species and habitat mapping within the works footprint — has been delayed by adverse weather conditions and limited access to the upper corridor sections (km 36–56) during the survey period. Survey work is ongoing and will be completed before works reach each section. The NNL Programme cannot be responsibly finalised until these surveys are complete and residual habitat loss at each bridge and crossing location has been quantified by the Ecologist. PIURR is committed to issuing the approved NNL Programme before any works commence that could affect confirmed PBF habitats.

### *10.1 What No Net Loss Means in Practice*

No Net Loss means that the biodiversity value lost as a result of the Project — after all avoidance, minimisation, and on-site restoration measures have been applied — is compensated for by gains of equivalent biodiversity value elsewhere within the Shurobdaryo catchment. For the Contractor, this translates into a clear sequence of obligations:

Step	Action	Contractor Obligation
1	Implement all avoidance and minimisation measures	Sections 5, 6, and 7 of this Plan. These are the foundation of the NNL case — without full compliance, the residual impact is larger and harder to compensate. The Contractor cannot rely on offsets to excuse inadequate avoidance and minimisation during construction.
2	Implement all on-site restoration	Section 8 of this Plan. On-site restoration of disturbed riparian margins and habitat areas is counted towards the NNL calculation. Good reinstatement reduces the size of the residual gap that offsets must fill.
3	Receive and implement the PIURR-approved No Net Loss Programme	Once the ESIA team has quantified residual impacts and designed the offset programme, PIURR issues the No Net Loss Programme to the Contractor. The Contractor implements the programme as directed — habitat protection works or species-specific conservation actions within the Shurobdaryo catchment. [INSERT: NNL Programme details to be added here when surveys are complete and the Programme has been approved by PIURR and EBRD].
4	Monitor and report on NNL Programme outcomes	The Contractor monitors the NNL Programme outputs as specified in the Programme and reports results to the Engineer and PIURR as part of the quarterly ESHS monitoring report. Monitoring continues until the Programme's success criteria are met or until handover to a long-term steward confirmed by PIURR.

### *10.2 Precautionary Obligations Pending Completion of Pre-construction Surveys*

Until pre-construction surveys have confirmed the spatial distribution of all PBF habitats within the project footprint, the following precautionary obligations apply:

- The Contractor shall not take any irreversible action — meaning any action that permanently destroys a habitat or feature that could subsequently be confirmed as PBF — without specific written approval from the Engineer and PIURR. This applies particularly to: clearance of intact riparian vegetation; disturbance of confirmed or potential otter holt sites; works affecting confirmed Red Book plant populations; and any in-channel works at the main Shurobdaryo bridge crossings.
- Where the Ecologist identifies a feature during pre-construction surveys that was not anticipated in preliminary screening and that could constitute a PBF, the Ecologist notifies the Engineer and PIURR immediately. Works in the vicinity of that feature are suspended until PIURR has reviewed the finding and issued direction.
- The Contractor maintains comprehensive photographic and written records of all habitat conditions prior to disturbance — pre-clearance survey records, pre-clearance certificates, and pre-disturbance photographs. These records form the baseline against which NNL is assessed.

**PLACEHOLDER — TO BE COMPLETED BY PIURR:** This section will contain the approved No Net Loss Programme once residual impacts on confirmed PBF habitats have been quantified by the ESIA team and the Programme has been reviewed and approved by PIURR and EBRD. The Programme will specify: the PBF habitats for which No Net Loss must be demonstrated; the offset actions to be implemented where residual impacts cannot be fully addressed through avoidance and restoration; the locations and specifications of those actions; the monitoring indicators and success criteria; and the responsible parties for long-term stewardship after the construction contract closes.

Until the NNL Programme is issued, the Contractor's obligations under this section are those set out in Sections 10.1 and 10.2 above — full compliance with avoidance, minimisation, and restoration measures, and maintenance of precautionary controls pending formal determination.

**TIMING NOTE:** The No Net Loss Programme must be finalised and issued to the Contractor before any works commence that could affect confirmed PBF habitats. Pre-construction surveys will be completed section by section as weather and access permit, and the Programme will be issued progressively to allow the Contractor to incorporate any offset requirements into the construction programme before reaching each section.

## 11. Biodiversity Monitoring and Reporting

This section consolidates the monitoring and reporting obligations that arise across the whole Plan into a single reference. All monitoring activities are the primary responsibility of the Contractor's Ecologist unless otherwise stated. Results feed into the Biodiversity Register (Section 11.2) and the reporting chain (Section 11.3).

### 11.1 Monitoring Schedule

Activity	What is Checked / Recorded	Frequency	Responsible	Reported To
PRE-CONSTRUCTION				
Pre-clearance ecological inspection	Presence of PBFs within clearing limit; outcome recorded in Pre-Clearance Certificate (Appendix B)	Before each new clearance section	Ecologist	Site Supervisor (certificate); Engineer (copy)
PBF Register — initial completion	All [INSERT] fields populated from CHA confirmed PBFs and pre-construction survey data; GPS coordinates, buffers, and measures confirmed for each feature.	Before clearance commences in any section with confirmed PBFs	Ecologist	Engineer and PIURR (for approval)

Pre-season nest check survey	Confirmed and potential nesting locations checked and mapped before nesting season restriction begins (1 March)	February each year	Ecologist	Sensitive Feature Register update; Engineer notified
DURING CONSTRUCTION				
No-go zone boundary integrity	Barrier tape intact; signage in place; no sign of encroachment by plant, vehicles, or workers	Weekly	Ecologist	Biodiversity Register; non-compliances to ESHS Manager within 24 hours
Riparian buffer condition	No disturbance, waste, spill signs, or encroachment within the buffer; no visible dust deposition on riparian vegetation	Weekly	Ecologist	Biodiversity Register
Turbidity — during active in-channel works	Visual check for turbidity plume extending beyond 500 m downstream of works; any exceedance triggers work stop and investigation	Daily during active in-channel works	Ecologist or designated Site Supervisor	Biodiversity Register; exceedances to Engineer same day
Wildlife encounter log review	All encounters logged; response procedures followed; any new Priority Biodiversity Features identified; pattern of encounters reviewed for significance	Monthly	Ecologist , ESHS Manager	Monthly Ecologist Report to Engineer
Bukhara deer farm — disturbance check	Visual check of farm perimeter for signs of animal distress; advance notification records	Start and end of each working day when works active within agreed buffer;	Ecologist or designated trained staff member	Biodiversity Register; monthly summary in Ecologist Report

	for noise/vibration works confirmed	monthly summary		
Hunting and collecting prohibition — compliance check	Confirmed zero incidents of hunting, trapping, fishing, or plant collection by Project workers; any incident recorded and reported	Continuous; summarised monthly	ESHS Manager , Ecologist	Monthly Ecologist Report; incidents to Engineer within 24 hours
Biodiversity induction and toolbox talk records	Attendance records for induction (all workers before first day); toolbox talk attendance records monthly	Induction: each new worker. Toolbox talk: monthly	Ecologist	Held in ESHS records; summary in monthly Ecologist Report
Sensitive Feature Register — ongoing updates	New features added as ESIA survey data received; any feature discovered during works added within 5 working days of identification	As required; Engineer notified within 5 working days of any new entry	Ecologist	Engineer; PIURR
POST-DISTURBANCE / REINSTATEMENT				
Reinstatement and revegetation progress	Percentage native vegetation cover per reinstated area; invasive species presence; erosion indicators; comparison to success criteria (60% at 6 months, 70% at 12 months, 80% at 24 months)	6, 12, and 24 months post-seeding for each area	Ecologist	Monthly Ecologist Report (progress); Reinstatement Completion Certificate issued to Engineer at 24 months where target met
Red Book plant translocation — survival monitoring	Survival rate of translocated individuals; establishment at receptor site; flowering or	3, 12, and 24 months post-translocation	Ecologist	Quarterly ESHS report to PIURR

	reproduction where observable			
Invasive species — reinstated areas	Presence and extent of invasive or problematic weed species on all reinstated areas; remediation actions taken	Quarterly — Years 1 and 2 post-reinstatement	Ecologist	Monthly Ecologist Report
No Net Loss Programme	Delivery of NNL offset actions per Programme	As specified in the NNL Programme [INSERT when issued]	Ecologist, ESHS Manager	Quarterly ESHS report to PIURR and Engineer

### 11.2 Biodiversity Register

The Ecologist maintains a Biodiversity Register throughout the construction period. The Register is the primary record of biodiversity management performance under EBRD ESR6 on the Project. It is submitted to the Engineer monthly as part of the Ecologist's Report. The Register contains the following categories of record:

Register Category	Content
Pre-Clearance Certificates	One entry per certificate issued: date, section (chainage from-to), outcome (Clear / Conditional / Hold), conditions stated, and countersignature by Site Supervisor. See template at Appendix B.
Wildlife Encounters	One entry per encounter: date, location, species or description, encounter circumstances, response action taken, and outcome. Includes any follow-up actions arising from the encounter.
Red Book Plant Translocations	One entry per translocation event: species, number of individuals, source GPS, receptor GPS, date, method, condition of plants, and survival monitoring results at each monitoring visit. See template at Appendix D.
No-Go Zone Inspection Records	Weekly inspection results for each no-go zone and buffer: date, zone identifier, condition (intact / damaged / encroached), and corrective action taken where required.
Bukhara Deer Farm Notifications and Monitoring	Record of each advance notification to Farm Manager: date, works planned, notification sent and by whom, Farm Manager response. Record of each daily disturbance check: date, observer, observations, any concerns raised.
Non-Compliances	Any breach of this Plan's requirements: date identified, nature of the breach, section of Plan breached, immediate action taken, corrective

	action and timescale, and date resolved. Reported to Engineer within 24 hours of identification.
Reinstatement Monitoring	Assessment results for each reinstated area at 6, 12, and 24 months: area identifier, date of assessment, percentage native cover, invasive species present, erosion status, and comparison to success criteria. Reinstatement Completion Certificates filed here.
Training Records	Biodiversity induction attendance: worker name, date, section of site they are assigned to. Toolbox talk attendance: date, topic, workers present.

### 11.3 Reporting

Report	Frequency / Trigger	Prepared by	Content and Recipients
Ecologist's Biodiversity Monitoring Report	Monthly	Ecologist, countersigned by ESHS Manager	Consolidation of Biodiversity Register entries for the month: no-go zone status, wildlife encounters, pre-clearance certificates issued, any non-compliances and their resolution, reinstatement progress, training records summary. Submitted to Engineer. Engineer forwards material issues to PIURR.
ESHS Monitoring Report — Biodiversity Section	Quarterly	ESHS Manager (drawing on Ecologist's monthly reports)	Aggregate biodiversity performance data for the quarter: compliance status against this Plan, reinstatement progress, translocation monitoring results, No net loss Programme delivery status. Submitted to PIURR and copied to Engineer.
Incident / Non-Compliance Notification	Within 24 hours of occurrence	ESHS Manager	Notification to Engineer of any material breach of this Plan, significant wildlife encounter with adverse outcome, hunting/poaching incident, or accidental damage to a sensitive feature. Verbal notification followed by written report within 48 hours.
Sensitive Feature Register Update Notification	Within 5 working days of any new entry	Ecologist	Notification to Engineer when a new feature is added to the Sensitive Feature Register following ESIA survey results or discovery during works. Where the new feature constitutes a potential new PBF or nationally protected species not previously captured in the Register,



			PIURR is also notified and works in the vicinity are suspended pending direction.
BMP Update — post-ESIA survey	On receipt of ESIA biodiversity survey results (and at other triggers in Section 1.2)	Ecologist , ESHS Manager	Revised Plan incorporating pre-construction survey data, completed Sensitive Feature Register, species-specific management measures, No Net Loss Programme (once issued). Submitted to Engineer and PIURR for written approval before works in newly confirmed sensitive areas commence.
Reinstatement Completion Certificate	On achievement of 24-month success criteria for each area	Ecologist	Confirms that a specific reinstated area has met the 80% native cover target and is released from further monitoring. Submitted to Engineer for countersignature. Forms part of practical completion and defects liability documentation.

## 12. Plan Approval and Amendment

### 12.1 Initial Approval

This Framework Plan is submitted to the Engineer and PIURR for written approval before any vegetation clearance, ground disturbance, or earthworks commences on the project corridor or at any ancillary facility. Approval of this Framework Plan does not authorise works in areas containing confirmed PBFs — those works require the updated Plan incorporating pre-construction survey findings to be approved first.

Prepared By Contractor Ecologist / ESHS Manager	Reviewed By Engineer (Supervision Consultant)	Approved By PIURR
Name: _____ — Signature: _____ Date: _____ —	Name: _____ — Signature: _____ Date: _____ —	Name: _____ — Signature: _____ Date: _____ —

### 12.2 Amendment Triggers

This Plan must be reviewed and — where changes are required — formally amended and resubmitted for approval at any of the following trigger points:

#	Trigger	Action Required
1	Receipt of ESIA biodiversity survey results	Update Sensitive Feature Register (Section 4 and Appendix A); complete species-specific management measures; update all [INSERT] fields. Resubmit for Engineer and PIURR approval before works commence in newly confirmed sensitive areas.
2	Significant change to project footprint, works programme, or construction method	Ecologist assesses whether change affects PBFs or timing restrictions. If yes, update affected sections and resubmit. If no, record assessment in Biodiversity Register and notify Engineer.
3	Discovery during works of a sensitive feature not previously captured in the Register	Suspend works in vicinity. Ecologist adds feature to Register within 5 working days. If feature constitutes a potential new PBF or nationally protected species not previously captured in the Register, notify PIURR and suspend works in the vicinity pending direction. Update Plan if management measures require amendment and resubmit.
4	Material non-compliance or incident with ecological consequences	ESHS Manager notifies Engineer within 24 hours. Ecologist conducts root cause assessment. Plan amended to address any gap in measures that contributed to the incident. Corrective actions approved by Engineer before works in the affected area resume.
5	Direction from Engineer or PIURR	Plan amended as directed. Updated version submitted for approval within the timeframe specified by the Engineer.

### 12.3 Version Control

Each version of this Plan is assigned a version number and date. The version history is maintained in the document control table on the cover page. Superseded versions are retained in the project ESHS records but are marked as superseded and are not used operationally. The current approved version is the only version that governs site operations.

Version	Date	Amended by	Summary of Changes
1.0	[Date of issue]	Contractor Ecologist / ESHS Manager	Framework Plan issued prior to ESIA survey completion. All [INSERT] fields pending.

1.1	[To be completed]	[To be completed]	Post-ESIA survey update — Sensitive Feature Register completed; species-specific measures confirmed.
2.0	[To be completed]	[To be completed]	NNL Programme incorporated following PIURR approval.

## Annex A — Sensitive Feature Register

**FRAMEWORK STATUS:** This Register must be completed by the Contractor's Ecologist from ESIA biodiversity survey results before any vegetation clearance or ground disturbance commences in any section of the corridor. Approved by Engineer and PIURR before use. Updated within 5 working days of any new feature identification.

The Register is the central operational reference for all biodiversity management on site. Every Priority Biodiversity Feature (PBF) identified through ESIA surveys is recorded here with its location, applicable buffer or exclusion zone, seasonal restrictions, and management measures. It is maintained by the Ecologist and available for inspection by the Engineer at all times.

Register Version	e.g. 1.0 — Framework   1.1 — Post-ESIA survey update
Date of Last Update	
Updated by (Ecologist)	Name and signature
Approved by (Engineer)	Name, signature, and date of approval

Ref	Feature Species /	GPS Coordinates	Chainage (km)	Buffer / Exclusion	Management Measures	Seasonal Restriction	Status / Last Checked
1	Riparian buffer — Shurobdaryo River (full corridor length)	[INSERT from ESIA survey]	0+000 to 56+000 (full length)	15 m from bankfull edge (default)	No-go for all non-essential works. No materials, vehicles, or waste. See Section 5.2.	Enhanced controls Sep–Nov (fish spawning)	[INSERT date of last inspection]

2	Riparian buffers — tributary crossings	[INSERT]	[INSERT]	10 m from bankfull edge (default)	As above. River Works Method Statement required. See Section 7.2.	Sep–Nov restriction	[INSERT]
3	Red Book plant populations — species to be confirmed by ESIA botanical surveys	[INSERT]	[INSERT]	5 m min around population boundary	Pre-clearance inspection. Translocation before clearance if within footprint. See Section 7.3.	Clearance check required Mar–May. See Section 6.5.	[INSERT]
4	Bukhara deer breeding farm, Dashtaro village	[INSERT]	[INSERT]	[INSERT from ESIA site assessment]	48-hour notice before blasting or piling. Daily monitoring when works active within buffer. See Section 7.8.	Calving season [INSERT — likely Apr–May]	[INSERT]
5	Confirmed bird nesting sites	[INSERT]	[INSERT]	Min 20 m — Ecologist specifies per species	No clearance or blasting within exclusion during nesting season.	1 Mar – 30 Sep	[INSERT]
6	Restricted-range reptile habitat — Alsophylax tadjikiensis or other confirmed species	[INSERT]	[INSERT]	[INSERT from reptile surveys]	Physical exclusion fencing. Daily reptile checks during works in vicinity.	[INSERT active season]	[INSERT]
7	Tugai woodland — if confirmed by ESIA	[INSERT]	[INSERT]	Maximum avoidance — no machinery	No machinery entry without specific engineering	Year-round	[INSERT]

	habitat survey			entry without written Engineer approval	justification and written Engineer approval.		
8							
9							
10							
11							
12							

ADDITIONAL ENTRIES: Rows 8 onwards are blank for features confirmed by ESIA surveys or discovered during works. Add rows as required. Notify the Engineer within 5 working days of any new entry. Where a new feature constitutes a potential new PBF or nationally protected species not previously captured in the Register, notify PIURR.

## Annex B — Pre-Clearance Certificate

One certificate is issued per section before clearance machinery enters. The original is held by the Site Supervisor for that section. A copy is retained by the Ecologist in the Biodiversity Register. Template may be reproduced as required — do not alter the format.

BALJUVON – SARI KHOSOR ROAD PROJECT

PRE-CLEARANCE CERTIFICATE — ANNEX 8: BIODIVERSITY MANAGEMENT PLAN

### SECTION DETAILS

Certificate Reference No.	BMP-PCC-_____
Date of Inspection	
Section Description	
Chainage From	km _____
Chainage To	km _____
GPS — Start Point	Lat: _____ Long: _____
GPS — End Point	Lat: _____ Long: _____
Proposed Clearance Works	

### INSPECTION FINDINGS

Red Book plant species present within clearing limit?	<input type="checkbox"/> None identified <input type="checkbox"/> Present — see conditions below
Active bird nests within exclusion distance?	<input type="checkbox"/> None identified <input type="checkbox"/> Present — see conditions below
Reptiles or signs of reptile activity?	<input type="checkbox"/> None identified <input type="checkbox"/> Present — see conditions below

Unmapped watercourse or drainage feature?

☐ None identified    ☐ Present — see conditions below

Encroachment into no-go zone or buffer?

☐ No encroachment    ☐ Risk of encroachment — see conditions below

Other findings

#### OUTCOME

- ☐ CLEAR No PBFs identified. Clearance machinery may enter this section.
- ☐ CONDITIONAL Clearance may proceed only after conditions stated below are satisfied.
- ☐ HOLD Clearance suspended in this section pending written direction from Engineer.

#### CONDITIONS (if CONDITIONAL or HOLD outcome)

--

#### SIGNATURES

Ecologist (issuing authority)

Name: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Site Supervisor (receiving and confirming)

Name: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

**MANDATORY:** Clearance machinery shall not enter this section without a signed CLEAR or CONDITIONAL certificate. A verbal clearance is not sufficient. This certificate must be held by the Site Supervisor at the work face.

## Annex C — Wildlife Encounter Log

All wildlife encounters — including close sightings, animals found in excavations or machinery paths, evidence of species (tracks, nests, burrows, otter spraints) — are logged here on the day of occurrence. The Ecologist reviews the log weekly and summarises encounters in the monthly Biodiversity Monitoring Report. See Section 7.4 for encounter response procedures.

Log Period (Month / Year)	
Maintained (Ecologist)	by

Ref	Date	Location (Chainage / GPS)	Species / Description	Encounter Type	Response Action Taken	Outcome	Follow-up Required?	Logged by
1								
2								
3								
4								
5								
6								
7								
8								



9								
10								
11								
12								

GUIDANCE ON 'ENCOUNTER TYPE': Use one of: Direct sighting — animal seen; Evidence — tracks, spraints, nests, burrows, eggshell; Captive — animal trapped in excavation or structure; Injury — animal found injured; Mortality — animal found dead; Other.

## Annex D — Red Book Plant Translocation Record

One record sheet is completed per translocation event. All sheets are held in the Biodiversity Register and summarised in the quarterly ESHS Report to PIURR. Monitoring visits at 3, 12, and 24 months are recorded on the same sheet. See Section 7.3 for the translocation protocol.

BALJUVON – SARI KHOSOR ROAD PROJECT

RED BOOK PLANT TRANSLOCATION RECORD — ANNEX 8: BMP APPENDIX D

### TRANSLOCATION EVENT

Record Reference	TRL-_____
Date of Translocation	
Species (common and scientific name)	
Red Book status (Republic of Tajikistan)	
Number of individuals translocated	
Plant material translocated (tick)	<input type="checkbox"/> Whole plant with rootball <input type="checkbox"/> Bulb / corm <input type="checkbox"/> Cutting <input type="checkbox"/> Seed <input type="checkbox"/> Other: _____
Condition of plants at time of lifting	<input type="checkbox"/> Good — actively growing <input type="checkbox"/> Fair <input type="checkbox"/> Dormant <input type="checkbox"/> Poor — describe below

### SOURCE LOCATION

GPS Coordinates (source)	Lat: _____ Long: _____
--------------------------	------------------------

Chainage reference	km _____
Habitat description at source	
Aspect and slope at source	
Reason removal was necessary (avoidance not practicable)	

## RECEPTOR LOCATION

GPS Coordinates (receptor)	Lat: _____ Long: _____
Habitat description at receptor	
Aspect and slope at receptor	
Receptor site approved by	<input type="checkbox"/> Ecologist alone <input type="checkbox"/> Engineer also <input type="checkbox"/> CEP authorisation obtained (reference: _____)
Planting depth and arrangement	
Any aftercare applied (watering, mulching, etc.)	

## SURVIVAL MONITORING

Visit	Date	No. Survivors	Condition	Notes (flowering, reproduction, any threats)
3 months				
12 months				
24 months				

<p>Ecologist</p> <p>Name: _____</p> <p>Signature: _____</p> <p>Date: _____</p>	<p>Reviewed by (ESHS Manager)</p> <p>Name: _____</p> <p>Signature: _____</p> <p>Date: _____</p>
--	---

## Annex E — Seasonal Restrictions Wall-Chart

This chart is printed at A3 and displayed at the site office, each active work front, and each camp. It provides a quick-reference summary of the seasonal restrictions in Section 6. For full requirements, always refer to the Plan itself.

### BSK ROAD PROJECT — BIODIVERSITY SEASONAL RESTRICTIONS

DISPLAY AT ALL WORKSITES AND CAMP OFFICES — Annex 8 BMP Section 6

ACTIVITY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
In-stream and near-channel works (bridge, culverts, bank protection)	X	X	✓	■	■	■	✓	✓	✓	✓	X	X
Vegetation clearance / cliff works at confirmed bird nesting locations	✓	✓	X	X	X	X	X	X	X	✓	✓	✓
General vegetation clearance (outside confirmed nesting sites) — Pre-Clearance Certificate required	✓	✓	■	■	■	✓	✓	✓	✓	✓	✓	✓
Works within agreed buffer of Bukhara deer breeding farm, Dashtaro	✓	✓	■	■	■	✓	✓	✓	✓	✓	✓	✓

✓ Permitted — standard controls apply   ■ Conditional — heightened vigilance or specific requirements (see Plan Section 6)   X Restriction in force — written approval of Ecologist and Engineer required before works proceed

Restriction	Dates	Works Affected
Fish spawning — HARD STOP on in-stream works	1 Nov – 28 Feb	All in-channel and near-channel works: piling, culvert installation, bank protection, dredging, cofferdams. Preferred window: July–October.
Bird nesting — confirmed sites only	1 Mar – 30 Sep	Vegetation clearance, tree felling, cliff face excavation at confirmed nesting locations. February pre-season survey required.

Red Book plant clearance check	Mar – May	Clearance in areas with confirmed or potential Red Book species requires botanical inspection by Ecologist before proceeding.
Bukhara deer calving — heightened controls	[INSERT — likely Apr–May]	No high-noise works within agreed buffer without Farm Manager coordination. Daily monitoring.
High-flow season — in-stream works impracticable	~Apr – Jun	Not a formal restriction — safety and practicability constraint. In-stream works not possible during peak snowmelt flows.

**KEY CONTACTS — report any sensitive feature sighting or concern immediately**

Contractor Ecologist	[INSERT name and mobile number]
ESHS Manager	[INSERT name and mobile number]
Engineer (Supervision Consultant)	[INSERT name and mobile number]

**REMEMBER:** If you see something unusual — a plant, animal, or habitat that might be sensitive — STOP, step back, and tell your Supervisor. You will never be penalised for stopping work to report something. Pre-Clearance Certificate must be held before clearance begins.

## Annex 9: Labour & Working Conditions Management Plan (Framework)

---

### 11.1 Purpose, Scope, and Objectives

This Labour and Working Conditions Management Plan (LWCMP) sets out the mandatory requirements and procedures that the Contractor shall implement to protect the rights and welfare of all workers employed on, or in connection with, the Baljuvon – Sari Khosor (BSK) Road Project in Baljuvon District, Khatlon Region, Republic of Tajikistan.

The BSK Road Project is an EBRD-financed infrastructure project. EBRD Environmental and Social Requirement 2 (ESR2 – Labour and Working Conditions) sets the minimum standards for workforce management that the Contractor must meet. These standards apply to the Contractor's directly employed workers and, through contractual flow-down provisions, to all subcontractors and labour intermediaries engaged on the Project. The objective is to ensure that construction activity neither causes harm to workers nor exploits their labour, regardless of their employment category, nationality, or work location.

This Plan applies to all persons working on the BSK Road Project, including:

- Direct employees of the Contractor (management, technical staff, skilled and unskilled workers);
- Workers supplied by subcontractors at any tier;
- Workers supplied through labour agencies or intermediaries;
- Migrant workers, whether domestic (from other regions of Tajikistan) or international;
- Apprentices, trainees, and young workers;
- Any other person whose labour is directed by the Contractor or a subcontractor in connection with the Project.
- The management of worker accommodation and welfare facilities is addressed in the companion document, Annex 10: Worker Accommodation and Camp Management Plan.

#### *1.1 Overarching Objectives*

The Contractor commits to the following objectives in all workforce management activities:

- Respect and protect the fundamental principles and rights of workers in accordance with national law and ILO core conventions;
- Ensure fair treatment, non-discrimination, and equal opportunities for all workers;
- Establish clear, written employment relationships with all workers before work commences;
- Pay wages at least at the national minimum wage and on time, in full, without unlawful deductions;
- Prohibit the use of forced labour, child labour, and trafficking of persons;
- Prevent and respond to sexual exploitation, abuse, and harassment (SEA/SH) and all forms of gender-based violence and harassment (GBVH);
- Provide workers with an accessible, confidential, and non-retaliatory grievance mechanism;
- Respect workers' rights to freedom of association and collective bargaining.

#### *1.2 Legal and Policy Framework*

Instrument	Relevance to this Plan
Labour Code of the Republic of Tajikistan (No. 1329, 2016, amended 2022)	Primary national labour law. Regulates employment relationships, minimum wages, working hours and rest periods, overtime, leave, prohibition of forced and child labour, and termination. Requires a 'labour protection service' for workforces exceeding 50 employees.
Law on Equality and Elimination of All Forms of Discrimination (Tajikistan, 2022)	Prohibits discrimination in employment on any ground. Requires employers to take affirmative action to promote equality and prevent discrimination.
Law on Trade Unions (Tajikistan, 2011)	Establishes workers' right to form and join trade unions and to engage in collective bargaining.
Law on State Social Insurance (Tajikistan, 1997, as amended)	Requires employer contributions to the state social insurance fund for illness, disability, death, and maternity benefits.
Law on Occupational Safety (Tajikistan, 2009, amended 2012)	Establishes legal requirements for safe and healthy working conditions. Mandates risk assessment, training, and accident investigation and reporting.
Law on Legal Status of Foreign Nationals (Tajikistan, 2018)	Governs the employment of foreign nationals. International workers must hold valid work permits issued by the Ministry of Labour, Migration and Employment.
ILO Core Conventions (ratified by Tajikistan)	Includes: No. 29 (Forced Labour), No. 87 (Freedom of Association), No. 98 (Collective Bargaining), No. 100 (Equal Remuneration), No. 111 (Discrimination), No. 138 (Minimum Age), No. 155 (OHS), No. 182 (Worst Forms of Child Labour).
EBRD Environmental and Social Policy (2024) – ESR2	Sets minimum requirements for workforce management on EBRD-financed projects, including employment terms, non-discrimination, prohibition of forced and child labour, worker grievance mechanisms, and management of supply chain labour risks.
Project CESMP (Parent Document)	This Plan forms Annex 9 of the Contractor's CESMP. It must be read alongside the OHS Management Plan (Annex 1), the Community Health and Safety Plan (Annex 2), the Worker Accommodation and Camp Management Plan (Annex 10), and the Code of Conduct (Annex 12).

## 2. Roles and Responsibilities

Role	Labour Management Responsibilities
------	------------------------------------



Contractor Project Manager	Ultimate accountability for labour management compliance. Ensures adequate staffing and resources for the Labour Officer function. Signs off on employment policies and the Worker Grievance Register. Notifies Engineer of serious labour non-compliances.
Labour Officer (Contractor)	Day-to-day management of this Plan. Maintains all employment records. Operates the Worker Grievance Mechanism. Conducts induction and labour rights training. Monitors subcontractor compliance. Conducts welfare facility inspections. Acts as confidential point of contact for SEA/SH concerns (supported by ESHS Manager). [INSERT: Name , Mobile]
ESHS Manager (Contractor)	Integrates labour management requirements with broader ESHS compliance. Reviews and signs off on the Worker Grievance Register monthly. Includes labour performance data in ESHS reports to the Engineer. Co-responsible for SEA/SH response.
Human Resources / Payroll Function	Prepares and issues employment contracts. Processes wages and benefits. Maintains employment records including contracts, payslips, leave records, and social insurance contributions. Ensures compliance with payroll obligations under national law.
Health and Safety Supervisor (HSS)	Ensures OHS requirements — addressed in Annex 1 — are integrated with the working conditions standards of this Plan. Reports occupational injuries and illnesses to Labour Officer and ESHS Manager.
Site Supervisors / Foremen	Enforce daily compliance with working hours limits, rest periods, and Code of Conduct requirements at their work fronts. Report any instances of worker distress, forced labour indicators, child labour, or worker complaints to the Labour Officer immediately.
Subcontractor Management Representatives	Each subcontractor is required to designate a named individual responsible for compliance with this Plan within their workforce. That individual reports to the Contractor's Labour Officer.
Engineer (Supervision Consultant)	Reviews and approves the completed LWCMP. Audits labour management compliance during site visits. Reviews quarterly labour performance reports. Escalates material non-compliances to PIURR.
PIURR	Receives quarterly labour management performance reports. Has authority to require corrective action on labour non-compliances. Responsible for overall ESR2 compliance at programme level.

### 3. Workforce Categories and Employment Records

#### 3.1 Anticipated Workforce

The Contractor shall maintain an up-to-date Workforce Register throughout construction. The register shall record all persons working on the Project by employment category, nationality, and work location. The anticipated workforce categories and estimated numbers at peak construction are shown below; the Contractor shall update these figures in the completed Plan:

Worker Category	Employment Route	Peak [INSERT]	Number	Nationality [INSERT]	Profile
Management and technical staff	Direct (Contractor)	[INSERT]		[INSERT]	
Skilled construction workers	Direct (Contractor)	[INSERT]		[INSERT]	
General / unskilled labourers	Direct (Contractor)	[INSERT]		[INSERT]	
Subcontractor workforce (all tiers)	Via subcontract	[INSERT]		[INSERT]	
Agency / intermediary-supplied labour	Via labour agency	[INSERT]		[INSERT]	
Domestic migrant workers (from other regions)	Direct or via subcontract	[INSERT]		[Tajik nationals – non-local]	
International workers (non-Tajik nationals)	Direct or via subcontract	[INSERT]		[INSERT]	
Young workers (16–18 years)	Direct (if any)	[INSERT]		Subject to additional age verification and risk assessment – see Section 5.2	

### 3.2 Employment Contracts and Documentation

All workers shall receive a written employment contract, signed by both the worker and the Contractor (or subcontractor), before commencing work. Employment contracts shall be prepared in the relevant language — Tajik and/or Russian — and the worker shall be given sufficient time to read and understand the contract before signing. Each party shall retain an original copy.

Employment contracts shall, as a minimum, specify:

- The worker's name, role, and employment start date;
- The employer's name and legal entity;
- The nature of the contract (fixed-term, indefinite, task-based);
- The wage rate, payment frequency (minimum monthly), and method of payment ( bank transfer only — see Section 4.2);
- Normal working hours per day and per week;
- Overtime provisions — when overtime may be required, the rate of overtime pay, and that overtime is voluntary (except in genuine emergency);
- Rest periods — daily rest, weekly rest day, annual leave entitlement;

- Applicable leave types — annual leave, sick leave, maternity/paternity leave — and entitlements in accordance with national law;
- Social insurance contributions and employer obligations;
- Grounds and procedure for termination, and worker's rights on termination;
- Reference to the Project's Code of Conduct and Grievance Mechanism;
- For international workers: work permit status, visa category, accommodation arrangements.

The Contractor shall maintain a complete, current employment records file for every worker on the Project. Records shall include: the signed employment contract, copies of identification documents, work permits (for foreign nationals), payslip records, leave records, training records, and any disciplinary records. These records shall be made available to the Engineer and PIURR on request.

### *3.3 Subcontractor and Supply Chain Labour Compliance*

The Contractor shall require all subcontractors, at every tier, to comply with this Plan and with national labour law as a condition of engagement. This requirement shall be incorporated in all subcontracts. Specifically:

- All subcontracts shall include labour management clauses requiring compliance with ESR2, the Labour Code, and this Plan;
- Before engaging any subcontractor, the Contractor shall assess the subcontractor's past labour and OHS performance and current capacity to meet ESR2 requirements;
- The Contractor shall not engage subcontractors with a known history of forced labour, child labour, unpaid wages, or labour rights violations;
- Where subcontractors use labour agencies or intermediaries, the Contractor shall verify that: workers are contracted directly with the subcontractor (not through a chain of intermediaries that obscures employment relationships); agency fees are not charged to workers; and workers understand who their employer is;
- The Contractor's Labour Officer shall conduct periodic unannounced spot-checks of subcontractor employment records, payroll, and welfare facilities;
- Any subcontractor found to be in material non-compliance with labour standards shall be given a corrective action notice. Persistent non-compliance shall result in contract termination.

## **4. Employment Terms and Working Conditions**

### *4.1 Working Hours and Rest*

Working hours shall comply with the Labour Code of Tajikistan and with the following standards, whichever provides greater protection:

Parameter	Requirement	Notes
Standard working day	Maximum 8 hours	Exclusive of rest breaks.
Standard working week	Maximum 40 hours	Over a 5- or 6-day work week as per contract.

Rest break during working day	Minimum 30 minutes	Not counted as working time. Provided no later than after 4 consecutive hours of work.
Daily rest between shifts	Minimum 11 hours	Workers must have at least 11 hours between end of one shift and start of next.
Weekly rest day	Minimum 1 full day per week	Sunday or a designated alternative rest day. Workers may not work 7 consecutive days.
Overtime	Voluntary. Maximum 4 hours/day, 120 hours/year	Overtime beyond these limits is prohibited. Overtime must be compensated at the premium rate required by the Labour Code. Workers must not be pressured or threatened to work overtime.
Night work (22:00–06:00)	Restricted and compensated	Night work hours count as 1.5 hours for pay purposes per the Labour Code. Night work for young workers is prohibited.
Annual leave	Minimum 24 working days per year	Per Labour Code. Accumulated and taken in accordance with a mutually agreed schedule.
Sick leave	Per national law	Workers shall not be penalised for taking sick leave. Medical certificates may be required.
Maternity leave	Per national law (minimum 140 days)	Full protections apply. Pregnancy is not grounds for termination or non-renewal of contract.

Working hours shall be recorded for every worker on every working day. Records shall be available for inspection by the Engineer and Labour Officer at any time.

#### *4.2 Wages and Benefits*

MINIMUM WAGE COMPLIANCE IS NON-NEGOTIABLE. No worker on the BSK Road Project shall be paid less than the national minimum wage of Tajikistan applicable at the time of payment. The Contractor shall monitor changes to the national minimum wage and adjust pay rates accordingly without delay.

Wages shall be paid at least monthly. The first wage payment shall be made no later than one month after the worker's start date. Wages shall not be withheld for any reason not permitted by national law.

Wages shall be paid in full in the agreed currency (Tajik Somoni for local workers). Payment of wages in cash is not permitted. All wage payments shall be made through traceable banking systems to ensure

transparency, compliance with labour standards, and prevention of exploitation. Payments via intermediary agents that are not transparent and verifiable are prohibited.

Itemised payslips shall be provided to every worker for each pay period, showing: gross wage, hours worked including overtime, applicable deductions (social insurance, tax), and net wage. Payslips shall be in a language the worker understands.

All statutory deductions (social insurance contributions, income tax) shall be made transparently, recorded on payslips, and paid to the relevant authorities promptly.

No unlawful deductions shall be made from wages. Deductions for accommodation, food, or other benefits provided by the Contractor shall not reduce take-home pay below the national minimum wage and shall only be made with the worker's prior written consent.

Migrant workers and local workers performing the same work shall receive the same pay and benefits. No differential pay based on nationality, ethnicity, or place of origin is permitted.

Workers shall not be charged recruitment fees, placement fees, or any fees associated with obtaining their position on the Project. Fee charging by labour agencies to workers is prohibited, and the Contractor shall verify this before engaging any agency.

#### *4.3 Non-Discrimination and Equal Opportunities*

The Contractor shall ensure that all employment decisions — including recruitment, job assignment, pay, promotion, training, and termination — are made on objective, merit-based grounds and are free from discrimination on any of the following grounds:

Prohibited Grounds for Discrimination (left)	Prohibited Grounds for Discrimination (right)
Gender / sex	Religion or belief
Age (except age-based protections for young workers)	Political opinion
Race, ethnicity, or national origin	Disability
Pregnancy or maternity status	Social origin or property status
Marital or family status	Membership of a workers' organisation or trade union
Language	Any other characteristic unrelated to the inherent requirements of the job

Equal pay for equal work shall be applied regardless of gender. The Contractor shall periodically review pay rates to identify and correct any unexplained gender pay gaps.

The Contractor shall take proactive steps to ensure that women are not disadvantaged in recruitment, assignment, training, or promotion relative to male workers with equivalent qualifications.

Workers with disabilities shall be reasonably accommodated in their work assignments and working conditions.

Workers from ethnic or linguistic minorities shall have access to communications, training, and grievance procedures in a language they understand.

#### *4.4 Worker Accommodation Inspection*

The Contractor shall implement a worker accommodation inspection programme using the Worker Accommodation Inspection Checklist at **Annex 9-A** of this Plan. Inspections shall be conducted at the frequencies set out in the table below, determined by the compliance score from the previous inspection. As a minimum, inspections shall be conducted quarterly and shall cover accommodation conditions, hygiene, sanitation, fire safety, overcrowding, welfare facilities, freedom of movement, security arrangements, and compliance with GIIP and EBRD ESR2 requirements.

Inspections shall be carried out by the Contractor's Labour Officer and Camp Manager. The Engineer and PIURR retain the right to conduct unannounced inspections at any time.

Compliance score	Risk rating	Inspection frequency
80–100%	Low risk	Every 6 months
70–79.9%	Medium risk	Every 4 months
50–69.9%	Higher risk	Every 2 months
Below 50%	Critical risk	Monthly

Where a Critical risk rating is recorded, the Contractor shall notify the Engineer and PIURR within 48 hours and submit a corrective action plan within 5 working days.

Completed inspection checklists shall be submitted to the Engineer and PIURR as part of the quarterly ESHS Monitoring Report, together with the labour and working conditions data reported under **Annex 9-B**, Section B.9 of this Plan.

## **5. Absolute Prohibitions**

### *5.1 Prohibition of Forced Labour*

FORCED LABOUR IS ABSOLUTELY PROHIBITED. No worker on the BSK Road Project shall be subjected to forced, compulsory, bonded, indentured, or trafficked labour under any circumstances.

The following practices constitute indicators of forced labour and are prohibited absolutely. The Contractor, all subcontractors, and all labour agents engaged on the Project are required to confirm in writing that none of these practices apply:

- Withholding of wages, salary payments, or documents (passports, identity cards) as a means of coercing work or preventing a worker from leaving;
- Requiring workers to pay a recruitment fee, deposit, or 'advance' that creates a debt bond;
- Threatening workers with dismissal, deportation, or other reprisals if they do not work overtime or comply with demands;
- Restricting workers' freedom of movement — including locking them in accommodation or preventing them from leaving work sites without permission;

- Requiring workers to work to repay a loan from the employer at terms that effectively trap them in employment;
- Trafficking of persons — transporting or recruiting people through coercion, deception, or abuse of power for the purpose of labour exploitation.

The Labour Officer shall be trained to recognise indicators of forced labour and shall conduct periodic unannounced inspections of work sites and accommodation, paying particular attention to the circumstances of migrant and agency-supplied workers who may be more vulnerable.

### *5.2 Prohibition of Child Labour*

CHILD LABOUR IS ABSOLUTELY PROHIBITED. No person under the age of 16 shall be employed on the BSK Road Project in any capacity. Young persons aged 16–18 shall not perform hazardous work.

The minimum age for employment on the Project is 16 years old. The national minimum age under the Labour Code of Tajikistan for employment in construction is 16 years.

No person under 18 years of age shall be employed on tasks classified as hazardous under the Labour Code or under ILO Convention No. 182 — this includes any work involving heavy machinery, heights above 2 m, confined spaces, explosives, hazardous chemicals, or work near water.

Before employing any worker who appears to be under 25 years of age, the Contractor shall verify age by examining original identification documents. Unverified age claims shall be treated as under 18 pending confirmation.

All young workers (16–18) shall be subject to a site-specific risk assessment before commencing work. Their working hours shall not exceed 35 hours per week and they shall not work night shifts.

Any contractor or labour agent found to have supplied workers under the age of 16 shall have their contract immediately terminated. The incident shall be reported to the Engineer, PIURR, and relevant national labour authority.

## **6. Sexual Exploitation, Abuse, Harassment, and Gender-Based Violence**

SEA/SH AND GBV ZERO TOLERANCE: The Contractor maintains a zero-tolerance policy toward all forms of sexual exploitation, sexual abuse, sexual harassment, and gender-based violence and harassment (collectively SEA/SH/GBV). These prohibitions apply to all Project workers — managers, professional staff, skilled and unskilled workers, subcontractor employees, and any other person working under the Contractor's authority — at all times, including outside working hours when conduct affects the Project environment.

### *6.1 Definitions*

Sexual exploitation: Any actual or attempted abuse of a position of vulnerability, power, or trust, for sexual purposes, including profiting monetarily, socially, or politically from the sexual exploitation of another.

Sexual abuse: Actual or threatened physical intrusion of a sexual nature, whether by force or under unequal or coercive conditions.

Sexual harassment: Any unwelcome sexual advance, request for sexual favour, or other verbal or physical conduct of a sexual nature that creates an intimidating, hostile, or offensive work environment.

Gender-based violence and harassment (GBVH): Any harmful act perpetrated against a person's will based on socially ascribed gender differences, including physical, sexual, psychological, or economic harm.

### *6.2 Code of Conduct*

All workers shall sign the Project Code of Conduct (Annex 12 of the CESMP) before commencing work. The Code of Conduct explicitly prohibits SEA/SH and GBV and sets out the consequences of violations, including immediate dismissal and referral to national authorities where criminal acts are involved.

The Labour Officer shall deliver SEA/SH awareness training to all workers at induction and at quarterly intervals throughout the project, consistent with ESMP measure C-LB-03. Training shall explain:

- What constitutes SEA/SH and GBV — with examples relevant to a construction site context;
- The zero-tolerance policy and consequences for perpetrators;
- How to report concerns confidentially — including reporting options outside the Contractor's structure;
- That retaliation against anyone who reports a concern is prohibited and will itself be treated as a disciplinary offence.

### *6.3 Confidential Reporting and Response*

SEA/SH concerns require a survivor-centred response. The following principles govern all SEA/SH-related reports:

- The survivor's wishes and safety are the primary consideration at every stage of the response process;
- All reports are treated as confidential. No information about the identity of the survivor shall be shared without their explicit consent;
- Retaliation against a survivor, a witness, or a person who reports a concern is a disciplinary offence subject to immediate dismissal;
- Reporting to the Contractor's Labour Officer or ESHS Manager does not preclude and should not discourage the survivor from also reporting to the police or accessing other legal or support services;
- The Contractor shall maintain a confidential SEA/SH reporting channel — in addition to the standard Worker Grievance Mechanism — with an option for anonymous reporting. The channel shall be accessible to workers of all genders and shall be publicised in all languages spoken on site;
- Aggregate statistics on SEA/SH reports (number of reports, category, status) shall be included in quarterly ESHS reports to the Engineer and PIURR. No identifying information shall be included.

The Contractor shall establish a referral pathway for survivors to access appropriate support services (medical, psychological, legal). [INSERT: Local support services available in Baljuvon District or Khatlon Region — medical facility, counselling service, women's support organisation if available].

## **7. Freedom of Association and Workers' Organisations**

The Contractor shall respect and not obstruct workers' rights under national law and ILO Convention No. 87 and No. 98 to:

- Form, join, or not join a trade union or workers' organisation of their choice;
- Elect workers' representatives and engage in collective bargaining;
- Participate in lawful workers' organisation activities without penalty, discrimination, or retaliation.



The Contractor shall not discriminate in recruitment, assignment, pay, or termination based on a worker's membership or participation in a workers' organisation. Workers' representatives shall be granted reasonable access to the workforce and to the information they need for meaningful engagement.

Where no formal trade union is present on site, the Contractor shall establish or support a worker representation mechanism — such as a Worker Welfare Committee — through which workers can raise issues, provide feedback on working conditions, and engage constructively with management. The composition and operation of the Worker Welfare Committee shall be described in the site-specific completion of this Plan. [INSERT: Committee composition, meeting frequency, terms of reference].

## 8. Migrant Workers

Migrant workers — both domestic (from other regions of Tajikistan) and international (non-Tajik nationals) — may be employed on the BSK Road Project. These workers are recognised as potentially more vulnerable to exploitation, owing to language barriers, unfamiliarity with local services and legal systems, isolation from family and community support networks, and dependence on the employer for accommodation and transport. The following specific protections apply:

International workers must hold a valid work permit issued by the Ministry of Labour, Migration and Employment of Tajikistan before commencing work. The Contractor shall verify permit validity before employment commences and shall not employ any international worker who does not hold a valid permit.

Work permits and all other identity documents shall at all times remain in the possession of the worker. The Contractor or any subcontractor shall not hold, confiscate, or retain workers' documents under any circumstances.

All migrant workers shall receive a copy of their employment contract in a language they understand before commencing work, including a clear explanation of their rights under national law and this Plan.

Domestic and international migrant workers performing the same work as local workers shall receive the same pay rates and benefits. No deduction shall be made from migrant workers' wages to recover recruitment, transport, or accommodation costs, beyond what is permitted by national law and disclosed in the employment contract.

The Contractor shall provide information to all migrant workers about: local emergency services, the Worker Grievance Mechanism, the Project's SEA/SH reporting channel, and access to medical care. This information shall be in a language the worker understands.

Where labour agents or recruitment agencies are used to supply migrant workers, the Contractor shall audit the agency's practices before engaging them and shall require written confirmation that no recruitment fees have been or will be charged to workers. Fee-charging agencies shall not be engaged.

## 9. Worker Grievance Mechanism

EBRD ESR2 (paragraph 21) requires the Contractor to establish and maintain an accessible, effective, and confidential grievance mechanism for workers. The Worker Grievance Mechanism (Worker GRM) is a separate mechanism from the community-facing Project Grievance Mechanism, though the two systems shall be coordinated by the Labour Officer and SCLO to ensure grievances are correctly routed.

### 9.1 Scope

The Worker GRM applies to all workers on the Project — direct employees, subcontractor employees, agency workers, and migrant workers. Workers' organisations may also submit grievances on behalf of their members. The Worker GRM covers:

- Wage disputes — including unpaid wages, incorrect deductions, or failure to pay overtime premiums;
- Working hours — including excessive hours, inadequate rest, or involuntary overtime;
- Employment contract issues — including failure to provide a contract, changes to terms without consent, or unlawful termination;
- Discrimination, bullying, harassment, and SEA/SH concerns (the latter routed through the confidential SEA/SH channel described in Section 6.3);
- Working conditions — including inadequate welfare facilities, unsafe conditions, inadequate PPE, or exposure to hazards;
- Accommodation and camp conditions — coordinated with the Camp Management Plan (Annex 10);
- Any other workplace concern.

### *9.2 Accessibility and Channels*

The Worker GRM shall be accessible to all workers, including those who are illiterate, who do not speak Tajik or Russian fluently, or who may fear retaliation. The following access channels shall be provided:

- A designated Labour Officer as the named, face-to-face point of contact on site, available during working hours and by phone outside hours — [INSERT: Name , contact details];
- A written grievance form — available in Tajik and Russian (and any other language spoken by a significant portion of the workforce) — available at the camp office, welfare areas, and work fronts;
- A locked suggestion/grievance box at the camp, accessible at all times, allowing anonymous written submissions;
- A direct telephone or SMS line to the Labour Officer or a nominated independent receiver — [INSERT: number to be posted prominently at all work fronts and in accommodation areas];
- An option for workers to submit grievances through a workers' representative or trade union representative, if present.

Workers shall be informed of the Worker GRM at induction, and information shall be posted in Tajik and Russian (and other languages as needed) at prominent locations throughout the camp and work sites.

### *9.3 Procedure and Response Timelines*

Step	Action	Details	Timeline
1	RECEIPT	Labour Officer acknowledges receipt of grievance to the worker. Assigns a unique reference number. Enters grievance in the Worker Grievance Register.	Within 24 hours
2	ASSESSMENT	Labour Officer assesses the grievance and determines: (a) whether it can be resolved directly; (b) whether it requires escalation to management; (c) whether it involves an	Within 2 working days

		allegation that requires external referral (e.g. SEA/SH, criminal matter).	
3	RESOLUTION	Labour Officer works with relevant manager to resolve the grievance. Where resolution requires a management decision, a written response is provided to the worker. Worker may bring a colleague or representative to any meeting.	Within 10 working days of receipt
4	ESCALATION	If the worker is not satisfied with the outcome, or if the grievance involves allegations against the Labour Officer, the matter is escalated to the ESHS Manager and then to the Contractor's Project Manager. The Engineer may also be notified if escalation to project level is required.	Within 5 working days of escalation request
5	CLOSE OUT	Once resolved and accepted by the worker, the grievance is closed in the register with a brief record of the resolution. If the worker remains unsatisfied, they are informed of their right to escalate to the Engineer, PIURR, EBRD, or national labour authority.	Documented on resolution

The following principles govern the Worker GRM at every stage:

- Non-retaliation: No worker shall be dismissed, demoted, harassed, or otherwise penalised for raising a grievance. Retaliation is itself a serious disciplinary offence;
- Confidentiality: The identity of the worker submitting a grievance shall not be disclosed to parties not involved in its resolution without the worker's consent;
- Anonymous reporting: Anonymous grievances shall be accepted and investigated to the extent possible;
- Access to external remedies: The Worker GRM does not replace and does not preclude access to national labour arbitration, courts, or EBRD's Project Complaint Mechanism.

#### *9.4 Worker Grievance Register*

The Labour Officer shall maintain a Worker Grievance Register recording, for each grievance: a unique reference number; date received; worker category (without identifying the worker by name in shared records); nature of grievance; actions taken; date resolved; outcome; and whether the worker accepted the outcome. The register shall be reviewed monthly by the ESHS Manager and reported to the Engineer quarterly as part of the ESHS Monitoring Report.

## **10. Induction, Training, and Awareness**

All workers shall receive Labour and Working Conditions induction training before commencing work on site. The induction shall be delivered in a language workers understand, and attendance shall be recorded. As a minimum, the induction shall cover:

- Their employment terms and conditions — wages, hours, leave, overtime;
- Their rights under national law and this Plan;
- The prohibition of forced and child labour, and what to do if they witness or suspect either;

- The Code of Conduct — what is expected of them, and what the consequences of violations are;
- The SEA/SH zero-tolerance policy and how to report concerns confidentially;
- The Worker Grievance Mechanism — channels, timelines, confidentiality, and non-retaliation protections;
- Freedom of association — their right to join or not join a workers' organisation without penalty;
- Their right not to work overtime involuntarily.

Refresher training on SEA/SH prevention and the Worker Grievance Mechanism shall be provided every six months. Records of all training — including names (or unique IDs for privacy purposes), dates, languages, and topics — shall be maintained by the Labour Officer.

## 11. Monitoring, Inspections, and Reporting

### 11.1 Inspections

Inspection / Activity	Frequency	Responsible Party
Payroll audit — verify correct wages paid to all workers, no unlawful deductions	Monthly	Labour Officer, HR/Payroll
Working hours records review — verify compliance with hours limits and overtime provisions	Monthly	Labour Officer
Employment contracts audit — verify all workers hold signed contracts	At mobilisation; then spot-check monthly	Labour Officer
Age verification spot-check (particularly for subcontractor workers)	Quarterly	Labour Officer
Subcontractor labour compliance inspection (records, payroll, welfare)	Quarterly, unannounced	Labour Officer
Worker GRM review — register status, outstanding items, trends	Monthly	ESHS Manager
SEA/SH awareness and Code of Conduct posting check	Monthly	Labour Officer
Worker welfare facility inspection using Annex 9-A checklist (coordinated with Annex 10)	Monthly	Labour Officer and Camp Manager
Full labour management compliance audit	Quarterly, reported to Engineer	ESHS Manager
Annual third-party audit	Annual	Labour officer, ESHS Manager

In addition to internal inspections and audits, the Contractor and its subcontractors shall be subject to independent annual labour audits conducted by qualified third-party labour auditors. These audits shall assess compliance with the Contractor's LMP, the Project LMP, and EBRD ESR2. Audit findings and corrective actions shall be submitted to the Engineer and PIURR.

### 11.2 Reporting

Labour management performance shall be reported to the Engineer as part of the quarterly ESHS Monitoring Report using the Contractor Labour & Working Conditions Reporting Template at Annex 9-B of this Plan.. The Contractor shall notify the Engineer and PIURR within 48 hours of any labour-related incident, including, as a minimum, worker strikes or labour unrest, GBVH/SEA/SH allegations or incidents, cases or indicators of forced labour or child labour, fatalities, serious injuries, and significant worker grievances or disputes. A detailed incident report, including root cause analysis and corrective actions, shall be submitted within 5 working days.

The labour section of the report shall include, at a minimum:

- Total workforce by category (direct, subcontractor, agency, migrant — without disclosing personal data);
- Status of employment contract provision — percentage of workers with signed contracts;
- Working hours compliance — any recorded exceedances of daily or weekly limits, and corrective actions taken;
- Worker Grievance Register summary — total grievances received, type, status, resolved, outstanding;
- SEA/SH report summary — total reports (aggregated, anonymised), category, status;
- Training delivered — type, number of workers trained, language;
- Any labour non-compliances identified and corrective actions taken;
- Any forced or child labour indicators investigated and outcomes.

## 12. Workforce Demobilisation

All workforce demobilisation — whether progressive as works are completed or at final completion — shall be managed in an orderly and legally compliant manner. The Contractor shall:

- Provide workers with the notice period required by their employment contract and national law before their employment terminates;
- Pay all outstanding wages, leave pay, overtime entitlements, and social insurance contributions on or before the worker's last day of employment — no outstanding payments shall be deferred beyond the final date;
- Provide workers with written confirmation of their employment end date and a summary of final payments made;
- Ensure that all outstanding Worker Grievance Register items are resolved before the individual worker's departure, or clearly documented with a plan for resolution;
- Facilitate the return transport of migrant workers to their home regions or countries if the Contractor was responsible for their transport to site;

- Ensure that all international workers' work permits are closed out with the relevant authority upon completion of their employment.

Collective dismissals — involving 10 or more workers — require advance analysis of alternatives, consultation with workers or their representatives, and notification to national labour authorities in accordance with the Labour Code. The Contractor shall notify the Engineer and PIURR of any planned collective dismissal at least 30 days before the planned date.

### 13. Plan Approval and Amendment

This Framework Plan shall be completed with site-specific details — including workforce numbers and categories, employment contract templates, Worker GRM contact details, Worker Welfare Committee terms of reference, SEA/SH referral pathway details, and training schedules — by the Contractor's Labour Officer and ESHS Manager, and submitted to the Engineer and PIURR for approval before any workers are mobilised to site.

The Plan shall be reviewed and updated when: the size or composition of the workforce changes significantly; a new subcontractor is engaged; a labour non-compliance or grievance reveals a gap in the Plan; or a change in national labour legislation requires amendment. Any material revision requires re-approval by the Engineer.

The completed Contractor Labour Management Plan shall be submitted to the Engineer, PIURR, and EBRD for review and approval prior to mobilisation of any workers and prior to issuance of the Notice to Commence Works.

Prepared By (Labour Officer / ESHS Manager)	Reviewed By (Engineer)	Approved By (PIURR)
Name: Title: Signature: Date:	Name: Title: Signature: Date:	Name: Title: Signature: Date:

## Annex 9-A: Worker Accommodation Inspection Checklist

Source: EBRD PR2 Toolkit, Tool 7, Annex 7.1. This checklist shall be used to inspect all employer-provided worker accommodation on the BSK Road Project. Inspections shall be conducted by the Contractor's Labour Officer and Camp Manager at the frequencies set out in Section 4.4 of this Plan and in the Worker Accommodation and Camp Management Plan (Annex 10 of the CESMP).

Scoring: Assign a score of "1" next to each "Yes" response. Once complete, calculate the percentage compliance (total "Yes" score / total applicable items × 100). Where benchmarks are not applicable, exclude them from the denominator. Risk ratings by compliance percentage:

80–100%: Low risk — accommodation meets intended standard (inspect every 6 months). & 70–79.9%: Medium risk — below required standard with some issues (inspect every 4 months). & 50–69.9%: Higher risk — below required standard with numerous issues (inspect every 2 months). & Below 50%: Critical risk — unacceptably low performance requiring immediate remedial action (inspect monthly).

Project: BSK Road Project      Location: [INSERT accommodation site name/location]      Date of inspection: \_\_\_\_\_  
Inspector(s): \_\_\_\_\_      Overall score: \_\_\_\_ / \_\_\_\_ applicable items = \_\_\_\_%

Category	Benchmark	Yes / No / NA	If "Yes" score "1"	Comments
<b>General living facilities</b>				
	Living facilities are located to avoid flooding and other natural hazards.  Where possible, living facilities are located within a reasonable distance of the worksite.			
	Transport from the living facilities to the worksite is safe and free.			
	The living facilities are built with adequate materials, kept in good repair, and kept clean and free from rubbish and other refuse.			
<b>Drainage, water, heating and waste</b>				
	The building site is adequately drained to avoid the accumulation of stagnant water.			
	For facilities located in cold weather zones, the temperature is kept at a level of around 20 degrees			

	<p>Celsius, notwithstanding the need for adequate ventilation.</p> <p>For facilities located in hot weather zones, adequate ventilation and/or air conditioning systems are provided.</p> <p>Both natural and artificial lighting are provided and maintained in living facilities. Best practice: window area represents not less than 5-10% of floor area. Emergency lighting is provided.</p> <p>Workers have access to electricity in the worker accommodation facilities.</p>			
	<p>Access to an adequate and convenient supply of free potable water is always available to workers. Depending on climate and conditions, 80–180 litres per person per day are available.</p> <p>All tanks used for the storage of drinking water are constructed and covered to prevent water from becoming polluted or contaminated.</p>			
	Drinking-water quality is monitored regularly.			
	Specific containers for rubbish collection are provided and emptied on a regular basis. Best practice: leakproof, non-absorbent, rust- and corrosion-resistant containers, emptied at regular intervals.			
	Pest extermination, vector control, and disinfection are carried out throughout the living facilities, in compliance with local requirements and/or good practice.			
<b>Room / dormitory facilities</b>				
	<p>Rooms/dormitories are kept in good condition.</p> <p>Rooms/dormitories are aired and cleaned at regular intervals.</p>			
	Rooms/dormitories are built with easily cleanable flooring material.			



	<p>Sanitary facilities are located within the same buildings and provided separately for men and women.</p> <p>Density standards are met: GIP is 10–12.5 cubic metres (volume) or 4–5.5 square metres (surface) per resident.</p> <p>A minimum ceiling height of 2.10 metres is provided.</p> <p>In collective rooms, only a reasonable number of workers share the same room (standards: 2–8 workers).</p>			
	Doors and windows are lockable and provided with mosquito screens where conditions warrant.			
	<p>There are mobile partitions or curtains to ensure privacy.</p> <p>Every resident is provided with adequate furniture such as a table, a chair, a mirror, and a bedside light.</p> <p>Separate sleeping areas are provided for men and women, except in family accommodation.</p>			
<b>Bed arrangements / storage facilities</b>				
	A separate bed is provided for each worker. Hot-bedding (rotational sharing of beds) is avoided.			
	There is a minimum space between beds of 1 metre.			
	Double-deck bunks are minimised. Where used, GIP clear space between lower and upper bunk is 0.7–1.10 metres.			
	Triple-deck bunks are prohibited.			
	Each worker is provided with a comfortable mattress, pillow, cover, and clean bedding.			
	<p>Bed linen is washed frequently and treated with repellents and disinfectants on a weekly basis.</p> <p>Facilities for storage of personal belongings are provided for each worker.</p>			

	Separate storage for work boots and PPE, as well as drying/airing areas, is provided where needed.			
<b>Sanitary and toilet facilities</b>				
	Sanitary and toilet facilities are constructed of materials that are easily cleanable.			
	Sanitary and toilet facilities are cleaned frequently and kept in working condition.			
	Sanitary and toilet facilities are designed to provide workers with adequate privacy, including floor-to-ceiling partitions and lockable doors.			
	Sanitary and toilet facilities are not shared between men and women (except in family accommodation).			
	<p>An adequate number of toilets is provided (standards: 1 unit per 6–15 persons; urinals: 1 unit per 15 persons).</p> <p>Toilet facilities are conveniently located and easily accessible (standards: 30–60 metres from rooms/dormitories). Toilet rooms are well lit, ventilated, have sufficient handwashing basins, and are accessible without passing through sleeping areas.</p> <p>Shower/bathroom flooring is made of anti-slip hard washable materials.</p> <p>An adequate number of handwashing facilities is provided (standards: 1 unit per 6–15 persons), with tap, basin, soap, and hygienic means of drying hands.</p>			
	An adequate number of shower/bathroom facilities is provided (standards: 1 unit per 6–15 persons).			
	<p>Showers/bathrooms are conveniently located.</p> <p>Shower/bathroom facilities are provided with an adequate supply of cold and hot running water.</p>			
<b>Fire safety</b>				

	<p>A clear fire management plan is in place, including risk identification and escalation procedures.</p> <p>Smoke detectors are fitted in bedrooms and communal areas.</p> <p>Manually operated fire alarms are located across the accommodation site.</p>			
	Fire exits are clearly marked and illuminated and easily accessible from all locations.			
	<p>Floor plans and emergency escape routes are clearly marked on signs across the accommodation.</p> <p>An appropriate number and type of fire extinguishers are provided within the accommodation.</p>			
	Fire detection systems are set up across the accommodation facilities.			
<b>Canteen, cooking and laundry</b>				
	Canteen, cooking, and laundry facilities are built in adequate and easy-to-clean materials.			
	<p>Canteen, cooking, and laundry facilities are kept in a clean and sanitary condition.</p> <p>If workers can cook their own meals, kitchen spaces are provided, separate from sleeping areas.</p>			
	<p>Adequate facilities for washing and drying clothes are provided (standards: sinks or tubs with hot and cold water and drying lines minimum; washing machines and dryers as GIP).</p> <p>When work clothes are used in contact with dangerous substances, special laundry facilities (washing machines) are provided.</p>			
	Canteens provide a reasonable amount of space per worker (standards: 1–1.5 square metres per worker).			

	<p>Canteens are adequately furnished (tables, benches, individual drinking cups and plates at minimum).</p> <p>Places for food preparation are designed to permit good food hygiene practices, including protection against contamination.</p>			
	Kitchens are provided with sufficient handwashing basins with clean running water and means for hygienic drying.			
	Wall surfaces adjacent to cooking areas are made of fire-resistant materials. Food preparation tables have a smooth, durable, washable surface.			
	All kitchen floors, ceiling, and wall surfaces are durable, non-absorbent, easily cleanable, and non-toxic.			
	<p>Adequate facilities for cleaning, disinfecting, and storage of cooking utensils and equipment are provided.</p> <p>Food waste and other refuse is deposited in sealable containers and removed from the kitchen frequently to avoid accumulation.</p>			
<b>Nutrition / food safety</b>				
	The WHO five keys to safer food (or an equivalent process) are implemented.			
	Food provided to workers contains an appropriate level of nutritional value and takes into account religious/cultural backgrounds; different choices of food are served if workers have different backgrounds.			
	Food is prepared by cooks. Best practice: meals planned by a trained nutritionist.			
<b>Medical facilities</b>				
	<p>A number of first-aid kits are available, adequate for the number of residents. Where possible, a 24/7 first aid service/facility is available.</p> <p>First-aid kits are adequately stocked.</p>			

	<p>An adequate number of staff/workers is trained to provide first aid.</p> <p>Emergency services and ambulances have full access to the accommodation site.</p> <p>Where possible and depending on the medical infrastructure in the community, other medical facilities are provided at an easily accessible location (health centres, nurse's rooms, dental care, minor surgery).</p>			
<b>Leisure, social and telecommunications facilities</b>				
	<p>Basic collective social/rest spaces are provided to workers (standards: multi-purpose halls at minimum).</p> <p>Recreational facilities are provided (standards: exercise equipment at minimum; GIP: library, swimming pool, table tennis, educational facilities).</p>			
	Workers are provided with dedicated places for religious observance if the context warrants.			
	<p>Workers have access to public phones at affordable prices.</p> <p>Internet facilities are provided, particularly where large numbers of expatriates/third-country nationals are accommodated.</p>			
<b>Management and staff</b>				
	There are management plans and policies in place, especially in health and safety (with emergency responses), security, workers' rights, and relationships with communities.			
	<p>An appointed person with adequate background and experience is in charge of managing the workers' accommodation.</p> <p>If contractors are being used, there are clear contractual management responsibilities and monitoring and reporting requirements.</p>			

	Depending on the size of the accommodation, there is a sufficient number of staff in charge of cleaning, cooking, and general maintenance.			
	Such staff are recruited from local communities where possible.			
	Staff have received basic health and safety training.			
	Persons in charge of the kitchen are trained in nutrition and food handling and are adequately supervised.			
	When fees are charged, workers are provided with clear information and a detailed description of all payments made (rent, deposit, and other fees).			
<b>Fees for accommodation and services</b>				
	When company housing is considered part of workers' wages, workers are provided with an employment contract clearly specifying housing arrangements, regulations, payments, fees, and rules of notice.			
	When fees are charged, the renting arrangements are fair and do not cost the worker more than a small proportion of income; no speculative profit is included.  Food and other services are free or reasonably priced, never above the local market price.  The provision of accommodation or other services by employers as payment for work is prohibited.			
	Workers living in worker accommodation are provided with social welfare services.			
	Workers have the right to a weekly shower.			
<b>On-site health and safety</b>				
	Health and safety management plans, including electrical, mechanical, structural, and food safety, have been carefully designed and are implemented.			

	<p>The person in charge of managing the accommodation has a specific duty to report to the health authorities the outbreak of any contagious diseases, food poisoning, and other important casualties.</p> <p>An adequate number of staff/workers is trained to provide first aid.</p> <p>Guidance on the detrimental effects of abuse of alcohol, drugs, and other harmful substances, and the risk of HIV/AIDS and other health risks, is provided to workers. A clear policy on this issue is in place.</p>			
	<p>Workers have access to adequate preventive measures such as contraception (condoms in particular).</p> <p>Workers have easy access to medical facilities and medical staff. Where possible, female doctors/nurses are available for female workers.</p>			
	<p>Emergency plans on health and fire safety are prepared. Depending on local context, additional emergency plans address specific occurrences (earthquakes, floods, etc.).</p>			
<b>Security of workers' accommodation</b>				
	<p>A security plan including clear measures to protect workers against theft and attack is implemented.</p>			
	<p>A security plan including clear policies on the use of force has been carefully designed and is implemented.</p>			
	<p>Security staff have been checked to ensure they have not been implicated in previous crimes or abuses. Where appropriate, security staff of both genders are recruited.</p> <p>Security staff have a clear mandate and have received clear instructions on their duties, including not to harass, intimidate, discipline, or discriminate against workers.</p>			
	<p>Security staff have received adequate training in dealing with domestic violence and the use of force.</p> <p>Security staff have a good understanding of the importance of respecting workers' rights and the rights of communities.</p>			

	<p>Body searches are only allowed in specific circumstances, performed by specially trained security staff using the least intrusive means possible. Pat-down searches on female workers can only be performed by female security staff.</p> <p>Security staff adopt appropriate conduct towards workers and communities.</p> <p>Where possible, an adequate transport system to surrounding communities is provided (best practice: free transport to/from local communities).</p>			
	Withholding workers' ID papers is prohibited.			
	<p>Freedom of association is expressly respected. Best practice: trade union representatives are given access to workers at the accommodation site.</p> <p>Workers' gender and religious, cultural, and social backgrounds are respected. Workers are provided with the possibility of celebrating religious and cultural holidays and observances.</p> <p>Workers are made aware of their rights and obligations and are provided with a copy of the internal workers' accommodation rules and procedures in a language or medium they understand.</p> <p>Housing regulations, including allocation of housing, are non-discriminatory. Any justifiable rules (e.g. male dormitories) are strictly limited to maintaining the smooth running of the camp and good community relations.</p> <p>Where possible, visitor access is allowed.</p> <p>Decisions are made on whether to prohibit alcohol, tobacco, and third-party access to the camp; relevant rules are clearly communicated to residents and workers.</p>			
	A fair and non-discriminatory procedure exists to implement disciplinary procedures, including workers' right to defend themselves.			
<b>Consultation and grievance mechanisms</b>				



	Mechanisms for workers' consultation have been designed and implemented. Best practice: a review committee including representatives elected by workers.			
	Processes and mechanisms for workers to articulate their grievances are provided to workers.			
	Workers subjected to disciplinary proceedings arising from behaviour on the accommodation site have access to a fair and transparent hearing, with the possibility to contest decisions and refer the dispute to independent arbitration or relevant public authorities.			
	Where conflicts between workers or between workers and staff break out, workers have easy access to a fair conflict resolution mechanism.  Where more serious offences occur (including serious physical or mental abuse), mechanisms ensure full cooperation with the relevant police authority (where adequate).			
<b>Management of community relations</b>				
	Community relations plans addressing issues around community development, community needs, community health and safety (including GBV), and community social and cultural cohesion have been designed and implemented.			
	Community relations plans include a liaison mechanism allowing constant exchange of information and consultation with local communities to identify and respond quickly to any problems.			
	A senior manager is in charge of implementing the community relations management plan and liaising with the community.  The impacts of workers' accommodation on local communities are periodically reviewed, mitigated, or enhanced.			
	Community representatives are provided with an easy means of voicing their opinions and lodging complaints.			

	There is a transparent and efficient process for dealing with community grievances.			
--	---	--	--	--

## Annex 9-B: Contractor Labour & Working Conditions Reporting Template

Source: EBRD PR2 Toolkit, Tool 12. This reporting template shall be completed by the Contractor and submitted to the Engineer and PIURR as part of the quarterly ESHS Monitoring Report. Severe labour incidents (fatalities, forced labour, child labour, SEA/SH, strikes) must be reported within 48 hours of occurrence, with a full incident report within 5 working days.

### *B.1 Reporting frequency and immediate notification obligations*

Contractors must implement and report on the labour standards outlined in their contract with the client. They must ensure these are met for workers on site, not just direct employees. In order to do this, the Contractor must:

In particular, any instance of a severe infringement of labour standards must be reported immediately to the Engineer and PIURR. Instances of such severity include: occurrence of fatalities or serious/permanent injuries; instances of forced labour; instances of child labour; occurrence of strike(s) or labour unrest; instances of SEA/SH/GBV.

### *B.2 Contractor and project details*

Information	Response
Company name:	
Company address:	
Location:	
Name(s) of HR and OHS representatives:	
Title(s):	
Telephone:	
Mobile:	
E-mail:	

### *B.3 Project information*

Information	Response
Location of project	
Reporting period	

Expected peak construction phase	Please provide date and expected workforce numbers
Project update (summary of implementation in reporting period)	

#### *B.4 Subcontractor information*

Information	Response
Names of all subcontractors used on project	Please list all subcontractors, their activities, and the number of workers they employ
No. of staff responsible for subcontractor engagement	Please name and provide job titles and responsibilities
Labour and OHS policies covering subcontracted workers	Please attach as evidence
Copy of contractual clauses used in contracts with subcontractors related to labour and health and safety	

#### *B.5 Workforce information (sex-disaggregated)*

Worker information	Male	Female	Total
No. of permanent employees			
No. of temporary employees (fixed-term or seasonal)			
No. of subcontractor workers			
No. of workers provided by private agencies / labour brokers in reporting period			
No. of day / casual workers employed in reporting period			
No. of workers from local communities			

No. of foreign national workers			
No. of skilled workers			
No. of unskilled workers			
No. of workers from other regions within the country (domestic migrants)			
No. of workers below the age of 18			

### *B.6 Human resources management*

Reporting indicator	Response
No. of HR personnel employed	Please name and provide job title
Human resources policy / policies	Please attach as evidence
List of labour management plans and procedures in place	Please attach as evidence
Hours worked per worker / week (average)	
Status of employment contract provision — % of workers with signed contracts	
Any exceedances of daily or weekly working hours limits recorded? If yes, describe corrective actions.	
Any instances of unpaid or delayed wages? If yes, describe corrective actions.	
Any instances of unlawful wage deductions? If yes, describe corrective actions.	

Any instances of workers charged recruitment fees? If yes, describe corrective actions.

### *B.7 Grievance-related indicators*

Reporting indicator	Response
No. of grievances raised by workers in reporting period	
Summary of types of grievance raised and how they have been resolved	Please provide details of complaints and resolutions
No. of complaints related to gender-based violence and harassment / SEA/SH	Please provide details and resolutions (DO NOT share information about the victim or alleged perpetrator)
No. of reported instances of delayed or unpaid wages	Please provide details and resolutions
No. of reported instances of excessive hours / overtime	Please provide details and resolutions
No. of reported instances of unpaid overtime premiums	Please provide details and resolutions
No. of reported instances of poor quality housing and sanitary facilities	Please provide details and resolutions
Percentage of grievances resolved	
Percentage of grievances resolved to the satisfaction of the worker	

### *B.8 OHS management*

Reporting indicator	Response
List of hazardous jobs on the site	Please list and describe hazards for each
Measures in place to reduce hazards for each hazardous job	Please list

Procedures in place on chemical storage and handling	Please attach as evidence
Procedures in place to ensure safe use of PPE	Please attach as evidence
Procedures in place for risk assessment	Please attach as evidence
No. of fatal accidents	
No. of lost time injuries	
No. of medical treatment cases	
No. of first aid cases	
No. of near misses	
No. of qualified health and safety managers on site	
No. of sick days	
No. of OHS inductions / training sessions in reporting period	
No. of “toolbox talks” delivered in reporting period	Please list topics covered
No. of OHS inspections conducted	
No. of community injuries (third parties)	

### *B.9 Worker accommodation management*

Reporting indicator	Response
No. of camp managers employed	Please name
No. of workers on site living in employer-provided accommodation	

No. of workers per room and m <sup>2</sup> per worker  No. of workers per toilet in the accommodation site  No. of showers per worker in the accommodation	Please list all rooms, number of workers in them, and m <sup>2</sup> per worker
No. of grievances received on worker accommodation	Please provide details and resolutions
Procedures in place for monitoring worker accommodation site  No. of worker accommodation sites rated Critical risk (below 50% compliance on inspection checklist)	Please attach as evidence  Please attach completed Annex 9-A inspection checklist
Date of most recent accommodation inspection  Overall inspection score (% compliance)	

### B.10 Declaration

I certify that the data contained in this report completely and accurately represent operations during this reporting period.

Name:	
Title:	
Signature:	
Date:	



## Annex 10: Worker Accommodation & Camp Management Plan (Framework)

---

### 1. Purpose, Scope, and Applicable Standards

This Worker Accommodation and Camp Management Plan (WACMP) establishes the mandatory minimum standards and management procedures that the Contractor shall implement for all worker accommodation and construction camp facilities on the Baljuvon – Sari Khosor (BSK) Road Project. The Plan applies from the moment any worker is accommodated in a Project-provided facility through to final camp closure and site restoration.

The BSK Road Project is located in a remote mountain valley in Baljuvon District, Khatlon Region. Construction camps will accommodate workers — including domestic and international migrant workers — who cannot commute from home daily. For these workers, the construction camp is not simply a place to sleep: it is their home, their dining facility, their welfare environment, and their place of social life for the duration of the Project. The standard of accommodation directly affects worker health, morale, safety, and productivity, and has a significant influence on community relations given the potential for labour influx impacts in the corridor communities.

This Plan applies to all camps and worker accommodation sites on the BSK Road Project, whether operated directly by the Contractor or by a subcontractor. Subcontractors operating accommodation facilities shall be required by contract to meet the standards set out in this Plan.

#### 1.1 Applicable Standards

The minimum standards in this Plan are drawn from the following sources, and the higher standard shall apply in all cases where they differ:

Standard / Instrument	Application
Labour Code of Tajikistan (2016, amended 2022)	National legal basis for worker welfare obligations; requires adequate sanitary working conditions.
Russian Construction Standard BCH-199-84 (Temporary Camps for Transport Infrastructure Construction)	Referenced technical standard for temporary camp design in Tajikistan. Sets structural, spacing, and utility requirements.
ILO Recommendation No. 115 (Workers' Housing, 1961)	International good practice standard for worker accommodation. Specifies minimum floor space, sanitation ratios, bedding, ventilation, and welfare provisions. Applies equally to migrant and national workers.
IFC/World Bank Group — Workers' Accommodation: Processes and Standards	Good practice guidance on planning, managing, and monitoring worker accommodation, including risk and impact management, community relations, and monitoring frameworks.

EBRD Environmental and Social Policy (2024) – ESR2	Requires the Contractor to provide accommodation that is safe, hygienic, and respects the dignity and rights of workers. Conditions must not be used as a form of control or debt bondage.
WHO Five Keys to Safer Food	Applied to all food preparation and catering activities in camp kitchens.
Project CESMP – Annex 9 (Labour & Working Conditions Management Plan)	This Plan operates as the companion to Annex 9. Together, the two plans fulfil the EBRD ESR2 requirement for comprehensive worker welfare management.

## 2. Roles and Responsibilities

Role	Camp Management Responsibilities
Camp Manager (Contractor)	Overall accountability for camp operations and compliance with this Plan. Responsible for: daily oversight of all camp facilities; food hygiene and housekeeping standards; fire safety management; security arrangements; resident induction; camp grievance mechanism; regular camp inspections. A competent, named Camp Manager must be present on site at all times or on call outside hours. [INSERT: Name , Mobile]
Labour Officer (Contractor)	Responsible for worker welfare conditions as part of the broader Labour Management Plan (Annex 9). Works with Camp Manager on accommodation-related grievances. Conducts monthly welfare inspections. Reports accommodation issues in quarterly ESHS monitoring.
Catering Supervisor	Responsible for all food preparation, kitchen hygiene, and catering staff management. Ensures compliance with WHO food safety standards and national food hygiene law. Manages food waste. Reports to Camp Manager.
Camp Security Personnel	Control entry to and exit from camp. Must not impede workers' freedom of movement. Security personnel must be trained in appropriate, non-aggressive conduct toward workers and community members. Must not have a record of human rights abuses.
ESHS Manager (Contractor)	Ensures camp environmental controls (waste, wastewater, fuel storage, dust/noise) are integrated and compliant. Reviews camp inspection records monthly. Includes camp performance in ESHS reports.
Engineer (Supervision Consultant)	Conducts accommodation audits: first audit at initial worker mobilisation; second audit at peak construction workforce. Reviews monthly camp inspection reports. Approves the completed WACMP before camp establishment.
PIURR	Receives quarterly reports on accommodation status. May inspect any camp at any time. Approves the completed WACMP.

### 3. Camp Siting and Establishment

#### 3.1 Site Selection Criteria

The Contractor shall select camp sites in accordance with the following minimum criteria before any camp is established. Site selection shall be documented and submitted to the Engineer and PIURR for approval before construction of camp facilities commences:

Criterion	Requirement
Flood and natural hazard risk	Camp must be sited outside the 1-in-100-year flood extent of the Shurobdaryo River and any tributary. No camp shall be placed on a landslide-prone slope, within a rockfall runout zone, or in a known debris flow path.
Distance from settlements	Minimum 500 m from the nearest settlement boundary, unless a lesser distance is agreed with the Engineer and the affected community, and documented as such. Distance shall be sufficient to prevent noise, light, or dust nuisance to residents during working and non-working hours.
Distance from watercourses	Minimum 100 m from the bank of any watercourse. No wastewater shall drain toward any watercourse without treatment.
Distance from sensitive habitats	Camp shall not be established within or immediately adjacent to any protected area, riparian vegetation, or identified sensitive habitat. See CESMP biodiversity provisions.
Land authorisation	Camp must be established only on legally authorised land. The Contractor shall obtain written authorisation from landowners (or the relevant authority for state land) before any clearing or construction. No forcible occupation of land is permitted.
Access and emergency egress	Camp must be accessible to emergency vehicles (ambulance, fire engine) at all times and in all weather conditions. Emergency evacuation routes must be clear and identified.
Proximity to worksite	Camp should be within reasonable distance of active work fronts to minimise transport requirements. Where transport is required, it shall be safe, covered, and provided at no cost to workers.

#### 3.2 Camp Register

A Camp Register shall be maintained and updated for the duration of construction, recording all camp and accommodation sites — operated by the Contractor or any subcontractor — that house Project workers:

Camp ID	Location / GPS	Operator	Capacity (persons)	Actual Occupancy [INSERT monthly]	Status
C-01	[INSERT]	Contractor (Main Camp)	[INSERT]	[INSERT]	[INSERT]
C-02	[INSERT]	[INSERT subcontractor]	[INSERT]	[INSERT]	[INSERT]
C-03	[Add rows as required]	[INSERT]	[INSERT]	[INSERT]	[INSERT]

### 3.3 Camp Layout and Physical Requirements

Before construction of any camp commences, the Contractor shall prepare and submit to the Engineer a Camp Layout Plan drawn to scale. The layout plan shall show:

- Boundaries and perimeter fencing;
- Location of all accommodation buildings, offices, welfare facilities, and communal spaces;
- Male and female accommodation zones — clearly separated;
- Kitchen, dining, and catering facilities;
- Sanitation and shower blocks — male and female, separately;
- Medical room or first aid point;
- Recreation area;
- Waste segregation and storage areas;
- Fuel and hazardous material storage — with secondary containment shown;
- Water storage tanks and distribution pipework;
- Sewage and wastewater treatment system;
- Fire extinguisher locations and fire alarm points;
- Emergency assembly points and evacuation routes;
- Vehicle parking and access road;
- Security gate and controlled entry/exit points;
- Any places of worship or prayer areas provided.

## 4. Accommodation Standards

### 4.1 Sleeping Accommodation — Minimum Space and Structural Standards

The following minimum standards apply to all sleeping accommodation on the BSK Road Project. These standards are derived from ILO Recommendation No. 115 and IFC good practice and represent non-negotiable minimums. The Contractor shall not operate any camp where these standards are not met:

Parameter	Minimum Standard	Notes
Floor space per resident	4.0 m <sup>2</sup> minimum (good practice: 4.5–5.5 m <sup>2</sup> )	Measured as usable sleeping area, excluding en-suite bathroom if present.
Volume per resident	10 m <sup>3</sup> minimum	Combined floor space and ceiling height standard.
Ceiling height (clear)	Minimum 2.10 m	ILO Rec. 115: not less than 2.03 m. 2.10 m is the applied minimum.
Occupancy per room (collective rooms)	Maximum 8 persons per room	Smaller room sizes (2–4 persons) are strongly preferred for dignity and privacy. Dormitories of more than 8 are not permitted.
Beds per worker	1 dedicated bed per worker	Hot-bedding (rotational sharing of beds between shift workers) is strictly prohibited.
Bunk beds	Double-deck bunks permitted; triple-deck bunks prohibited	Clear space between lower and upper bunk: minimum 0.70 m. Double-deck bunks should be minimised — single beds or bunk pairs in rooms of 2–4 are preferred.
Minimum space between adjacent beds	Minimum 1.0 m	Measured bed edge to bed edge.
Bedding per worker	Comfortable mattress, pillow, blanket/duvet, clean linen	Bed linen washed and replaced at minimum weekly. Bedding and bed frame materials must deter vermin.
Personal storage	Lockable individual wardrobe or locker for each worker	Worker must be able to secure personal belongings. Minimum 475-litre locker equivalent.
Separation of sexes	Male and female sleeping areas strictly separated	Separate buildings or separate secured sections of a building with no shared internal access. Female accommodation shall have secure doors and lockable rooms.
Privacy	Mobile partitions or curtains for each bed space	Each resident to have some visual privacy within shared rooms.

Furniture per resident	Table (or shared table), chair, mirror, bedside light, reading lamp	Minimum furnishings for dignified accommodation.
Ventilation	Adequate natural and mechanical ventilation in all conditions	Windows that open, supplemented by mechanical ventilation where natural airflow is insufficient. Critical given high summer temperatures at the BSK corridor (projected peak >45°C).
Temperature control	Heating for winter; ventilation/cooling for summer	Winter temperatures in Baljuvon District can reach -15°C. Heating systems must maintain internal temperatures of at least 18°C. Summer cooling (fans, cross-ventilation) is required.
Lighting	Natural daytime light , adequate artificial lighting , emergency lighting	Window area not less than 5% of floor area. Emergency battery-backup lighting required.
Window and door security	Lockable doors and windows; mosquito screens where conditions warrant	Workers must be able to lock their own room from inside.

#### 4.2 Sanitation and Washing Facilities

SANITATION STANDARDS ARE MINIMUM REQUIREMENTS. No camp shall be established or operated where these standards are not met in full. Insufficient or inadequate sanitation is a material non-compliance reportable to the Engineer and PIURR.

Facility	Minimum Ratio	Additional Requirements
Toilets	1 per 15 persons (minimum)	Located max. 30–60 m from dormitories; accessible without passing through sleeping areas. Floor-to-ceiling partitions; lockable doors. Well lit and ventilated.
Urinals	1 per 15 male persons	In male sanitation blocks only.
Handwashing basins	1 per 15 persons	With soap and hygienic drying means (paper towels or dryer) at all times.
Showers / bathroom facilities	1 per 15 persons (minimum)	With hot and cold running water. Anti-slip flooring. Adequate drainage. Shower cubicles with privacy screen or door.
Sanitation and shower block —	Separate male and female facilities — no exceptions	Separate buildings or fully secured separate sections. Female facilities shall be accessible from female sleeping areas without passing through male areas.

gender separation		
Cleaning frequency — toilets and washrooms	Daily minimum	More frequently if occupancy is high. Cleaning records maintained by Camp Manager.
Sanitation materials	Soap, toilet paper, towels/dryers — always available	Workers shall not need to supply their own sanitation materials.
Shower flooring	Anti-slip hard washable material	Slip prevention is a safety requirement.

#### 4.3 Potable Water

An adequate, safe supply of potable water shall be available to all workers at all times — in sleeping areas, dining areas, recreation areas, and at active work fronts. The following standards apply:

- Minimum provision: 80 to 180 litres per person per day (depending on climate conditions — higher end applies during Baljuvon summer when ambient temperatures exceed 40°C);
- Water shall be obtained from a verified safe source: municipal supply, bottled water, or treated groundwater that has been tested and confirmed potable by a certified laboratory. [INSERT: water source and testing reference];
- Water storage tanks shall be covered, sealed, and constructed of food-grade materials. Tanks shall be cleaned and disinfected at minimum monthly and after any potential contamination event;
- Drinking water quality shall be monitored at minimum monthly. Records of test results shall be maintained and made available to the Engineer on request;
- No worker shall be required to drink water from the Shurobdaryo River or any tributary without confirmed potability testing.

#### 4.4 Drainage and Wastewater

- The camp shall be adequately drained to prevent accumulation of stagnant water, which creates a risk of mosquito-borne disease and slip hazards;
- All wastewater from toilets, showers, and kitchens shall be collected and treated before disposal. Direct discharge of untreated wastewater to any watercourse, drainage channel, or the ground surface is strictly prohibited;
- Septic tanks or equivalent approved sewage treatment systems shall be used. The bottom and sides of any septic tank shall be lined with concrete or another impermeable material to prevent groundwater contamination;
- Sewage disposal method, location, and authority approval shall be specified in the completed WACMP. [INSERT: sewage treatment system type, location, authority approvals];

- Grease traps shall be installed on kitchen drainage. Grease traps shall be cleaned by a licensed contractor at minimum monthly;
- Vacuum tanker emptying of septic tanks shall be carried out by a licensed contractor and disposed of at an approved facility. Records of all sewage disposal shall be maintained.

## 5. Catering, Food Safety, and Nutrition

### 5.1 Catering Facilities

- A dedicated dining hall (canteen or mess room) shall be provided, separate from sleeping areas. Minimum floor space in the dining area: 1.0 m<sup>2</sup> per seat; the dining hall shall be large enough that all workers on one shift can be seated simultaneously without undue crowding;
- Kitchen and food preparation areas shall be constructed of durable, non-absorbent, easily cleanable materials — non-porous walls, sealed floors, and easily cleanable surfaces on preparation tables;
- A sufficient number of handwashing basins with hot and cold running water, soap, and hygienic drying means shall be provided in or immediately adjacent to the kitchen for catering staff;
- Kitchen walls adjacent to cooking areas shall be of fire-resistant material;
- Adequate refrigeration for perishable food shall be provided and maintained;
- Food waste shall be stored in sealed, pest-resistant containers and removed from the kitchen daily to prevent odour and vermin attraction;
- Laundry facilities with a 24-hour turnaround shall be available to all workers at minimum three times per week, including separate facilities for washing work PPE that has been contaminated with hazardous materials (fuels, chemicals, bitumen).

### 5.2 Food Safety Standards

All food preparation and service on the Project shall comply with the WHO Five Keys to Safer Food and with Tajikistan national food hygiene regulations. The Camp Manager and Catering Supervisor are jointly responsible for food safety. The following minimum requirements apply:

- All catering staff shall hold a valid food hygiene certificate or have completed equivalent training before handling food;
- Food provided to workers shall be nutritionally balanced, culturally appropriate for the workforce composition, and provided in adequate quantity. A nutritionist or dietitian shall review the menu at mobilisation. [INSERT: whether dietary requirements for specific nationalities, religious groups, or health conditions have been assessed];
- Safe potable water shall be used in all food preparation and available to workers throughout the day in dining areas;
- Hot food shall be served at a safe temperature (above 63°C for hot dishes). Cold food shall be stored and served at below 5°C;
- Daily dining times shall be communicated to residents and structured to align with shift patterns;
- A mechanism for workers to provide feedback on food quality shall be provided — via the camp suggestion box, worker representative meetings, or the camp grievance mechanism;



- Food hygiene inspections of the kitchen and dining area shall be conducted weekly by the Camp Manager. Records shall be maintained.

## 6. Camp Health, Safety, and Fire Management

### 6.1 Medical Facilities

- A dedicated medical room or first aid point shall be provided in the main camp, stocked to the standard specified in the Emergency Preparedness and Response Plan (Annex 4);
- A trained first aider shall be on duty or on call at the camp at all times (including nights and days off). First aid certificates shall be current;
- Pre-agreed arrangements with the nearest hospital or clinic shall be documented and kept accessible at the camp medical room. Medical evacuation capability (a designated vehicle available 24 hours) shall be maintained;
- Separate sick bay or isolation area shall be provided for workers who are ill, to prevent spread of communicable diseases in the communal living environment;
- Records of all medical consultations and treatments at the camp medical facility shall be maintained confidentially. Aggregate health data shall be reported to the Engineer quarterly.

### 6.2 Fire Safety

The construction camp presents a significant fire risk due to the concentration of workers in sleeping accommodation, the presence of cooking equipment, and proximity to fuel storage areas. The following minimum fire safety requirements apply to all camp facilities:

Fire Safety Requirement	Standard
Smoke detectors	Fitted in all sleeping rooms and communal areas. Tested monthly.
Manually operated fire alarms	Located at regular intervals throughout the camp. All residents must be able to hear the alarm from any location.
Fire extinguishers	Appropriate type and number for each building (kitchen: CO <sub>2</sub> or dry powder; dormitories: water or dry powder). Inspected monthly; serviced annually.
Fire exits	Clearly marked, illuminated, and unobstructed at all times. Minimum 2 exits per accommodation building.
Emergency escape routes	Floor plans with escape routes displayed in every room and at building entrances.
Assembly point	Designated camp assembly point marked and known to all residents. Away from fuel storage and buildings.

No smoking zones	No smoking inside any building. Designated smoking areas only — located away from fuel storage, kitchens, and dormitory windows.
Fuel storage separation	Minimum 30 m between any fuel storage and any accommodation, kitchen, or dining building.
Camp fire drills	Minimum once every three months. Timed and documented.
Camp Fire Management Sub-Plan	Required as part of the completed WACMP. Shall include: fire risk assessment, prevention measures, alarm response procedure, evacuation procedure, and coordination with emergency services (101).

### *6.3 Pest and Vector Control*

- The camp shall be maintained free of rodents, insects, and other vermin at all times. A pest control programme shall be in place from camp establishment;
- In areas where mosquitoes are prevalent (particularly near the Shurobdaryo River and during warm months), workers shall be provided with mosquito netting for bed areas and mosquito screens on dormitory windows;
- Standing water — whether in drainage channels, containers, or low-lying areas — shall be eliminated promptly to prevent mosquito breeding;
- Pest monitoring and eradication shall be conducted by the Camp Manager on a regular basis, with external pest control contractor engagement where required. Pest control records shall be maintained.

## **7. Worker Welfare, Recreation, and Social Environment**

### *7.1 Recreation and Rest Facilities*

Workers who are housed in construction camps for extended periods are at risk of boredom, social isolation, and discontent if adequate recreational facilities are not provided. These risks can contribute to increased alcohol consumption, unsanctioned interaction with nearby communities, and tensions within the camp. The Contractor shall:

- Provide accessible recreational facilities appropriate to the size and composition of the workforce. The specific facilities shall be discussed with and agreed by the Worker Welfare Committee before mobilisation. [INSERT: proposed facilities — examples: TV/media room, reading materials in relevant languages, exercise equipment, outdoor recreational space, table sports, Wi-Fi or internet access point];
- Provide reasonable access to telephone or internet communication for workers to maintain contact with their families. Charges for such access, if any, shall be reasonable and disclosed to workers in advance;
- Provide appropriate facilities for religious observance where workers express a need. The specific provisions shall be assessed case by case in consultation with workers. [INSERT: arrangements for prayer space, Friday observance if applicable, religious calendar considerations];

- Maintain camp common areas and grounds in a clean, well-maintained, and pleasant condition. Communal spaces contribute significantly to camp morale.

### *7.2 Labour Influx and Community Relations*

The presence of a construction workforce — particularly migrant workers — in the Shurobdaryo valley communities creates risks of community tension, increased demand on local services, and potential for gender-based violence and exploitation. The following measures are mandatory:

- Workers shall be provided with cultural sensitivity awareness training at induction, covering: respectful behaviour toward community members; cultural norms and practices in Baljuvon District; the absolute prohibition on sexual exploitation, abuse, or harassment of community members; and the Contractor's zero-tolerance policy on SEA/SH (see CESMP Annex 9 and Annex 12);
- Workers shall not be encouraged or permitted to bring community members (including family members) into the camp accommodation without specific, pre-approved arrangements managed by the Camp Manager;
- Workers found to have engaged in sexual exploitation, harassment, or other harmful behaviour toward community members shall be dismissed and, where criminal acts are alleged, referred to the relevant national authorities;
- Camp noise, lighting, and traffic shall be managed to avoid nuisance to nearby settlements. Maximum noise at the camp perimeter: 70 dBA during daytime; 55 dBA at night. Lighting shall be directed inward and shall not cause light pollution toward settlements;
- Alcohol policy: [INSERT — the Contractor shall establish and communicate a clear alcohol policy for camp residents, consistent with the Code of Conduct in Annex 12. Alcohol consumption that leads to disorderly behaviour, aggression, or impairment for the following day's work shall be a disciplinary matter].

### *7.3 Camp Rules, Induction, and Code of Conduct*

All workers accommodated in Project camps shall receive a Camp Induction before occupying their accommodation. The Camp Induction shall be delivered by the Camp Manager in the worker's language (Tajik and/or Russian as applicable) and shall cover:

- The emergency evacuation procedure — the alarm signal, evacuation routes, and assembly point;
- How to access medical care at the camp;
- Fire safety — no smoking zones, fire alarm locations, fire extinguisher locations;
- Camp rules: housekeeping obligations in sleeping areas; prohibition on cooking in dormitories; signing in and out when leaving and returning; no harassment or violence toward other residents or staff;
- The Camp Grievance Mechanism — how to raise concerns about food, facilities, treatment, or other issues;
- The Code of Conduct (Annex 12) — expected behaviour at all times, including outside the camp;
- Workers' rights — a brief summary of their rights under their employment contract and the Labour Management Plan (Annex 9);

- SEA/SH zero-tolerance policy — what it means, who to report to, and the protections against retaliation.

Camp rules shall be posted in writing at prominent locations throughout the camp in Tajik and Russian. Attendance at the Camp Induction shall be documented and signed by each resident.

#### *7.4 Camp Grievance Mechanism*

Workers accommodated in the camp shall have access to a Camp Grievance Mechanism for concerns specifically related to accommodation conditions — food quality, hygiene, room allocation, noise, interpersonal conflict, and similar matters. This mechanism operates alongside (not instead of) the broader Worker Grievance Mechanism established in the Labour Management Plan (Annex 9).

- A locked camp suggestion/grievance box shall be accessible in the dining area or a common space at all times;
- The Camp Manager shall review the suggestion box at minimum weekly, and respond to all substantive submissions within 72 hours;
- Workers shall also be able to raise concerns verbally with the Camp Manager at any time. No worker shall be penalised or disadvantaged for raising a concern;
- A Worker Welfare Committee — composed of elected worker representatives from different workforce categories — shall meet monthly with the Camp Manager to review food quality, hygiene, facilities, and camp rules. Meeting records shall be maintained;
- Accommodation-related grievances that cannot be resolved at camp level shall be escalated to the Labour Officer and ESHS Manager via the standard Worker Grievance Mechanism.

### 8. Camp Security

Camp security is necessary to protect workers and prevent unauthorised access. However, security arrangements must not restrict workers' freedom of movement or be used as a means of controlling or trapping workers in the camp. The following requirements apply:

- Security personnel shall be trained in appropriate, proportionate, and non-aggressive conduct toward workers, staff, and community members. Security personnel must not have a known history of human rights abuses or misconduct;
- Workers shall be free to leave and return to the camp at will during non-working hours, subject only to a sign-in/sign-out procedure for safety accountability purposes. A sign-in/sign-out procedure is a safety measure, not a restriction on movement;
- Security personnel shall not search workers' personal belongings without consent and a documented reason. Any physical search must be conducted by a security officer of the same gender as the worker;
- Security arrangements for female workers' accommodation shall include specific provisions to prevent unauthorised male access. Female workers shall not be required to pass through male accommodation areas to reach sanitation facilities or exit the camp;
- Security incidents — including any instance of aggression by security personnel toward workers — shall be immediately reported to the Camp Manager and Labour Officer and logged in the Camp Incident Record.

### 9. Camp Environmental Controls

Camp operations generate waste, wastewater, noise, and light that must be controlled to protect the environment and the nearby communities. The following controls apply; they are consistent with the more detailed provisions in the Waste Management Plan (Annex 5), the Water Quality Plan (Annex 7), and the Sewage Management Plan:

- Waste segregation: minimum five waste streams in the camp — food waste, dry recyclables (plastic/glass/metal), general non-recyclable waste, hazardous waste (used oil, batteries, chemicals), and sewage sludge. Colour-coded bins provided throughout the camp;
- Food and organic waste shall be collected and removed from the camp at minimum every two days in warm weather to prevent vermin attraction and odour nuisance;
- General camp waste shall be removed to a licensed disposal facility at minimum weekly. No waste burning or open waste pits in or near the camp are permitted;
- Hazardous waste (used oil, chemical containers, batteries) shall be stored in a designated banded hazardous waste store within the camp boundary and collected by a licensed contractor;
- All fuel storage within the camp shall be within secondary containment (bunds of 110% of the largest tank volume). No fuel storage shall be within 30 m of accommodation or kitchen buildings;
- Camp access roads shall be watered or otherwise dust-suppressed in dry weather at minimum three times per day to prevent dust nuisance to settlements;
- Camp perimeter noise (maximum 70 dBA daytime, 55 dBA nighttime) shall be monitored weekly by the Camp Manager;
- Artificial lighting shall be directed inward and downward. No floodlights shall be pointed toward settlement areas.

## 10. Monitoring, Inspections, and Reporting

### 10.1 Camp Inspection Schedule

Inspection Item	Frequency	Responsible Party
Housekeeping — toilets and washrooms	Daily	Catering/Cleaning Staff, verified by Camp Manager
Housekeeping and worker conditions — dormitories and common areas	Weekly	Camp Manager
Kitchen, food preparation, and dining area hygiene	Weekly	Camp Manager and Catering Supervisor
Campgrounds — standing water, waste accumulation, general maintenance	Weekly	Camp Manager
Water quality testing	Monthly	Camp Manager (certified lab)

Pest and vector control inspection	Monthly	Camp Manager
Fire alarm and smoke detector test	Monthly	Camp Manager
Medical inventory and first aid supplies check	Monthly	First Aid Officer / Camp Manager
Noise level check at camp perimeter	Monthly	Camp Manager / ESHS Manager
Camp fire drill	Quarterly	Camp Manager — timed and documented
Full accommodation audit (all facilities against this Plan)	Quarterly (Engineer-led)	Engineer (SC): first audit at mobilisation; second at peak workforce. PIURR may attend.
Electrical systems and fittings inspection	Annually	Certified electrician — records maintained
Worker Welfare Committee meeting	Monthly	Camp Manager and Worker Representatives

### 10.2 Accommodation Reporting

Camp status shall be reported to the Engineer as part of the monthly Contractor ESHS Report, including the following minimum data:

- Number of workers accommodated by camp, employment category, gender, and nationality;
- Status of all inspection items — date of last inspection, any deficiencies found, and corrective actions taken;
- Accommodation-related grievances received — number, nature, status, and resolution;
- Water quality test results;
- Any significant incidents (fire, medical, security, pest infestation);
- Worker Welfare Committee meeting record — issues raised and actions agreed.
- The Engineer (Supervision Consultant) shall submit a detailed accommodation audit report to PIURR following each full quarterly audit.

## 11. Camp Closure and Site Restoration

Camp closure shall be planned and managed to ensure that all waste is removed, all structures are appropriately decommissioned, and the site is restored to a condition acceptable to the landowner and relevant authorities. The following checklist shall be completed before any camp is handed back:

- All residents vacated and accommodated elsewhere or demobilised;

- All personal belongings removed by residents;
- All accommodation structures removed (unless agreed otherwise with landowner);
- All temporary utility connections disconnected and removed;
- Fuel tanks and chemical storage removed and all bunds cleaned;
- Septic tanks pumped out, decommissioned, and filled or removed as required by the authority;
- Grease traps cleaned and removed;
- All solid waste removed from site to licensed disposal facility;
- All hazardous waste removed to licensed hazardous waste facility with transfer documentation;
- Maintenance and workshop areas inspected for soil contamination — contaminated soil removed and disposed of as hazardous waste;
- Camp perimeter fencing removed;
- Ground surface re-graded, topsoil re-spread, and revegetated where required;
- Final photographic record of closed camp;
- Joint inspection by Camp Manager, ESHS Manager, and Engineer with written sign-off before handback to landowner.

If soil contamination is found in fuel storage, maintenance, or waste handling areas, the Contractor shall notify the Engineer and ESHS Manager immediately. Contaminated soil shall be characterised, excavated, and disposed of as hazardous waste before site handback.

## 12. Plan Approval and Amendment

This Framework Plan shall be completed with site-specific details — including camp layout drawings, location GPS coordinates, water supply source and test results, sewage disposal arrangements, sanitation ratios with actual occupancy, catering menu and nutritional assessment, fire management sub-plan, pest control programme, and Worker Welfare Committee terms of reference — by the Contractor's Camp Manager and ESHS Manager before any worker is accommodated in a Project-provided facility.

The completed WACMP shall be submitted to the Engineer and PIURR for approval, and shall be made available to local sanitary and environmental authorities as required by national law, before camp occupation commences.

The Plan shall be reviewed and updated whenever: the camp is expanded or a new sub-camp is established; a significant deficiency is found during an inspection or audit; a worker accommodation complaint reveals a gap in the Plan; or the Engineer or PIURR requires an amendment.

Prepared By (Camp Manager / Labour Officer)	Reviewed By (Engineer)	Approved By (PIURR)
Name:	Name:	Name:

Title:	Title:	Title:
Signature:	Signature:	Signature:
Date:	Date:	Date:

## Appendix A — Worker Accommodation Inspection Checklist

Project: Baljuvon-Sari Khsor road project

Inspection Date:

Location:

Inspector:

Category	Requirement	Yes	No	N/A	Comments / Corrective Actions
General	Accommodation located outside flood-prone / hazard areas				
	Approved by Engineer / PIURR				
	Located within reasonable distance to worksite				
	Facilities constructed with adequate materials and maintained in good condition				
Water, Drainage & Utilities	Adequate drainage (no stagnant water)				
	Continuous access to potable water				
	Drinking water quality monitored				
	Electricity available in accommodation				
	Waste collection system in place and regularly emptied				
Room / Dormitory Conditions	Rooms clean, ventilated, and in good condition				
	Adequate space per worker (no overcrowding)				
	Separate accommodation for men and women (unless family units)				



	Lockable doors/windows and privacy ensured				
Beds & Storage	Separate bed provided for each worker (no hot-bedding)				
	Adequate bedding and mattress provided				
	Personal storage (lockers/cupboards) available				
Sanitary Facilities	Toilets and washing facilities clean and functional				
	Adequate number of toilets and showers				
	Separate facilities for men and women				
	Availability of soap, water, and hygienic drying materials				
Fire Safety	Fire extinguishers available and maintained				
	Fire exits clearly marked and accessible				
	Emergency evacuation plan displayed				
Canteen & Food	Cooking/eating areas clean and hygienic				
	Safe food preparation and storage practices				
	Adequate space and seating provided				
Medical & First Aid	First aid kits available and stocked				
	Workers trained in first aid				
	Emergency access for ambulance available				
Labour & Welfare Compliance	Workers have valid contracts and records maintained				
	Wage payments made through traceable systems (no cash)				
	No evidence of forced or child labour				
	Worker Code of Conduct implemented				
	GBVH awareness measures in place				
	Worker grievance mechanism in place and accessible				

GRM Reporting &	Grievance log maintained and updated				
	Labour incidents reported in line with ESMP requirements				
Security & Community Relations	Security arrangements in place and appropriate				
	No restriction on worker rights (e.g. ID withholding)				
	Measures in place to manage interaction with local communities				
Management & Monitoring	Accommodation managed by designated responsible person				
	Regular inspections conducted (at least quarterly)				
	Previous non-compliances addressed				

## Annex 11: Chance Finds Procedure

---

### 1. Purpose and Scope

This Chance Finds Procedure (CFP) establishes the mandatory actions that all Contractor personnel, subcontractor workers, and site visitors must follow in the event that any object of potential archaeological, cultural, historical, religious, or palaeontological significance is uncovered during construction of the Baljuvon – Sari Khosor (BSK) Road Project.

The procedure applies to all ground-disturbing activities across the full project corridor — including road earthworks, bridge and culvert excavations, borrow area extraction, spoil disposal site preparation, camp construction, and any other activity involving soil disturbance, blasting, or structural demolition. It applies from initial site clearance through to final site restoration.

This procedure is aligned with:

- EBRD Environmental and Social Requirement 8 (ESR8 – Cultural Heritage);
- The Law of the Republic of Tajikistan 'On the Protection and Use of Historical and Cultural Heritage';
- The Project CESMP contractual obligations; and
- The authority of the Main Department for the Preservation and Use of Historical and Cultural Heritage under the Ministry of Culture of the Republic of Tajikistan.

### 2. Cultural Heritage Context of the Project Corridor

ELEVATED CULTURAL HERITAGE RISK: The Baljuvon – Sari Khosor corridor traverses mountainous river valley terrain historically associated with Silk Road trade routes, medieval settlements, agricultural terraces, and traditional Islamic cemeteries. Undocumented subsurface remains may exist beneath river terraces, on valley plateaus, near existing settlements, and at elevated viewpoints along the corridor. The probability of encountering culturally significant materials during earthworks is assessed as elevated.

Specific heritage risk factors in the BSK corridor include:

- Traditional Islamic and pre-Islamic burial grounds — some may not be formally mapped and may have been partially obscured by erosion or vegetation;
- Subsurface structural remains — walls, floor surfaces, hearths, and storage features associated with historical settlement in the Shurobdaryo valley;
- Artefact scatters — ceramics, coins, metalwork, glass, and worked stone associated with Silk Road period activity;
- Palaeontological deposits — vertebrate fossil material may be present in exposed geological strata in cut sections;
- Ethnographic landscape features — irrigation channels, terracing, and other traditional agricultural infrastructure of cultural significance.

The absence of formal archaeological survey of the full corridor prior to construction means that the location and nature of subsurface remains cannot be predicted. All personnel must therefore treat any unusual find as potentially significant until assessed by a competent authority.

### 3. What to Look For — Recognizing a Potential Chance Find

Workers involved in excavation, grading, blasting, trenching, or any other soil or rock disturbance activity shall stop work and report to their supervisor immediately upon encountering any of the following:

Category	Examples — Stop Work and Report Immediately if You Find:
Human Remains	Bones (whole or fragmentary); skulls; teeth; grave markers; burial urns or containers; any indication of a grave pit or burial feature. These are the highest-priority finds and require the most sensitive handling.
Pottery and Ceramics	Sherds (fragments) or complete vessels of hand-made or wheel-thrown pottery, including glazed and unglazed wares; ceramic tiles or bricks that appear ancient; roof tile fragments.
Metalwork and Coins	Coins (any period); metal tools, weapons, or ornaments (bronze, iron, silver, or gold); corroded or encrusted metal objects of uncertain function.
Structural Remains	Walls, foundations, or floor surfaces made of cut stone, fired brick, or mud brick; hearths or fire pits; storage pits lined with stone or brick; plastered surfaces; channels or drains.
Stone Objects and Worked Stone	Grindstones or millstones; carved or inscribed stone (including fragments); stone tools (blades, scrapers, points) showing human working; decorated architectural stonework.
Glass and Ornaments	Fragments of ancient glass vessels or beads; jewellery (rings, bracelets, pendants); gemstones or semi-precious stones that appear worked or set.
Dark Soil Layers and Organic Deposits	Distinct dark-coloured soil layers containing ash, charcoal, or fragments of bone/pottery — these 'cultural layers' indicate areas of past human occupation even without visible objects.
Palaeontological Remains	Large fossilised bones or teeth; fossil shells; any material that appears to be mineralised biological material embedded in rock or geological matrix.
Any Unusual or Unidentified Object	If in doubt, stop and report. Workers are not expected to be able to identify archaeological material. The rule is simple: if it looks unusual — stop, secure, and notify. It is always better to report and be wrong than to proceed and damage something irreplaceable.

NOTE: Do not attempt to clean, wash, move, reassemble, or photograph finds with a flash before the ESHS Manager has attended and authorised such actions. Disturbing the position or context of a find can permanently destroy its scientific and legal value.

#### 4. Step-by-Step Response Procedure

The following steps must be followed in sequence. Every worker at every level — machine operator, labourer, supervisor, engineer — is personally responsible for complying with this procedure. No instruction from any manager may override these steps.

**STEP 1 STOP WORK IMMEDIATELY**

Cease all ground-disturbing activity within a minimum 30-metre radius of the find. Switch off excavation plant. Do not continue working in the vicinity.



**STEP 2 DO NOT TOUCH OR MOVE THE FIND**

Leave the object exactly where and how it was found. Do not attempt to extract, lift, clean, or reposition it. Do not cover it with spoil. Do not allow vehicles or plant to approach within 30 metres.



**STEP 3 SECURE THE AREA**

Mark the 30-metre exclusion zone immediately using barrier tape, cones, or temporary fencing. Post a person at the perimeter to prevent unauthorised entry. No one except the Site Supervisor and ESHS Manager may enter the secured zone.



**STEP 4 NOTIFY THE SITE SUPERVISOR**

Inform the Site Supervisor verbally and immediately. The Site Supervisor must attend the site and confirm the exclusion zone. The Site Supervisor then notifies the ESHS Manager by the fastest available means (phone, radio).



**STEP 5 ESHS MANAGER ATTENDS AND MAKES INITIAL ASSESSMENT**

The ESHS Manager attends the site as soon as possible (maximum 2 hours). Confirms the exclusion zone. Makes an initial assessment of the nature of the find. Photographs the find in situ (without touching or moving it) if safe to do so.



**STEP 6 NOTIFY ENGINEER AND PIURR — WITHIN 24 HOURS**

The ESHS Manager notifies the Engineer and PIURR in writing within 24 hours of the discovery. The written notification shall include: GPS location, chainage reference, date and time of discovery, brief description of the find, photographs, and immediate actions taken.

**STEP 7 PIURR NOTIFIES THE MINISTRY OF CULTURE**

PIURR notifies the Main Department for the Preservation and Use of Historical and Cultural Heritage under the Ministry of Culture of Tajikistan. PIURR coordinates the formal inspection by the competent authority.

**STEP 8 OFFICIAL INSPECTION AND DECISION**

The Ministry of Culture authority (or designated archaeological expert from the Institute of History, Archaeology and Ethnography, National Academy of Sciences) inspects the site and issues a written decision on: (a) whether the find is of archaeological/heritage significance; (b) the required management actions — recording, excavation, preservation in situ, or relocation; and (c) whether and when construction may resume.

**STEP 9 IMPLEMENT AUTHORITY INSTRUCTIONS**

The Contractor implements all instructions of the competent authority in full. The ESHS Manager records all actions in the Chance Find Register. Any artefacts for which the authority requires preservation shall be handled only by designated experts.

**STEP 10 WRITTEN CLEARANCE BEFORE RESUMPTION**

Work may not resume in the affected area until the ESHS Manager holds written clearance from the competent authority. A verbal clearance is not sufficient. The written clearance shall be filed in the Chance Find Register and a copy provided to the Engineer.

## 5. Special Protocol for Human Remains

HUMAN REMAINS REQUIRE HEIGHTENED SENSITIVITY AND IMMEDIATE AUTHORITY NOTIFICATION. The discovery of human remains — whether ancient or recent — must be treated with the utmost respect for the dignity of the deceased and the cultural and religious sensitivities of local communities.

In addition to the standard Steps 1–10 above, the following additional requirements apply specifically to discoveries of human remains:

- The area shall be secured with a minimum 50-metre exclusion zone, larger than the standard 30-metre requirement for other finds;
- No remains shall be touched, moved, or photographed without the specific approval of the competent authority. Even where remains appear to be very ancient, they may have religious significance to local communities;
- PIURR shall notify the local Hukumat (district administration) and relevant community representatives, including religious leaders if appropriate, as soon as the find is confirmed. Community consultation shall inform decisions about the management and disposition of the remains;
- Where human remains are discovered within or adjacent to a known or suspected Islamic cemetery, works in that area shall be redesigned where at all feasible to avoid further disturbance;
- If there is any possibility that remains are recent (less than approximately 50 years), the police shall be notified immediately in addition to the Ministry of Culture;
- Any remains ultimately requiring relocation shall be handled in strict accordance with the instructions of the Ministry of Culture authority and in a manner that is culturally and religiously appropriate, under the oversight of designated experts and in consultation with local community and religious representatives.

## 6. Key Contacts for Chance Find Notification

COMPLETE ALL FIELDS BEFORE CONSTRUCTION COMMENCES. All contact details must be verified and updated before any ground-disturbing activity begins. These numbers shall be posted at every work front, in every site vehicle, and at the main camp alongside the bilingual site notice in Section 8.

Contact / Authority	Name	Telephone
Site Supervisor (worker's immediate point of notification)	[INSERT]	[INSERT]
ESHS Manager (Contractor)	[INSERT]	[INSERT]
Engineer (Supervision Consultant)	[INSERT]	[INSERT]
PIURR Project Manager	[INSERT]	[INSERT]
Main Department for Preservation and Use of Historical and Cultural Heritage (Ministry of Culture, Tajikistan)	[INSERT — verify current contact before construction]	[INSERT]

Institute of History, Archaeology and Ethnography (A. Donish Institute, NAS Tajikistan) — designated expert archaeological authority	[INSERT]	[INSERT]
Baljuvon District Hukumat (for community and human remains notifications)	[INSERT]	[INSERT]
Police (Tajikistan national: 102) — for potentially recent human remains	102	102

## 7. Documentation — Chance Find Register

The ESHS Manager shall maintain a Chance Find Register throughout the construction period. A new entry shall be created for every discovery, including those subsequently determined to be of no cultural significance. The Register shall include the following information for each find:

Field	Data Element	Notes / Example
1	Find Reference Number	Sequential number: CFP-001, CFP-002, etc.
2	Date and Time of Discovery	DD/MM/YYYY and approximate time.
3	GPS Coordinates	Latitude / Longitude recorded by ESHS Manager on attendance. Decimal degrees format.
4	Road Chainage	Approximate chainage reference (e.g. km 12+450).
5	Discovered By	Role of worker (e.g. 'excavator operator') — not necessarily full name for privacy.
6	Description of Find	Written description of what was found: material, size, condition, approximate depth below surface, what it appeared to be.
7	Photographs	Reference to photograph file names — taken in situ by ESHS Manager only.
8	Exclusion Zone Established	Radius and time zone was established.
9	Engineer / PIURR Notification	Date and time of written notification. Recipient name.
10	Authority Notified	Which authority notified; date and time; contact name.



11	Authority Inspection Date	Date of official inspection.
12	Authority Instructions / Decision	Summary of written decision. Reference to decision document.
13	Actions Taken by Contractor	Any preservation, recording, or relocation actions taken at authority's direction.
14	Written Clearance Date	Date written clearance to resume work received. Reference to clearance document.
15	Works Resumed	Date and time works resumed in the cleared area.
16	Status	OPEN / CLEARED / ONGOING PRESERVATION

The Chance Find Register shall be made available for inspection by the Engineer and PIURR at any time. Any open (unresolved) finds shall be reported in the monthly ESHS Monitoring Report until written clearance is received.

## 8. Bilingual Site Posting Notice

The following notice shall be printed in large format (minimum A3) and posted prominently at every active work front, in every site vehicle, and at the main camp entrance. The notice shall remain posted for the duration of ground-disturbing works.

### CHANCE FIND NOTICE — BSK ROAD PROJECT

#### ENGLISH

IF YOU FIND BONES, POTTERY, OLD COINS, METAL OBJECTS,  
STONE WALLS, OR ANY UNUSUAL OBJECT DURING EXCAVATION:

① STOP WORK IMMEDIATELY ② DO NOT TOUCH OR MOVE IT ③ TELL YOUR SUPERVISOR NOW

Removing or concealing a find is a criminal offence under Tajik law.

#### ТОҶИКӢ / RUSSIAN

АГАР ШУМО УСТУХОН, КОСАҲОИ ҚАДИМӢ, ТАНГАҲО, АШӢИ МЕТАЛЛӢ,  
ДЕВОРҲОИ ҚАДИМӢ ЁГО АШӢИ ҒАЙРИОДӢ ЁБЕД:

① КОРРО ФАВРАН ҚАТӢ КУНЕД ② ОНРО ДАСТ НАЗАНЕД ③ БА САРКОР ЁН КУНЕД

Бурдан ё пинҳон кардани ашӢ аз рӯи қонунгузори Тоҷикистон ҷинояткорӣ мебошад.

ESHs Manager: [INSERT Name] | Tel: [INSERT] | Site Supervisor: [INSERT] | Tel: [INSERT]

## 9. Absolute Prohibitions

THE FOLLOWING ARE STRICTLY PROHIBITED AND CONSTITUTE A DISCIPLINARY AND POTENTIALLY CRIMINAL OFFENCE:

Removing any find from the site — including taking it home, selling it, or giving it away;

Concealing a find from the Site Supervisor or ESHS Manager;

Continuing to work within the exclusion zone after the stop-work instruction has been given;

Touching, moving, cleaning, washing, or disassembling a find before the ESHS Manager has attended and authorised such actions;

Resuming work in the exclusion zone without written clearance from the competent authority;

Disturbing or disrespecting human remains in any way;

Any manager instructing a worker to continue work over a potential find without following this procedure.

Any person found to have committed any of the above shall be immediately suspended from the Project pending investigation, and the matter shall be reported to the Engineer, PIURR, and relevant national authorities.

## 10. Worker Training and Induction

All workers engaged in any ground-disturbing activity on the BSK Road Project — including machine operators, labourers, blasting crews, site supervisors, and foremen — shall receive Chance Find training as part of their site induction before commencing work. No worker shall begin ground-disturbing activity without completing this training.

The induction shall be delivered in Tajik and/or Russian as appropriate, and shall cover:

- What cultural heritage is and why it matters — including the specific Silk Road and Islamic heritage context of the Baljuvon – Sari Khosor corridor;
- Examples of what different types of finds look like — using photographs and examples where available;
- The step-by-step response procedure (Steps 1–10 above) — walk through each step;
- The location of the site notice and emergency contact details for their specific work front;
- The absolute prohibitions — and the legal and disciplinary consequences of violation;
- The special protocol for human remains and the requirement for cultural sensitivity;
- The non-retaliation commitment: workers will not be penalised for stopping work to report a find.

Training records — including names (or unique IDs), date, language, and trainer name — shall be maintained by the ESHS Manager. Workers who do not understand the training content due to language barriers shall be provided with a translator. Training shall be refreshed whenever the procedure is updated or when a find occurs on site.

NOTE: Workers must never be pressured to continue working through a potential find or to conceal a discovery. Any such pressure constitutes a serious violation of this procedure and of Tajik law. Workers are encouraged to report such pressure through the Worker Grievance Mechanism (Annex 9) without fear of retaliation.

### 11. Approval and Sign-Off

Prepared By (Contractor ESHS Manager)	Reviewed By (Engineer)	Approved By (PIURR)
Name: Title: Signature: Date:	Name: Title: Signature: Date:	Name: Title: Signature: Date:

## Annex 12: Worker Code of Conduct

---

### 1. Purpose

This Code of Conduct sets out the mandatory standards of personal behaviour applicable to every person working on the Baljuvon – Sari Khosor (BSK) Road Project, including all Contractor employees, subcontractor personnel, agency workers, consultants, and visitors to construction sites, camps, and associated facilities.

The Code is a condition of employment. All workers sign a personal declaration confirming they have read (or had read to them), understood, and agreed to comply with this Code before commencing work on the Project. Refusal to sign the Code is grounds for non-engagement. Violation of the Code is grounds for disciplinary action, up to and including immediate dismissal and referral to relevant national authorities.

This Code supports the Contractor's obligations under EBRD Environmental and Social Requirements (ESR2, ESR4, ESR10) and national law.

### 2. General Conduct

All workers shall:

- Behave professionally, respectfully, and lawfully at all times, both during working hours and outside working hours while associated with the Project;
- Treat all colleagues, supervisors, community members, and visitors with dignity and respect regardless of gender, age, ethnicity, religion, nationality, disability, or social status;
- Follow all lawful instructions from supervisors and the ESHS team;
- Comply with all site rules, safety procedures, management plans, and method statements applicable to their work;
- Report any unsafe condition, environmental concern, or breach of this Code to their supervisor or any member of the ESHS team;
- Cooperate with inspections, audits, and investigations;
- Maintain good housekeeping at worksites, camps, and communal areas.

### 3. Prohibited Conduct

The following conduct is strictly prohibited and constitutes grounds for immediate dismissal:

#### *3.1 Sexual Exploitation, Abuse, and Harassment (SEA/SH)*

**ZERO TOLERANCE — ALL FORMS OF SEA/SH ARE PROHIBITED AT ALL TIMES**

- Any form of sexual exploitation — including any abuse of a position of power or trust for sexual purposes;
- Any form of sexual abuse — including any actual or threatened physical intrusion of a sexual nature;
- Any form of sexual harassment — including unwelcome sexual advances, requests for sexual favours, or other verbal or physical conduct of a sexual nature;
- Any sexual activity with a person under 18 years of age, regardless of local age of consent;

- Exchange of money, employment, goods, or services for sex, including sexual favours or other forms of humiliating, degrading, or exploitative behaviour;
- Any form of gender-based violence or harassment.

These prohibitions apply to interactions with community members, colleagues, and any other person. They apply at all times — during working hours, rest periods, weekends, and leave — while the worker is associated with the Project.

### *3.2 Violence, Intimidation, and Harassment*

- Physical violence or threats of violence against any person;
- Verbal abuse, bullying, or intimidation of colleagues, community members, or any other person;
- Discriminatory behaviour or language based on gender, ethnicity, religion, nationality, disability, age, or social status;
- Retaliation against any person who reports a concern, files a grievance, or participates in an investigation.

### *3.3 Substance Abuse*

- Reporting to work under the influence of alcohol or illegal drugs;
- Consumption of alcohol or illegal drugs during working hours or on any Project site;
- Possession of illegal drugs on any Project site or in Project accommodation;
- [INSERT: Contractor's camp alcohol policy — e.g., complete prohibition, or controlled consumption in designated areas outside working hours only. The policy must be clearly communicated to all workers at induction.]

### *3.4 Theft, Fraud, and Property Damage*

- Theft of any property belonging to the Project, colleagues, community members, or any other party;
- Deliberate damage to Project property, community property, or infrastructure;
- Fraudulent claims, falsification of records, or misrepresentation.

### *3.5 Unauthorised Activities*

- Unauthorised entry onto private land, into residences, or into community facilities;
- Hunting, trapping, fishing, or collecting any wild animal or plant within the project area of influence;
- Possession or purchase of bushmeat or wild-caught fish;
- Feeding of wild animals;
- Unauthorised possession of firearms, weapons, or explosives;
- Photographing or filming community members without their consent;
- Removing or disturbing any object of potential archaeological or cultural heritage significance;
- Engaging in any commercial activity, trading, or money-lending with community members.

## 4. Environmental Obligations

All workers shall:

- Dispose of all waste in designated containers — never on the ground, in watercourses, or in unauthorised locations;
- Use only designated sanitation facilities;
- Not light fires outside designated and controlled areas;
- Report any spill, leak, or environmental contamination immediately to their supervisor;
- Respect all demarcated no-go zones and sensitive area boundaries;
- Not damage or remove vegetation beyond approved clearing limits;
- Follow all speed limits and traffic management requirements.

## 5. Community Relations

Workers shall at all times behave respectfully toward communities along the BSK corridor. Specific obligations include:

- Respect local cultural norms, customs, and religious practices;
- Do not enter cemeteries, mosques, or other places of cultural or religious significance without invitation or authorisation;
- Do not obstruct community access to roads, irrigation, markets, or public facilities;
- Do not engage in arguments, disputes, or confrontations with community members — refer any issue to the SCLO;
- Do not make promises to community members regarding employment, compensation, or project benefits — all communication on these matters is through the SCLO or PIURR;
- Workers accommodated in camps shall remain within camp boundaries during non-working hours unless authorised. Workers shall not establish informal accommodation in community areas.

## 6. Reporting Obligations

Workers are expected to report:

- Any breach of this Code of Conduct by any person;
- Any SEA/SH incident or concern — through the confidential reporting channel described at induction;
- Any unsafe condition, environmental hazard, or near miss;
- Any suspected forced labour, child labour, or trafficking;
- Any suspected corruption, fraud, or illegal activity.
- NON-RETALIATION: No worker will be penalised, dismissed, or disadvantaged in any way for making a good-faith report. Retaliation against a reporter is itself a serious violation of this Code.
- Reports can be made through any of the following channels:
- Direct report to any supervisor, the ESHS Manager, Labour Officer, or SCLO;

- The Worker Grievance Mechanism (Annex 9 of the CESMP);
- The confidential SEA/SH reporting channel;
- The anonymous suggestion/grievance boxes at camps and worksites;
- The PIURR project-level Grievance Redress Mechanism.

## 7. Consequences of Violation

Violations of this Code of Conduct will be addressed through a proportionate disciplinary process:

Severity	Examples	Consequences
Minor	Littering, failure to use PPE, failure to follow housekeeping standards, minor disrespectful language	Verbal warning (first instance); written warning (repeat); temporary suspension (persistent)
Serious	Unauthorised entry onto private land, alcohol on site, refusal to follow safety instructions, damage to community property, disruptive behaviour	Written warning and mandatory retraining; suspension pending investigation; dismissal for repeat offences
Gross	Any form of SEA/SH; violence or threats of violence; hunting or poaching; theft; deliberate environmental damage; possession of weapons or drugs; forced labour or child labour involvement; removal of cultural heritage objects	Immediate dismissal. Referral to national authorities where criminal acts are involved. No re-engagement on the Project.

All disciplinary actions are recorded in the personnel file and reported to the Engineer in the monthly ESHS report. The worker has the right to raise concerns about disciplinary actions through the Worker Grievance Mechanism.

## 8. Worker Declaration

THIS DECLARATION MUST BE SIGNED BY EVERY WORKER BEFORE COMMENCING WORK

I, the undersigned, confirm that:

This Code of Conduct has been read to me and/or I have read it in a language I understand;

I understand the standards of behaviour required of me;

I understand that violation of this Code may result in disciplinary action, including immediate dismissal;

I understand the reporting channels available to me and that I will not face retaliation for making a good-faith report;

I agree to comply with this Code of Conduct throughout my employment on the BSK Road Project.

Worker Name (printed): \_\_\_\_\_

Worker Signature: \_\_\_\_\_

ID / Passport Number: \_\_\_\_\_

Employer (Contractor / Subcontractor): \_\_\_\_\_

Date: \_\_\_\_\_

Witness (ESHS team member): \_\_\_\_\_

Language of delivery: \_\_\_\_\_ Tajik \_\_\_\_\_ Russian \_\_\_\_\_ Other: \_\_\_\_\_

A signed copy of this declaration shall be retained in the worker's employment file. The worker shall receive a copy in their language. The original is held by the Contractor's Labour Officer.

## 9. Plan Approval

Role	Name	Signature	Date
Contractor Project Manager			
ESHS Manager			
Engineer (CSC)			



## Annex 13: Air Quality and Dust Management Plan (Framework)

### 1. Purpose and Scope

This Air Quality and Dust Management Plan (AQDMP) establishes the mandatory requirements and controls that the Contractor shall implement to prevent, minimise, and manage air quality impacts arising from construction of the Baljuvon – Sari Khosor (BSK) Road Project.

The BSK corridor traverses a narrow mountain valley with approximately 19 settlements along the alignment. Dust from earthworks and unpaved haul routes, emissions from the asphalt plant and crushers, and vehicle exhaust from heavy construction traffic all have the potential to cause nuisance, health impacts, and environmental degradation if not effectively controlled.

This Plan applies to all activities and facilities that generate airborne emissions, including:

- Earthworks, excavation, and embankment construction;
- Operation of crushers, screening plants, and aggregate processing facilities;
- Asphalt plant operation, including bitumen heating and hot mix production;
- Material haulage on unpaved roads and haul routes;
- Loading, unloading, and stockpiling of fine materials;
- Concrete batching and cement handling;
- Construction camp operations, including generator exhaust;
- Blasting activities (where applicable);
- Demolition of existing structures.

#### 1.1 Legal and Policy Framework

This Plan has been developed in accordance with the following requirements:

Requirement	Relevance
Law on Atmospheric Air Protection (2011)	National emission control framework; permit requirements for stationary sources
Sanitary Rules and Norms (SanPiN) — Maximum Allowable Concentrations for ambient air	Numerical air quality standards at settlement boundaries
EBRD ESR3 — Resource Efficiency and Pollution Prevention	Pollution prevention hierarchy; application of GIIP; ambient standards where national standards less stringent
IFC/WHO General EHS Guidelines — Air Emissions and Ambient Air Quality	Benchmark ambient standards (PM <sub>10</sub> , PM <sub>2.5</sub> , NO <sub>2</sub> , SO <sub>2</sub> ); stack emission guidance for combustion and industrial sources
IFC EHS Guidelines for Construction Materials Extraction	Dust management at quarries and borrow areas

Where national standards and IFC/WHO guidelines differ, the more stringent standard shall apply.

## 2. Roles and Responsibilities

Role	Air Quality Responsibilities
ESHS Manager	Overall responsibility for air quality compliance; reviews monitoring data; authorises corrective actions; reports to Engineer
Environmental Inspector	Conducts daily visual dust inspections; coordinates water spraying; monitors dust at sensitive receptors; maintains air quality records
Plant Manager	Ensures asphalt plant and crusher emission controls are operational; maintains equipment; monitors stack emissions where required
Site Supervisors	Implement dust suppression at active work fronts; report dust complaints; ensure loads are covered
SCLO	Receives and logs community dust complaints; communicates planned high-dust activities to settlements; coordinates response

## 3. Air Quality Risk Register

The following sources of air quality impact have been identified along the BSK corridor. The Contractor shall update this register as construction progresses and new risks are identified.

Source	Emission Type	Key Receptors	Risk Rating
Earthworks and excavation	Fugitive dust (PM <sub>10</sub> , TSP)	Settlements within 200 m of active works	High
Unpaved haul routes	Fugitive dust from vehicle movements	Settlements along haul route; agricultural land	High
Crushing and screening plant	Dust (PM <sub>10</sub> , PM <sub>2.5</sub> ); noise-related vibration resuspension	Nearest settlement; workers at plant	High
Asphalt plant	Combustion emissions (NO <sub>2</sub> , SO <sub>2</sub> , CO, PM); bitumen fumes (VOC, PAH)	Nearest settlement; workers at plant	High
Material stockpiles	Wind-blown dust	Adjacent areas; watercourses	Medium
Concrete batching	Cement dust	Workers; nearby watercourses	Medium
Vehicle and plant exhaust	CO, NO <sub>2</sub> , PM from diesel engines	Workers; settlements	Medium

Blasting (if required)	Dust cloud; blast gases	Settlements; workers	High (episodic)
------------------------	-------------------------	----------------------	-----------------

## 4. Dust Control Measures

### 4.1 General Requirements

Dust control is not optional and is not limited to responding to complaints. Proactive dust suppression shall be implemented before dust becomes a nuisance. The following controls apply across all work fronts:

- Water spraying of all active earthwork areas, exposed surfaces, and unpaved access roads at a frequency sufficient to prevent visible dust generation. As a minimum, spraying shall occur twice per day during dry weather and more frequently during hot, dry, or windy conditions;
- Speed limits for construction vehicles on unpaved roads: 20 km/h within 200 m of any settlement, 30 km/h elsewhere on unpaved haul routes. Speed control is the single most effective measure to reduce haul road dust;
- All loads of fine materials (soil, aggregate, sand, crusher dust, cement) shall be covered with tarpaulins before any vehicle leaves a work area onto a haul route or public road;
- Wheel wash facilities shall be operational at all exits from borrow pits, quarries, crushers, spoil sites, and the asphalt plant. Vehicles shall not leave these sites with material adhering to tyres or bodywork;
- Stockpiles of fine material shall be protected from wind erosion using water spraying, covers, or windbreak screens. Stockpiles that will remain in place for more than two weeks shall be seeded with a temporary cover crop or covered with hessian;
- The extent of simultaneously exposed soil shall be minimised. Completed earthwork sections shall be progressively stabilised by compaction, seeding, or covering;
- Open burning of any material is absolutely prohibited.

### 4.2 Enhanced Controls Near Settlements

Where active works are located within 200 m of a settlement, school, clinic, or other sensitive receptor, the following enhanced controls shall apply in addition to the general requirements above:

- Dust suppression frequency shall be increased to at least three applications per day, with additional applications during windy conditions (wind speed > 5 m/s);
- High-dust activities (topsoil stripping, bulk excavation, material crushing) shall be suspended when sustained wind is blowing directly toward the settlement and dust suppression is demonstrably insufficient to control visible emissions;
- The SCLO shall notify the settlement at least 48 hours before high-dust activities commence in their vicinity;
- Community complaints about dust shall be recorded in the Grievance Register and responded to within 24 hours, with corrective action implemented immediately where the complaint is substantiated.

### 4.3 Haul Route Dust Management

- Unpaved haul routes shall be watered at a frequency sufficient to prevent visible dust plumes reaching settlements. This may require multiple water tanker passes per day on heavily trafficked sections;

- Where haul routes pass through or immediately adjacent to settlements, the Contractor shall consider the application of dust suppressants (e.g., calcium chloride or equivalent) where water spraying alone is insufficient;
- Haul route surfaces shall be maintained in good condition. Potholes and surface damage that generate additional dust shall be repaired promptly;
- Mud and material deposited on paved roads by construction vehicles shall be cleaned within 2 hours of identification.

## 5. Asphalt Plant Emission Controls

The asphalt plant is the most significant point source of air emissions on the Project. The following controls are mandatory:

- Plant siting shall account for prevailing wind direction. The plant shall be located downwind of the nearest settlement wherever site logistics permit. Minimum separation distance from nearest settlement: 500 m, or as determined by a site-specific dispersion assessment approved by the Engineer;
- The plant shall hold all required national emission permits before commissioning. Permit copies shall be maintained on site;
- The asphalt drum dryer burner shall be properly calibrated and maintained to minimise incomplete combustion. Stack emissions shall comply with Tajik emission standards or IFC guidelines, whichever is more stringent;
- Bitumen storage and handling shall employ closed systems where feasible to minimise fugitive VOC and PAH emissions. Hot bitumen shall not be left in open containers;
- Aggregate feed and transfer points on the plant shall be fitted with dust suppression (water sprays or enclosures);
- Plant operators shall be trained in emission minimisation procedures, including correct burner operation and maintenance;

NOTE: Specific asphalt plant type, burner specification, and emission control equipment to be confirmed by the Contractor post-award.

## 6. Crusher and Screening Plant Controls

- Crushing and screening operations shall be fitted with water spray suppression at all feed points, discharge points, and conveyor transfer points;
- Where enclosed crusher units are available, these shall be used in preference to open units;
- Minimum separation distance from nearest settlement: 500 m, or as determined by site-specific assessment;
- Wind screens or bund walls shall be erected on the downwind side of crushing areas where settlements are within 1,000 m;
- All required operating permits, including air emission permits, shall be obtained before commissioning.

## 7. Vehicle and Equipment Emissions

- All diesel-powered construction vehicles, plant, and generators shall be maintained in accordance with manufacturer specifications. Engines producing visible black smoke shall be taken out of service until repaired;

- Vehicle and plant maintenance records, including emission-related maintenance, shall be maintained and available for inspection;
- Vehicles and plant shall not be left idling unnecessarily. Engines shall be switched off when not in active use;
- Generators shall be positioned away from accommodation areas and fitted with appropriate exhaust systems.

## 8. Air Quality Monitoring

### 8.1 Visual Monitoring

Daily visual monitoring of dust conditions shall be conducted by the Environmental Inspector at all active work fronts and at the boundary of the nearest settlement. Observations shall be recorded in the daily site diary, noting:

- Wind direction and estimated wind speed;
- Visible dust plumes and their extent;
- Effectiveness of dust suppression measures;
- Any complaints received.

### 8.2 Quantitative Monitoring

Quantitative air quality monitoring shall be undertaken where the risk assessment identifies potential for standards exceedance at sensitive receptors. As a minimum:

Parameter	Location	Frequency	Standard	Method
PM <sub>10</sub> (24-hour)	Nearest settlement to active high-dust works	Monthly during active earthworks; event-triggered	40 µg/m <sup>3</sup> (WHO) or Tajik MAC, whichever lower	Portable gravimetric or real-time PM monitor
PM <sub>2.5</sub> (24-hour)	Nearest settlement to asphalt plant and crusher	Monthly during plant operation	25 µg/m <sup>3</sup> (WHO) or Tajik MAC	Portable gravimetric or real-time PM monitor
Depositional dust	Up to 4 locations at settlement boundaries	Monthly composite	350 mg/m <sup>2</sup> /day (GIIP benchmark)	Deposit gauge

NOTE: Final monitoring station locations to be confirmed by the Contractor's ESHS Manager post-award based on asphalt plant and crusher locations and active works programme.

Any exceedance of applicable standards shall be reported to the Engineer within 24 hours and corrective action implemented immediately.

## 9. Non-Compliance Response

- Any air quality non-compliance — including visible dust reaching a settlement without adequate suppression, operation of plant without emission controls, or exceedance of monitoring standards — shall be recorded in the Non-Compliance Register;

- The ESHS Manager shall investigate the cause and implement corrective action within 24 hours for dust-related non-compliances and within 48 hours for emission-related non-compliances;
- Repeated or persistent dust complaints from the same settlement shall trigger a management review and revision of suppression methods;
- The Engineer may instruct the Contractor to suspend high-dust activities pending implementation of additional controls.

## 10. Worker Awareness and Training

All workers involved in earthworks, haulage, plant operation, and material handling shall receive air quality and dust management training during induction, covering:

- The health effects of dust exposure and why suppression matters;
- Correct use of dust suppression equipment (water tankers, sprays);
- The requirement to cover all loads;
- Speed limits on unpaved roads and why they matter for dust;
- Correct use of respiratory PPE where required (crusher operators, cement handlers);
- How to report excessive dust or equipment producing black smoke.

Training shall be delivered in Tajik and/or Russian. Records shall be maintained by the ESHS Manager.

## 11. Plan Approval and Amendment

This Framework Plan shall be completed with site-specific details — including asphalt plant and crusher locations, monitoring station locations, and haul route dust management arrangements — by the Contractor's ESHS Manager and submitted to the Engineer for approval before earthworks or plant commissioning.

The Plan shall be reviewed and updated if: plant locations change; new sensitive receptors are identified; monitoring data indicates controls are insufficient; or the Engineer requires a revision.

Role	Name	Signature	Date
Contractor ESHS Manager			
Engineer (CSC)			

## Annex 14: Noise and Vibration Management Plan (Framework)

### 1. Purpose and Scope

This Noise and Vibration Management Plan (NVMP) establishes the mandatory requirements and controls that the Contractor shall implement to prevent, minimise, and manage noise and vibration impacts arising from construction of the Baljuvon – Sari Khosor (BSK) Road Project.

The BSK corridor passes through or adjacent to approximately 19 settlements in a narrow mountain valley where sound propagation is amplified by topography and reflections from valley walls. Residential dwellings, schools, medical facilities, cemeteries, and the Bukhara deer breeding farm at Dashtaro are confirmed sensitive receptors. Construction activities generating significant noise and vibration include earthworks, rock-breaking, blasting (if required), piling, heavy vehicle movements, crusher and asphalt plant operation, and bridge construction.

This Plan applies to all construction activities and associated facilities capable of generating noise or vibration impacts, including:

- Earthworks, excavation, and rock-breaking;
- Blasting (where applicable);
- Piling and foundation works;
- Bridge construction and demolition;
- Operation of crushers, screening plants, and asphalt plant;
- Heavy vehicle and plant movements on haul routes and through settlements;
- Generator operation at camps and work fronts;
- Construction camp operations.

#### 1.1 Legal and Policy Framework

Requirement	Relevance
Law on Noise Protection (Tajikistan)	National noise limits at residential boundaries
Sanitary Rules and Norms (SanPiN) — Noise	Maximum Allowable Levels at residential premises
EBRD ESR3 — Resource Efficiency and Pollution Prevention	Pollution prevention; application of GIIP; receptor-based assessment
EBRD ESR4 — Health and Safety	Community health and safety; occupational noise exposure
IFC General EHS Guidelines — Noise Management	Construction noise benchmarks; receptor-based approach; vibration guidance

### 2. Roles and Responsibilities

Role	Noise and Vibration Responsibilities
------	--------------------------------------

ESHS Manager	Overall responsibility for noise and vibration compliance; approves working hours near settlements; reviews monitoring data; authorises corrective action
Environmental Inspector	Conducts noise monitoring; maintains records; coordinates with site supervisors on working hours and equipment deployment
Ecologist	Advises on noise and vibration controls near the Bukhara deer farm and other sensitive habitats
SCLO	Provides advance notification of noisy works; receives and logs community noise complaints; coordinates response
Site Supervisors	Implement permitted working hours; control equipment deployment; report complaints

### 3. Noise and Vibration Standards

#### 3.1 Ambient Noise Limits at Receptors

The Contractor shall ensure that construction noise does not exceed the following limits at the boundary of the nearest sensitive receptor. Where Tajik SanPiN standards and IFC guidelines differ, the more stringent standard applies.

Receptor Type	Daytime (07:00–22:00)	Night-time (22:00–07:00)
Residential premises	55 dB(A) LAeq,1h	45 dB(A) LAeq,1h
Schools, clinics, mosques (during use)	50 dB(A) LAeq,1h	N/A
Bukhara deer breeding farm	To be agreed with Ecologist and Farm Manager — see Section 5.3	To be agreed

These limits apply to construction noise contribution, not to total ambient noise including pre-existing background levels. Where pre-existing background levels already exceed the limits, the Contractor shall ensure construction noise does not increase existing levels by more than 3 dB(A).

#### 3.2 Vibration Limits

Construction vibration shall not exceed the following limits at the nearest occupied structure:

Category	Peak Particle Velocity (PPV)
Residential buildings (continuous vibration, e.g., from compaction, piling)	5 mm/s PPV at building foundation
Residential buildings (transient vibration, e.g., blasting)	10 mm/s PPV at building foundation
Historic or fragile structures, cemeteries	3 mm/s PPV at structure



## 4. Working Hours and Scheduling Controls

### 4.1 Permitted Working Hours Near Settlements

The following default working hours apply to all construction activities within 300 m of any settlement, school, clinic, mosque, or cemetery. Variations require written approval from the Engineer and advance community notification.

Activity	Permitted Hours
General construction works	07:00 to 19:00 (Monday to Saturday)
High-noise activities (rock-breaking, piling, blasting, vibratory compaction)	08:00 to 17:00 (Monday to Saturday)
Heavy vehicle haulage through settlements	07:00 to 22:00 (per Traffic Management Plan)
Night works (any activity)	Not permitted within 300 m of settlement without specific Engineer approval, advance community notification, and noise monitoring

No high-noise construction activity shall be undertaken during Friday prayers at locations within audible range of a mosque, where the community or local authority requests this restriction.

### 4.2 Scheduling of High-Noise Activities

- Where multiple items of high-noise equipment would operate simultaneously near a settlement, activities shall be sequenced to avoid cumulative peak exposure wherever practicable;
- Blasting, where required, shall be scheduled at a fixed, predictable time that is communicated to affected communities in advance. No blasting shall occur before 09:00 or after 16:00 near settlements;
- Continuous sources of noise (generators, pumps, compressors) operating at camps or work fronts near settlements shall be located as far as practicable from the nearest receptor and fitted with acoustic enclosures or attenuation where available.

## 5. Noise and Vibration Control Measures

### 5.1 Equipment Controls

- All construction plant and equipment shall be maintained in good working condition. Defective silencers, exhausts, or engine housings shall be repaired before equipment is deployed near settlements;
- Equipment with lower noise emission ratings shall be selected in preference to noisier alternatives where a choice exists;
- Reversing alarms on vehicles operating within 200 m of residential areas shall use broadband ('white noise') type alarms rather than tonal beepers where available, to reduce sleep disturbance;
- Pneumatic breakers shall be fitted with acoustic shrouds where operating within 150 m of any receptor;
- Compressors and generators shall be housed in acoustic enclosures or positioned behind solid barriers when operating within 300 m of a settlement;

- Impact piling shall not be used within 200 m of any occupied structure. Bored piling or vibratory methods shall be used as alternatives where geotechnical conditions permit.

### 5.2 Temporary Barriers and Screening

- Where sustained high-noise works (rock-breaking, piling, concrete demolition) are required within 100 m of a sensitive receptor, temporary acoustic barriers (minimum 2.4 m high, solid construction, no gaps) shall be erected between the noise source and the receptor;
- Earthen bunds or stockpiles may be used as additional screening where site layout permits;
- Barrier effectiveness shall be verified by noise measurement at the receptor during the first day of operation and adjusted if necessary.

### 5.3 Bukhara Deer Breeding Farm — Specific Controls

The Bukhara deer breeding farm at Dashtaro village is highly sensitive to noise and vibration, particularly during the calving season (Section 6.4 of the Biodiversity Management Framework, Annex 8). The following additional controls apply:

- The Ecologist shall establish an agreed noise threshold with the Farm Manager before works commence within the buffer zone. This threshold shall be below the residential limit and shall account for the specific behavioural sensitivity of captive deer;
- No blasting, impact piling, or rock-breaking shall be undertaken within the agreed buffer distance during the calving season without PIURR approval;
- Vibration monitoring shall be undertaken at the farm boundary whenever vibratory compaction or blasting occurs within 500 m;
- The Farm Manager shall be notified at least 48 hours before any high-noise or high-vibration activity within the buffer distance, as required by the Biodiversity Management Framework.

## 6. Noise and Vibration Monitoring

### 6.1 Monitoring Programme

Parameter	Location	Frequency	Standard	Equipment
Construction noise LAeq,1h	Nearest receptor to active high-noise works	Weekly during active works within 200 m of settlement; on commencement of each new high-noise activity	See Section 3.1	Type 2 (or better) integrating sound level meter, calibrated
Vibration PPV	Foundation of nearest occupied structure; deer farm boundary	During blasting, piling, vibratory compaction within 100 m of structures; during works within buffer of deer farm	See Section 3.2	Triaxial vibration monitor at foundation level
Baseline ambient noise	Representative settlements and deer farm	Once, before construction commences in each area	For reference	Type 2 integrating SLM; 24-hour measurement

NOTE: Specific monitoring station locations at key sensitive receptors to be confirmed by the Contractor's ESHS Manager post-award.

### 6.2 Exceedance Response

If monitoring identifies an exceedance of the applicable noise or vibration limit:

- The relevant activity shall be suspended or modified immediately;
- The ESHS Manager shall investigate the cause within 24 hours and implement corrective action (e.g., temporary barrier, revised schedule, equipment substitution);
- The Engineer shall be notified within 24 hours;
- Monitoring shall be repeated following implementation of corrective action to verify compliance;
- The community shall be informed of the action taken in response to the exceedance, via the SCLO.

## 7. Community Communication

Effective community communication is the most important noise management tool after source control. Communities who understand what is coming and for how long are significantly more tolerant of temporary construction noise than those who are uninformed.

- The SCLO shall notify each settlement at least 48 hours before the start of high-noise works in their vicinity (rock-breaking, blasting, piling, heavy earthmoving);
- Notification shall include: the nature of works, the expected duration, the daily working hours, the measures being taken to minimise noise, and who to contact with complaints;
- Noise complaints shall be recorded in the Grievance Register and responded to within 24 hours. The SCLO shall visit the complainant in person where the complaint is substantiated;
- Where sustained high-noise works will last more than two weeks adjacent to a settlement, the SCLO shall hold a community briefing at the start and provide weekly updates on progress and expected completion;
- Blasting notifications shall follow the procedure in the Emergency Preparedness and Response Plan (Annex 4), including audible warning signals.

## 8. Blasting Controls

Blasting, if required, is the highest-impact noise and vibration source on the Project. The following controls apply where blasting is proposed:

- A Blasting Management Plan shall be prepared by a licensed blasting contractor and approved by the Engineer before any blasting commences;
- Pre-blast structural condition surveys shall be undertaken on all buildings within 500 m of the blast site, with photographic records;
- Trial blasts at reduced charge weights shall be conducted and vibration monitored at the nearest receptor before production blasting begins;
- Charge weights and delay patterns shall be designed to maintain vibration below the limits in Section 3.2;
- Blasting shall not occur during the calving season at the Bukhara deer farm if the blast site is within the agreed buffer distance;
- All blasting shall comply with national explosives regulations and the conditions of the relevant permit.

## 9. Worker Noise Exposure

Occupational noise exposure is addressed in the OHS Management Plan (Annex 1). Workers exposed to noise levels above 85 dB(A) LAeq,8h shall be provided with appropriate hearing protection and shall be included in a hearing conservation programme. Noise exposure monitoring shall be conducted for workers at the crusher, asphalt plant, and during rock-breaking and blasting operations.

## 10. Record-Keeping and Reporting

- All noise and vibration monitoring records, including calibration certificates, measurement locations, meteorological conditions, and results, shall be maintained by the Environmental Inspector;
- Noise complaints, investigation findings, and corrective actions shall be logged in the Grievance Register and Non-Compliance Register as applicable;
- Monitoring results and noise management performance shall be reported to the Engineer quarterly as part of the ESHS Monitoring Report;
- Any exceedance of noise or vibration limits shall be reported to the Engineer within 24 hours.

## 11. Plan Approval and Amendment

This Framework Plan shall be completed with site-specific details — including baseline monitoring results, sensitive receptor register with distances, agreed working hours for each settlement, and monitoring station locations — by the Contractor's ESHS Manager and submitted to the Engineer for approval before construction works commence near any settlement.

The Plan shall be reviewed and updated if: works advance to a new settlement or sensitive receptor; a noise or vibration complaint reveals a gap in controls; blasting is proposed; or monitoring data indicates existing controls are insufficient.

Role	Name	Signature	Date
Contractor ESHS Manager			
Engineer (CSC)			

## Annex 15: Erosion and Sediment Control Plan (Framework)

### 1. Purpose and Scope

This Erosion and Sediment Control Plan (ESCP) sets out the mandatory measures the Contractor shall implement to prevent erosion of disturbed ground and the discharge of sediment-laden water to the Shurobdaryo River and its tributaries during construction of the Baljuvon – Sari Khosor (BSK) Road Project.

The BSK corridor traverses steep mountain terrain with shallow soils, significant rainfall, and direct hydraulic connectivity to the Shurobdaryo River. Uncontrolled erosion and sediment discharge present a credible risk to river ecology, downstream water users, irrigation intakes, and the stability of the road formation itself. This Plan applies to all earthworks activities, borrow areas, spoil sites, access tracks, and temporary drainage works throughout the construction programme.

This Plan forms Annex 15 of the Contractor's CESMP and must be read alongside the Water Quality & Sediment Control Plan (Annex 7), the Materials, Spoil & Borrow Area Management Plan (Annex 6), and the Biodiversity Management Framework (Annex 8).

### 2. Legal and Policy Framework

Instrument	Relevance to this Plan
Law of the Republic of Tajikistan on Environmental Protection	Prohibits pollution of land and water resources. Requires the Contractor to prevent damage to soils and watercourses from construction activities.
Law on Water and Water Use (Tajikistan)	Prohibits discharge of untreated or contaminated water to watercourses. The Shurobdaryo and its tributaries are protected water bodies under national law.
EBRD ESR3 – Resource Efficiency and Pollution Prevention	Requires the Contractor to prevent, minimise, and control construction-phase water pollution and erosion. Applies Good International Industry Practice (GIIP) to earthworks drainage and sediment control.
Project CESMP (Parent Document) and Annex 7	This Plan implements the erosion and sediment control requirements of the CESMP and supplements the water quality procedures in Annex 7 with earthworks-specific controls.

### 3. Roles and Responsibilities

Role	Erosion and Sediment Control Responsibilities
ESHS Manager (Contractor)	Overall accountability for ESCP implementation. Approves site-specific erosion control designs. Authorises commencement of earthworks in each section following ESCP pre-works inspection. Reports non-compliances to Engineer.
Site Engineer / Supervisor (Contractor)	Implements ESCP measures at the work front on a daily basis. Ensures sediment controls are installed before earthworks commence in each section. Initiates emergency stabilisation measures in the event of sudden rainfall or control failure.
Engineer (Supervision Consultant)	Reviews and approves the site-specific ESCP prior to earthworks commencement. Audits ESCP implementation during site inspections. Issues non-compliance notices where controls are absent or inadequate. Approves any variation to approved measures.

PIURR	Receives quarterly ESHS monitoring reports including erosion and sediment control performance data. Notified of any discharge incident affecting the Shurobdaryo River or tributaries.
-------	--

#### 4. Erosion Risk Assessment

Before earthworks commence in each section, the Contractor's ESHS Manager shall complete a simple site-specific erosion risk assessment covering: slope gradient, soil type and erodibility, proximity to watercourses, drainage catchment area, and expected exposure duration. The risk assessment shall determine the appropriate tier of controls from Section 5 and shall be documented in the ESCP site record.

[INSERT: Summary erosion risk assessment by section / chainage range, to be completed from site survey data before works commence.]

#### 5. Erosion and Sediment Control Measures

##### 5.1 General Earthworks Principles

The following principles apply to all earthworks activities throughout the project:

- Limit the area of disturbed ground at any one time — do not open more working frontage than can be actively managed with the available workforce and equipment.
- Protect exposed cut and fill slopes as soon as practicable after formation — do not leave unprotected slopes exposed through a significant rainfall event.
- Establish temporary drainage (cut-off drains and slope intercept drains) before earthworks commence in each section, not after.
- All water runoff from disturbed areas shall pass through a sediment trap or sediment basin before reaching any natural watercourse.
- No direct discharge of turbid or sediment-laden water to the Shurobdaryo River or any named tributary is permitted at any time.

##### 5.2 Slope and Surface Protection

Measure	Application	Standard / Requirement
Cut-off drain (diversion drain)	Top of all cut slopes; upslope of all disturbed areas	Install before cut commences. Lined with rock rip-rap or grass where gradient exceeds 5%. Outlet to sediment trap before any watercourse.
Slope drain / chute	Down-slope face of fill embankments; steep cut faces	Lined or piped discharge. Outfall energy dissipator at base of slope to prevent scour.
Slope seeding or turfing	All permanent cut and fill slopes on completion of formation	Use locally sourced, native grass seed mix. [INSERT: approved seed mix specification.] Apply within 14 days of slope completion. Irrigate if required during dry season establishment.
Hydro-seeding or erosion blanket	Steep slopes (>1:2) or where conventional seeding unlikely to establish before wet season	Erosion control blanket pinned to slope. Specification: [INSERT.] Required on all slopes steeper than 1:1.5 in areas with direct drainage to the Shurobdaryo River.
Temporary mulch or cover	Exposed areas not yet seeded; stockpiles during construction	Straw mulch, woodchip, or hessian sheeting. Applied to all stockpiles and exposed areas if rainfall forecast within 48 hours.

### 5.3 Sediment Control

Measure	Application	Standard / Requirement
Sediment fence (silt fence)	Downslope perimeter of all disturbed areas within 50 m of a watercourse or drainage line	Geotextile fabric, minimum 150 mm embedment. Inspect after every rainfall event. Remove accumulated sediment when half full. Replace when fabric damaged.
Sediment trap	Outlet of all temporary drains before any discharge point	Minimum volume: [INSERT — sized to capture runoff from drainage catchment area.] Desilt when 50% full. Retained sediment disposed at approved spoil site.
Rock check dam	Temporary drainage channels on gradient; access track drainage	Loose rock rip-rap or gabion. Spacing determined by gradient: [INSERT design standard.] Installed before channel first receives runoff.
Wheel wash	All vehicle exits from earthworks areas, borrow areas, and spoil sites onto public road	Permanent or temporary wash-down pad with sediment settling pit. Mud deposited on public road to be removed within 2 hours.

### 5.4 Watercourse Crossing Works

Where earthworks or construction activities occur within or immediately adjacent to the Shurobdaryo River or named tributaries:

- Install silt curtains or turbidity barriers upstream and downstream of in-channel works before works commence.
- Undertake in-channel works during the low-flow season wherever practicable. [INSERT: confirmed low-flow window from hydrological data.]
- Divert stream flow around active work areas using temporary cofferdams or flume pipes where in-channel duration exceeds one day.
- All cofferdams and diversions shall be designed to pass the design flood without failure. Design standard: [INSERT.]
- Turbidity monitoring at a downstream sentinel point shall be conducted continuously during any in-channel works. Turbidity trigger level for work suspension: [INSERT NTU threshold, to be agreed with Engineer].
- Remove all temporary works and restore channel bed and banks to original profile on completion.

### 5.5 Borrow Areas and Spoil Sites

Erosion and sediment control requirements specific to borrow areas and spoil sites are set out in the Materials, Spoil and Borrow Area Management Plan (Annex 6). As a minimum, the following measures shall also be implemented at all borrow areas and spoil sites under this Plan:

- Perimeter sediment fencing or bunding on the downslope side of all borrow and spoil areas before any excavation or tipping commences.
- Sediment trap at each drainage outlet from the site.
- Wheel wash at all vehicle exit points.
- Progressive rehabilitation and seeding of completed sections of borrow areas rather than waiting until the entire borrow area is exhausted.

## 6. Emergency Response – Sediment Spill or Discharge Incident

In the event of uncontrolled sediment discharge to the Shurobdaryo River or any tributary — including failure of a sediment fence, overtopping of a sediment trap, or failure of a cofferdam:

- Stop the works activity causing or contributing to the discharge immediately.
- Notify the ESHS Manager and Engineer within 1 hour.
- Implement emergency controls: install emergency sediment fencing, sandbags, or pump-out of affected area as appropriate.
- PIURR to be notified within 4 hours of any discharge incident reaching the Shurobdaryo River or a named tributary.
- A written incident report shall be submitted to the Engineer within 24 hours, including cause, volume, duration, and corrective actions taken.
- Works shall not resume in the affected area until the Engineer has approved revised controls.

## 7. Monitoring and Inspection

Inspection / Check	Frequency	Trigger for Action	Responsible
Pre-works ESCP check — controls installed before earthworks commence in each new section	Before each section commences	Works do not commence until ESHS Manager signs off	ESHS Manager
Visual inspection of all sediment fences, traps, and slope drains — condition and capacity	Daily during active earthworks; after every significant rainfall event	Repair or desilt within 24 hours if capacity >50% or damage found	Site Supervisor
Turbidity monitoring downstream of active earthworks sections and in-channel works	Continuous during in-channel works; weekly during earthworks near watercourses	Works suspended if turbidity exceeds [INSERT NTU threshold]	ESHS Manager
Slope protection status — seeding establishment and cover	Monthly during growing season on completed slopes	Re-seed if ground cover <70% after [INSERT] weeks	ESHS Manager
Full ESCP compliance audit — all measures vs plan	Monthly	Non-compliances reported to Engineer; corrective actions within 48 hours	ESHS Manager, reported to Engineer

## 8. Plan Development, Approval, and Amendment

This document is a Framework. The Contractor shall develop a site-specific ESCP before any earthworks, vegetation clearance, or ground disturbance commences. The site-specific ESCP shall populate all [INSERT] fields and include:

- Erosion risk assessment by chainage section.
- Scaled erosion and sediment control layout drawings for each major work area, borrow area, and spoil site.
- Turbidity monitoring locations, methods, and trigger levels agreed with the Engineer.
- Approved seed mix specification and supplier.
- In-channel works schedule aligned to confirmed low-flow window.

The site-specific ESCP shall be submitted to the Engineer for written approval at least 14 days before earthworks commence. The Plan shall be updated whenever: works advance to a new section; a new borrow area or spoil site is opened; a monitoring result triggers a threshold; or the Engineer requires revision. PIURR shall receive a copy of the approved ESCP for information.



OFFICIAL USE

Prepared By (Contractor ESHS Manager)	Reviewed & Approved By (Engineer)	Noted By (PIURR)
Name: Title: Signature: Date:	Name: Title: Signature: Date:	Name: Title: Signature: Date:

## Annex 16: Access Road Management Plan (Framework)

### 1. Purpose and Scope

This Access Road Management Plan (ARMP) establishes mandatory requirements for the construction, use, maintenance, and reinstatement of temporary construction access tracks, and for the use of existing community roads for construction haulage, during the BSK Road Project.

The BSK corridor is a mountain environment with steep terrain, shallow and erodible soils, and a network of unpaved community tracks that serve remote villages. Poorly managed construction access tracks cause erosion, slope instability, damage to community roads and crops, dust nuisance, and community conflict. This Plan applies to: all new temporary access tracks constructed for construction purposes; all existing unpaved and paved roads used for construction vehicle access and haulage; borrow area and spoil site access tracks; and camp access routes.

This Plan forms Annex 16 of the Contractor's CESMP and must be read alongside the Traffic Management Plan (Annex 3), the Erosion and Sediment Control Plan (Annex 15), the Materials, Spoil and Borrow Area Management Plan (Annex 6), and the Biodiversity Management Framework (Annex 8).

### 2. Legal and Policy Framework

Instrument	Relevance to this Plan
Law of the Republic of Tajikistan on Road Traffic (Traffic Code)	Governs use of public roads, vehicle standards, and load limits. Any use of a public road for construction haulage must comply with the Traffic Code and any applicable road use permits.
Land Code and Civil Code (Tajikistan)	Access across privately or communally held land requires the agreement of the landowner or land user. Any damage to private land, crops, or property from construction access must be compensated under the Land Acquisition and Livelihoods framework.
EBRD ESR4 – Community Health, Safety and Security	Requires that construction access activities do not endanger communities, damage community infrastructure, or create road safety hazards. Access route selection must consider community impacts.
Project CESMP (Parent Document)	This Plan forms Annex 16 of the Contractor's CESMP. Access road management requirements in the ESMP (measures C-VIS-01 and C-VIS-02) are implemented through this Plan.

### 3. Roles and Responsibilities

Role	Access Road Management Responsibilities
ESHS Manager (Contractor)	Overall accountability for ARMP implementation. Approves all access track construction and use plans before commencement. Ensures baseline condition surveys are completed. Oversees reinstatement on completion.
Site Engineer / Supervisor (Contractor)	Implements access road construction standards at the work front. Conducts daily condition inspections during use. Implements maintenance and dust suppression. Reports damage or community complaints to ESHS Manager.
Stakeholder and Community Liaison Officer (SCLO)	Engages with communities and landowners before access tracks cross or pass through community land. Manages complaints about access track dust, damage, and safety. Records all complaints in the Grievance Register.

Engineer (Supervision Consultant)	Reviews and approves steep terrain access track designs before construction. Audits access track condition and compliance during site visits. Approves reinstatement completion before final handover.
---	--

#### 4. Access Track Register

Before any new access track is constructed or any existing road is designated for construction use, the ESHS Manager shall register it in the Access Track Register. The Register shall record:

- Track ID and description of route.
- Start and end chainage or GPS coordinates.
- Whether new construction or use of existing track / road.
- Land ownership / user (community, private, state) and consent obtained.
- Baseline condition survey reference (photograph set, date, inspector).
- Approved design reference (for new tracks on steep terrain).
- Traffic type and volume authorised.
- Planned closure and reinstatement date.

[INSERT: Access Track Register to be completed from site survey and design data before works commence.]

#### 5. New Access Track Construction Standards

##### 5.1 Planning and Alignment

- Access tracks shall follow existing disturbance, natural benches, and ridgelines wherever possible to minimise vegetation clearance and slope cutting.
- Tracks shall not be routed through riparian buffer zones (within 15 m of the Shurobdaryo River or 10 m of named tributaries) except where unavoidable at crossing points.
- Track width shall be limited to the minimum necessary for the intended vehicle type. Typical maximum widths: single-lane light vehicle track — 4 m; single-lane heavy vehicle track — 6 m; passing places at visible intervals.
- Community access tracks and livestock paths crossed by new access roads shall be maintained or provided with alternative crossing points. The SCLO shall confirm community agreement before any crossing is constructed.

##### 5.2 Formation and Drainage

- Formation surface shall be compacted to a stable running surface before use by heavy vehicles. Proof-rolling to confirm stability required for all sections to be used by trucks >5 tonne.
- Cut and fill slopes shall not exceed the stable angle of repose for the local soil type (confirmed by geotechnical review or Engineer instruction). [INSERT: default maximum cut slope and fill slope angles for site conditions.]
- Cross-drainage (culverts, mitre drains, or rolling dips) shall be installed at all natural drainage lines crossed by the track, and at intervals not exceeding [INSERT — typically 50 m on gradients >8%, 100 m on 3–8%] to intercept and divert runoff.
- All culverts and drainage structures shall be sized for the design storm event. [INSERT: design storm standard.]
- Tracks on gradients steeper than 15% shall be designed by a competent engineer and submitted to the Engineer for approval before construction. The design shall address drainage, slope stability, surface treatment, and maximum loaded vehicle speed.

##### 5.3 Sensitive Area Restrictions

The following restrictions apply to access track location and construction in sensitive areas:

Sensitive Feature	Restriction
Riparian buffer zone (15 m from Shurobdaryo; 10 m from named tributaries)	No new track formation within buffer except at approved crossing points. Crossings to be designed with appropriate drainage and bank protection. Culverts to be installed within 2 working days of channel crossing.
Protected or sensitive habitats identified in BMP (Annex 8)	No access track through Sensitive Feature buffer zones without Ecologist sign-off and Engineer approval. Track alignment to avoid sensitive habitats entirely where any alternative exists.
Agricultural land (irrigated, cropped, or in active use)	Access track across agricultural land only with written agreement of landowner / user. Topsoil to be stripped and stored separately before track formation. Full reinstatement including topsoil replacement required on completion.
Settlement approaches and community paths	No access track blocking a community path or settlement access without providing an agreed alternative before closure. Adequate warning signage and barriers at all junctions with community paths.

## 6. Use of Existing Community Roads

### 6.1 Baseline Survey

Before using any existing community road or unpaved track for construction haulage, the Contractor shall:

- Complete a photographic baseline condition survey of the full length of the route to be used, covering road surface, drainage structures, verges, and any adjacent structures or crops.
- Record the survey with GPS coordinates, date, and inspector signature.
- Submit the survey to the Engineer for review and retain it as the reinstatement baseline.
- Agree in writing with the local Jamoat or road authority the terms of use, maintenance obligations, and reinstatement standard required on completion.

### 6.2 Maintenance During Use

- All existing roads used for construction haulage shall be inspected at least weekly by the Site Supervisor during active use.
- Potholes, rutting, and erosion shall be repaired promptly — within 48 hours of identification for damage affecting community vehicle access.
- Dust suppression shall be applied to unpaved sections passing through or within 200 m of a settlement at a frequency sufficient to prevent visible dust nuisance. Minimum frequency during dry season: daily.
- Load limits on bridges and culverts on community roads shall be verified before use. No vehicle shall exceed the load limit of any structure on the route.
- Wheel wash facilities shall be installed at all exits from earthworks areas onto community roads. Mud on community roads shall be removed within 2 hours.

## 7. Dust Management on Access Tracks and Haul Routes

Dust from unpaved construction access tracks and haul routes is one of the most common sources of community complaints on road construction projects. The following mandatory controls apply:

- All unpaved access tracks and haul routes within 500 m of a settlement shall be watered during dry conditions at minimum daily frequency and more frequently if required to prevent visible dust.
- Bowsers or water tanks of sufficient capacity shall be provided to cover the full length of dust-sensitive track sections. [INSERT: bower capacity and number required per active track length.]
- All haulage vehicles shall travel at a maximum speed of 20 km/h on unpaved surfaces within 500 m of settlements.

- Community complaints about dust shall be investigated within 24 hours and a response provided. Suppression frequency shall be increased immediately in response to any valid dust complaint.

## 8. Reinstatement

Reinstatement of all temporary access tracks is mandatory upon completion of construction or when the track is no longer required for construction purposes. The following standards apply:

- All temporary access tracks not designated for retention as part of the permanent works shall be decommissioned and reinstated to at least the pre-construction condition of the land.
- Reinstatement shall include: removal of all formed road surface material and drainage structures; regrading of cut and fill slopes to stable angles; replacement of topsoil (on agricultural land — full topsoil depth); revegetation with locally appropriate species.
- Reinstatement shall be completed and inspected by the Engineer before the section is handed back to the landowner or community.
- Any road or track used for construction haulage that was in a worse condition at the end of use than at baseline shall be repaired to at least baseline standard before handover. The baseline condition survey is the reference standard.
- All drainage structures installed on existing community roads for construction purposes shall be retained unless the Engineer and Jamoat agree they are not required.

## 9. Monitoring and Inspection

Inspection / Check	Frequency	Trigger for Action	Responsible
Pre-use baseline survey — all new and existing tracks before first use	Before first use	Track not used until survey complete and filed	ESHS Manager
Condition inspection of all active access tracks — surface, drainage, verges	Weekly during active use; after heavy rainfall	Repair within 48 hours for damage affecting community access	Site Supervisor
Dust suppression effectiveness check on tracks near settlements	Daily during dry season	Increase watering frequency immediately if dust visible at settlement boundary	Site Supervisor / SCLO
Community road condition vs baseline on actively used haulage routes	Fortnightly	Repair to baseline condition before handover or at end of use	ESHS Manager
Reinstatement inspection — completed access track sections	On completion of each track section	Engineer to approve reinstatement completion. Not signed off until baseline standard confirmed.	Engineer

## 10. Plan Development, Approval, and Amendment

This document is a Framework. The Contractor shall develop a site-specific ARMP that populates all [INSERT] fields and includes, as a minimum:

- Completed Access Track Register (Section 4) for all planned tracks.
- Route maps showing all access tracks and haul routes on the site plan.
- Design drawings for all tracks on gradients exceeding 15%.
- Land access agreements for community and private land crossings.
- Dust suppression schedule and equipment list.

- Reinstatement standards agreed with affected communities and the Engineer.

The site-specific ARMP shall be submitted to the Engineer for written approval at least 14 days before any new access track construction commences or any existing community road is first used for construction haulage. PIURR shall receive a copy for information. The Plan shall be updated when new tracks are required or when the Engineer directs a revision.

Prepared By (Contractor ESHS Manager)	Reviewed & Approved By (Engineer)	Noted By (PIURR)
Name: Title: Signature: Date:	Name: Title: Signature: Date:	Name: Title: Signature: Date:

## Annex 17: Land Access Restrictions

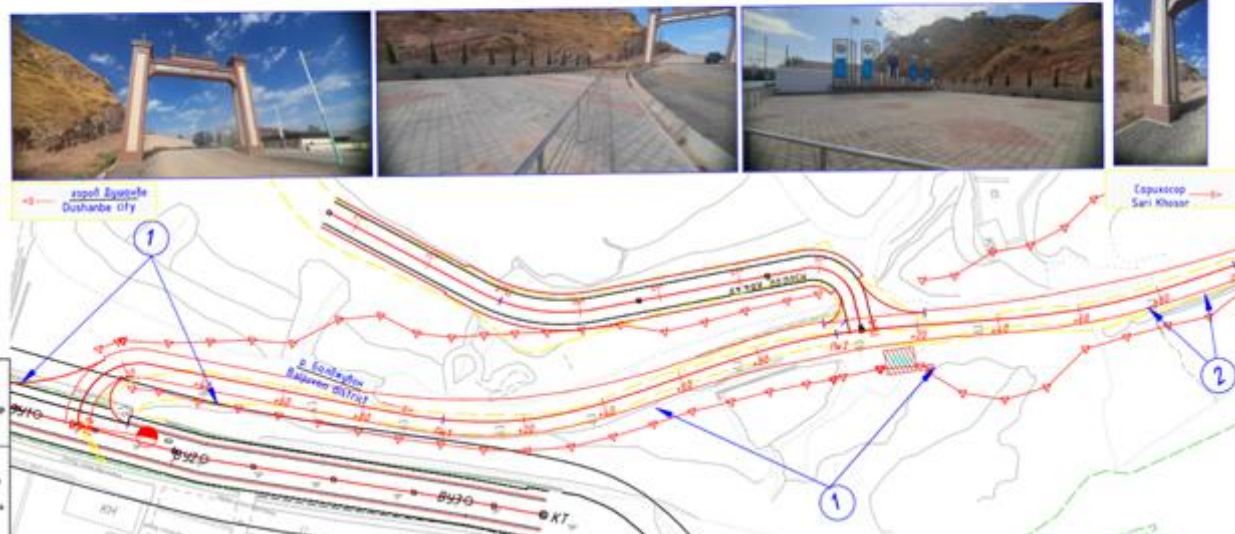
1. All blocked sites (sites/locations not available for works by Contractor) can be handed over to the Contractor only upon EBRD's formal No Objection Note;
2. EBRD's No Objection Note is conditional upon EBRD's sign off on (sectional) RAP Completion Report, evidencing the satisfactory (sectional) implementation of the approved RAP;
3. RAP Completion Report shall be prepared by External Resettlement Monitor retained by the Engineer.
4. RAP shall be prepared and implemented by the Client/PURR.

### A. Public assets to be protected from damage or reconstructed in agreement with the relevant authorities

- Arch over the road, to be maintained or reconstructed (serves as a road marker).  
Km 0+000 - km 0+040

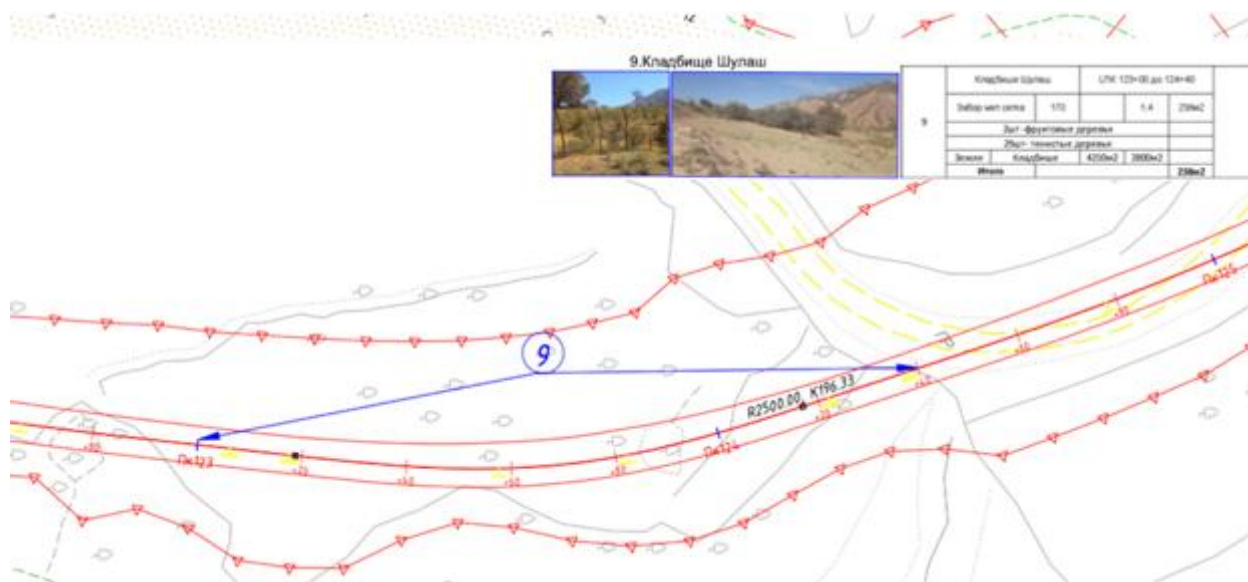
	Дарвозаи Сарӣ-Хосор	Араи	Т	0.0	0	44.8(0)
	Оғоз	49.2		0.63		40.8
	Бӯғи	20	17.3			40.8
	Иттиҳод					965.6

1. Дарвозаи Сарӣ-Хосор

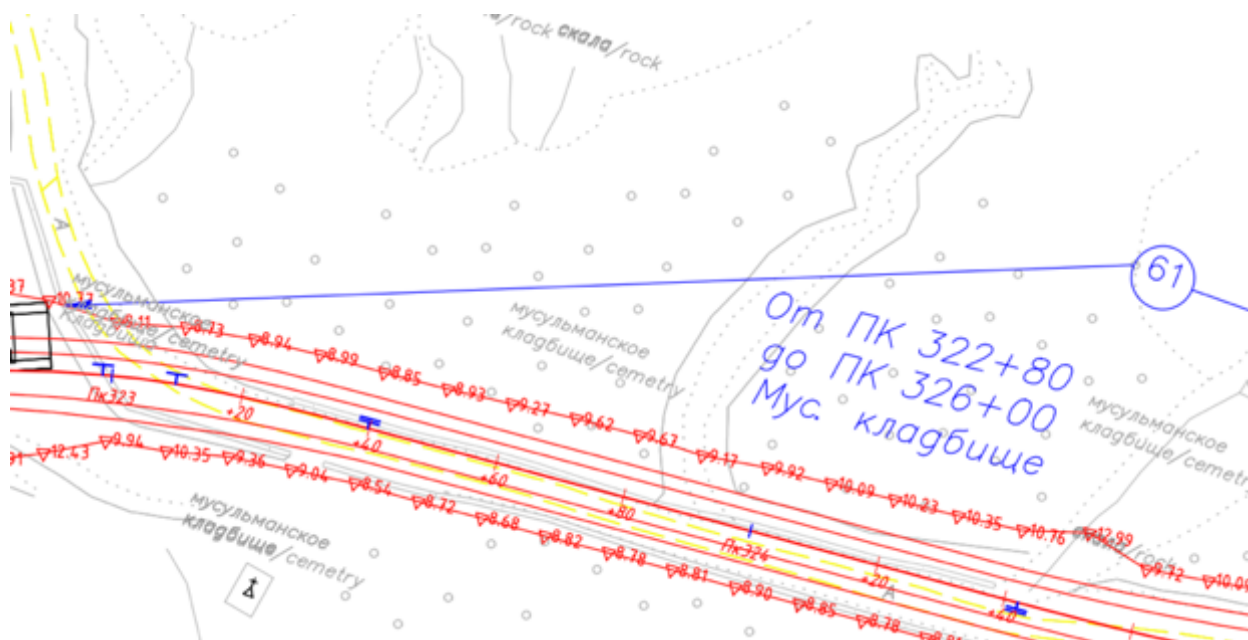


**B. Road sections where access is to be retained during construction works (or alternative access to be arranged)**

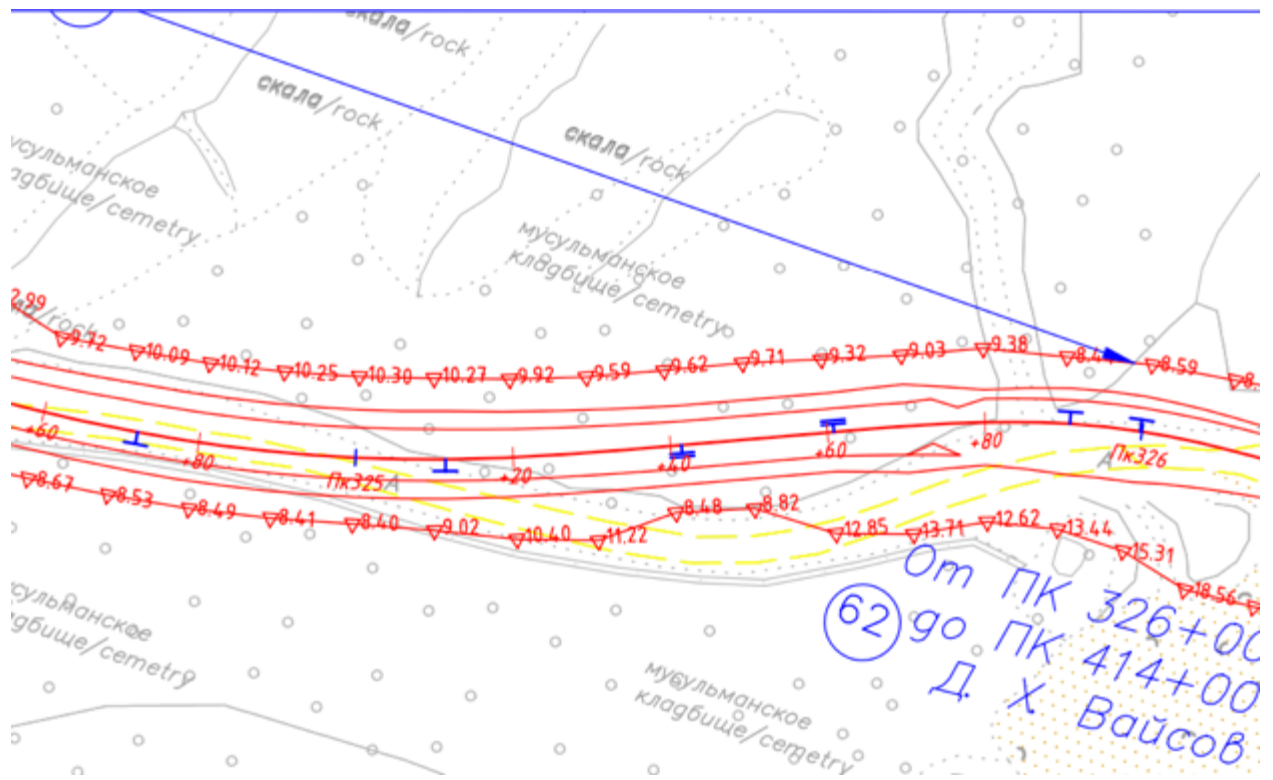
- Km 12+300 - km 12+440. Cemetery Shulash, located on the right side of the road - access to be maintained. Item (9) on the map below.



- Km 32+280 - km 32+600. Muslim cemetery, located on the left side of the road - access to be maintained. Item (9) on the map below.







**C. Road sections with land acquisition and resettlement impacts**

The following road sections are subject to land acquisition and resettlement impacts. Access to these sections shall be restricted for the construction contractor until the Resettlement Plan has been fully implemented.

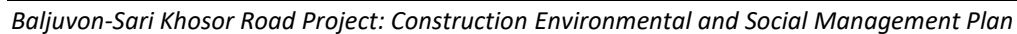
Maps for each section listed in the table are provided below. Sections between affected land plots with a length of less than 900 m are grouped into a single section.

<b>Nº</b>	<b>From km</b>	<b>To km</b>
<b>1</b>	0+150	0+300
<b>2</b>	1+300	3+000
<b>3</b>	3+900	4+200
<b>4</b>	10+900	11+200
<b>5</b>	16+300	16+600
<b>6</b>	18+600	18+760
<b>7</b>	21+600	24+880
<b>8</b>	26+150	29+100
<b>9</b>	30+390	31+960
<b>10</b>	34+150	36+000
<b>11</b>	38+000	48+800
<b>12</b>	51+650	52+250



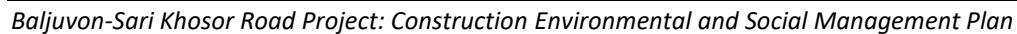
**1. km 0+000 - km 0+300 (boundaries marked with a red dashed line)**

Land users between km 0+150 - km 0+300 - second item (1) and item (2) on the map below.

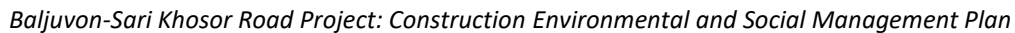


**2. km 1+300 – km 3+000 (boundaries marked with a red dashed line)**

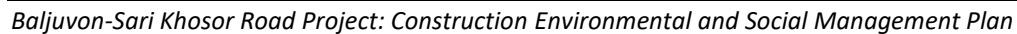
Land user between km 1+300 - km 3+000 - item (3) on the map below.











**3. km 3+900 – km 4+200 (boundaries marked with a red dashed line)**

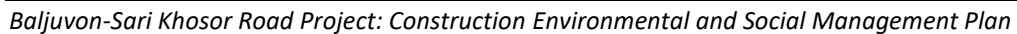
Land user between km 3+900 - km 4+200 - item (4) on the map below.



**4. km 10+900 – km 11+200 (boundaries marked with a red dashed line)**

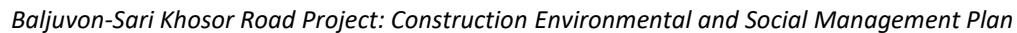
Land users between km 10+900 - km 11+200 - items (6,7,8) on the map below.





**5. km 16+300 – km 16+600 (boundaries marked with a red dashed line)**

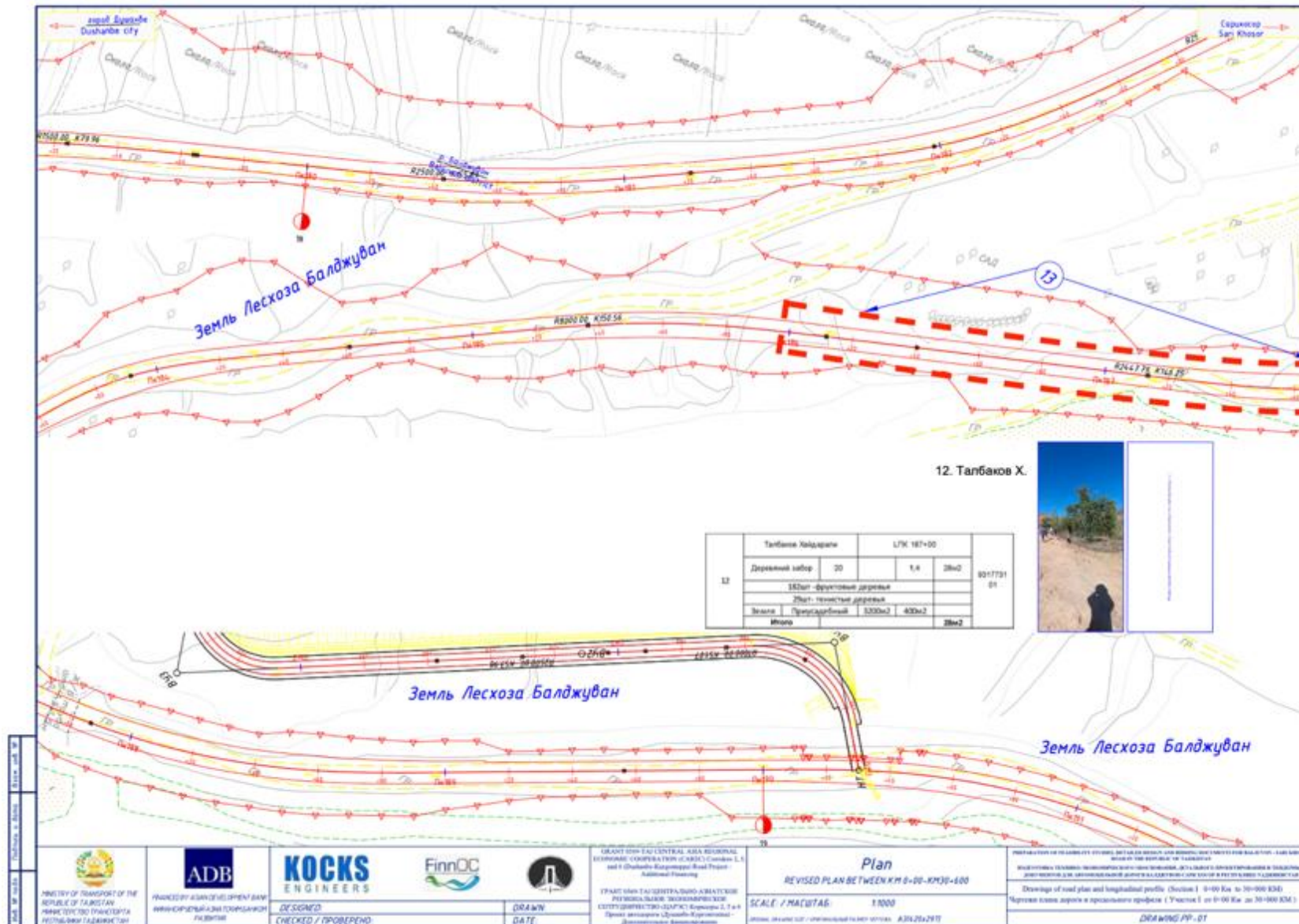
Land users between km 16+300 - km 16+600 - items (10, 11) on the map below.



**6. km 18+600 – km 18+760 (boundaries marked with a red dashed line)**

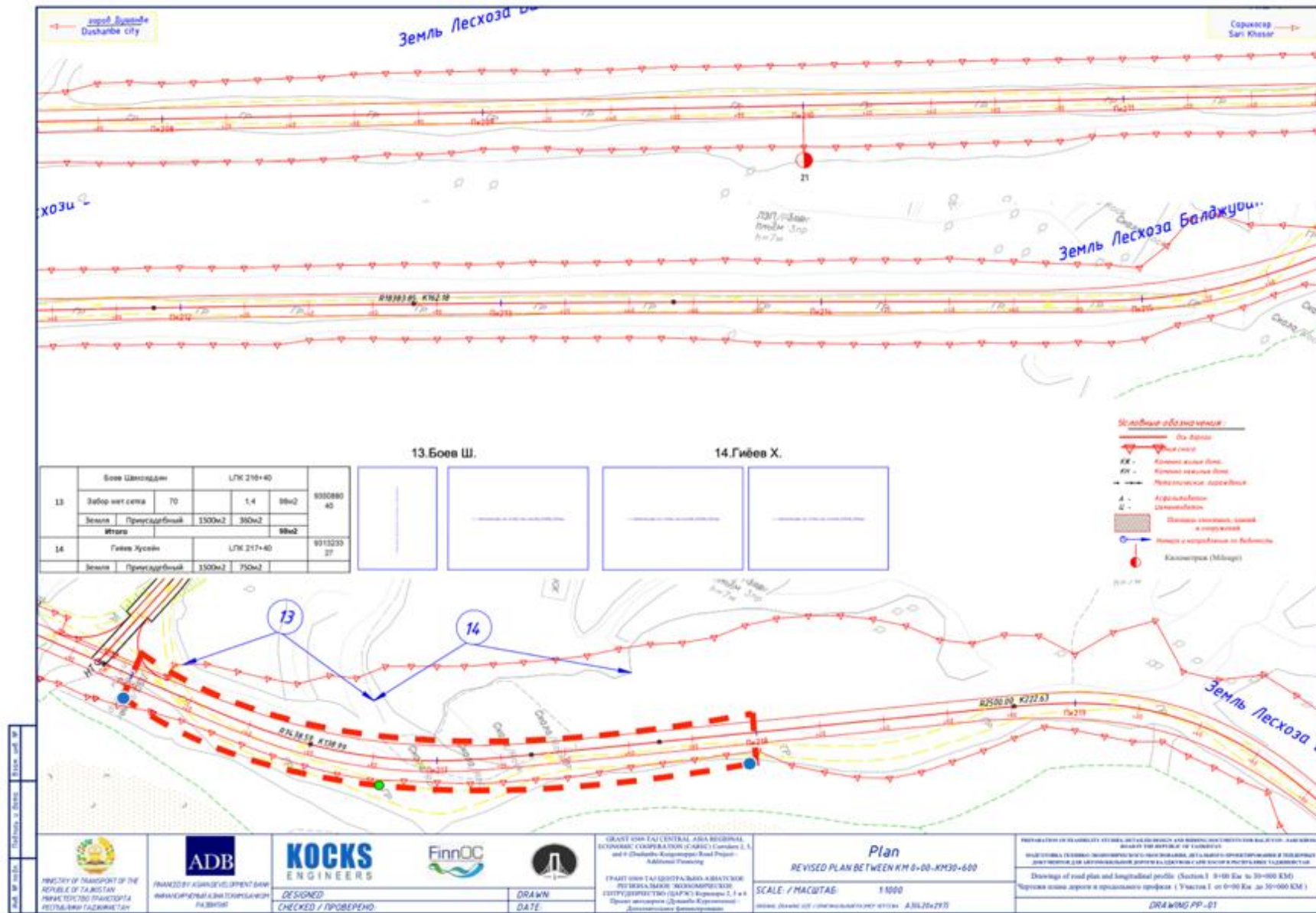
Land user between km 18+600 - km 18+760 - item (12) on the map below.



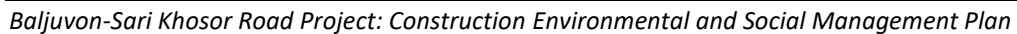


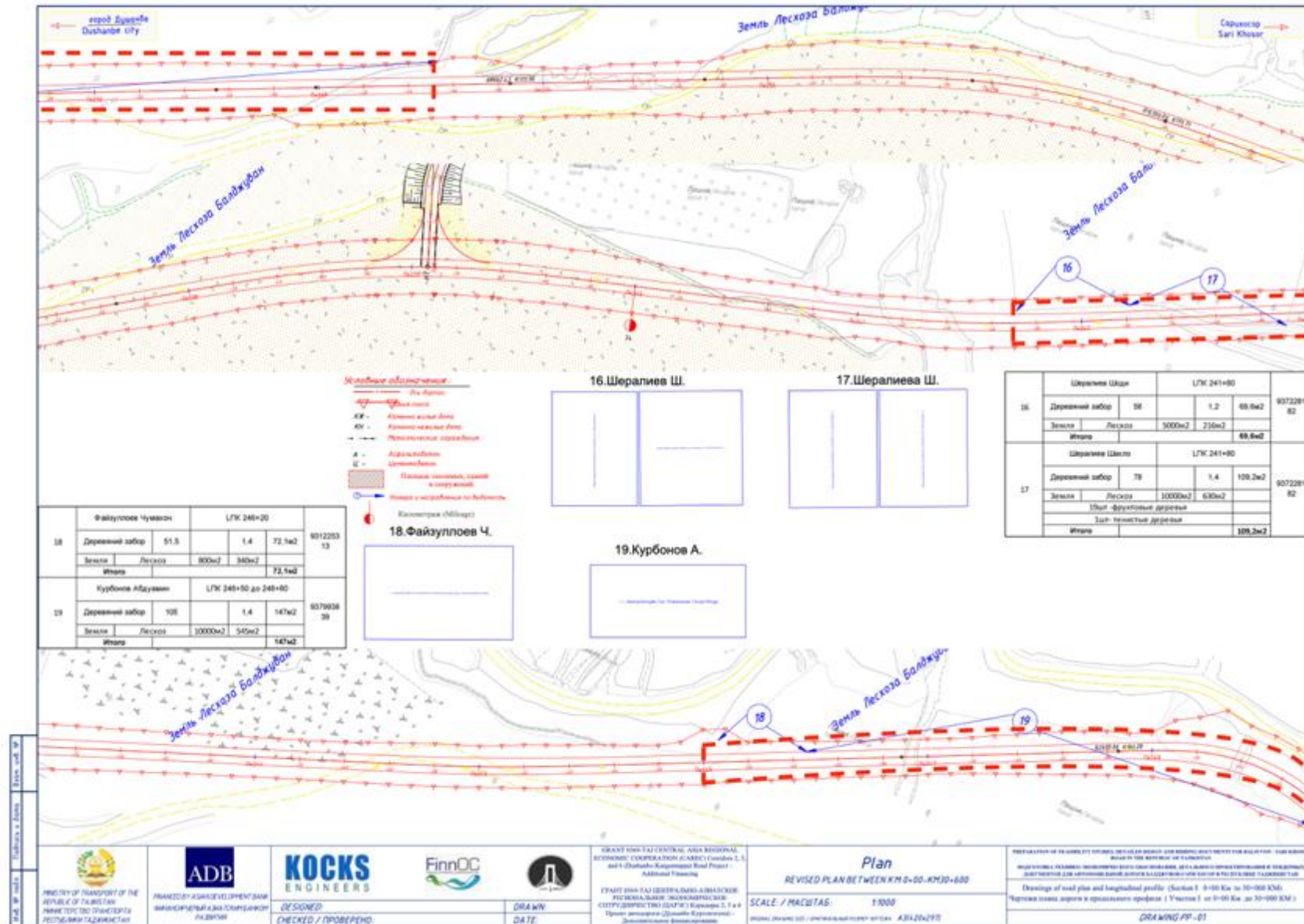
**7. km 21+600 – km 24+880 (boundaries marked with a red dashed line)**

1. Land user between km 21+600 - km 21+800 - item (11, 14) on the map below.
2. Land user between km 22+600 - km 23+350 - item (15) on the map below.
3. Land users between km 24+170 - km 24+300 - items (16, 17) on the map below.
4. Land users between km 24+600 - km 24+880 - items (18, 19) on the map below.





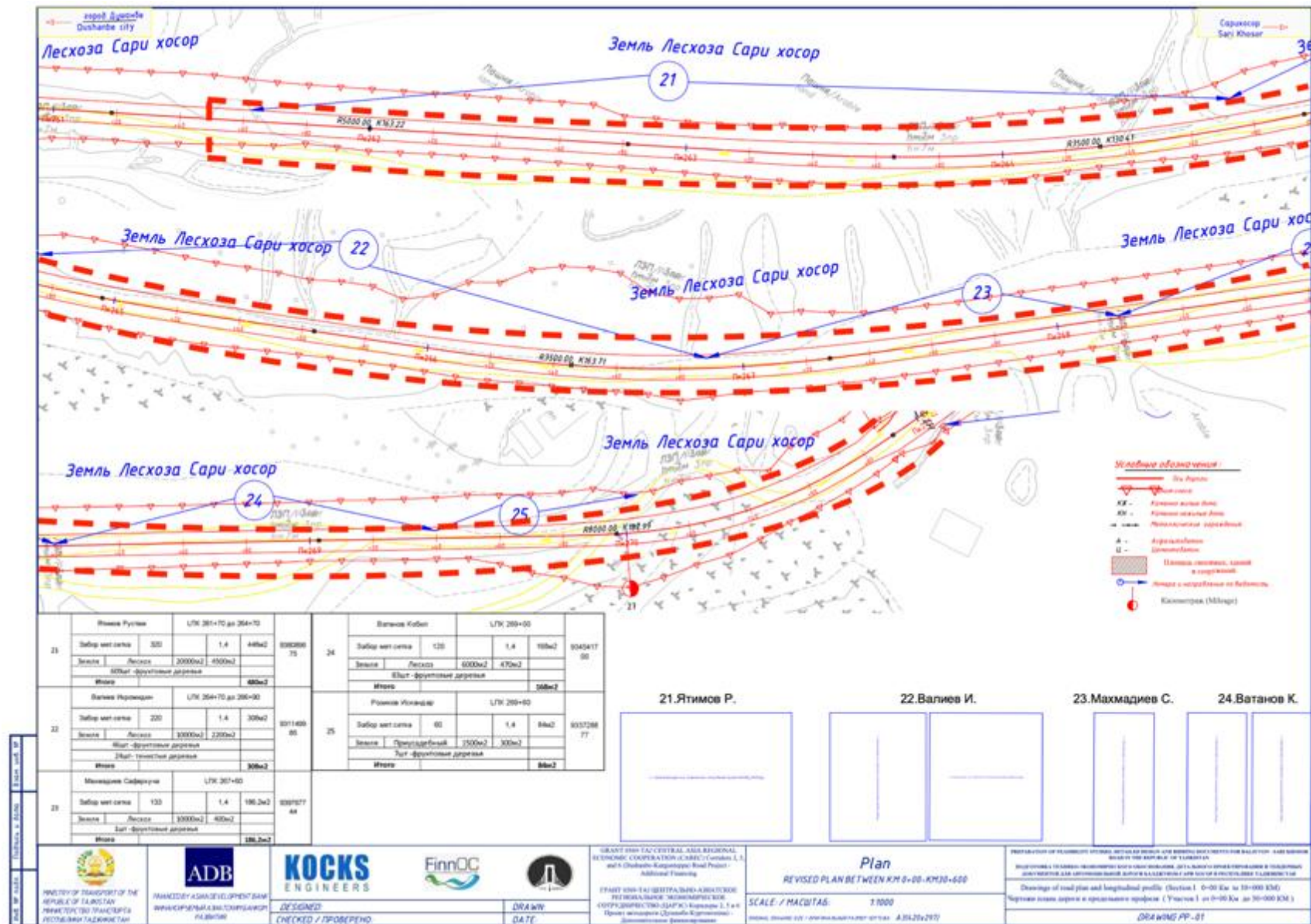


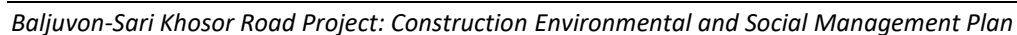


**8. km 26+150 – km 29+100 (boundaries marked with a red dashed line)**

Land users between km 26+150 - km 29+100 - items (21, 22, 23, 24, 25, 16, 17, 18, 27, 19, 28, 29, 20, 30, 31, 21, 32, 22, 33, 34, 35, 36, 37, 38) on the map below.

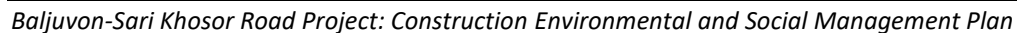








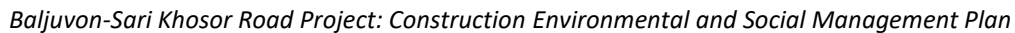




**9. km 30+390 – km 31+960 (boundaries marked with a red dashed line)**

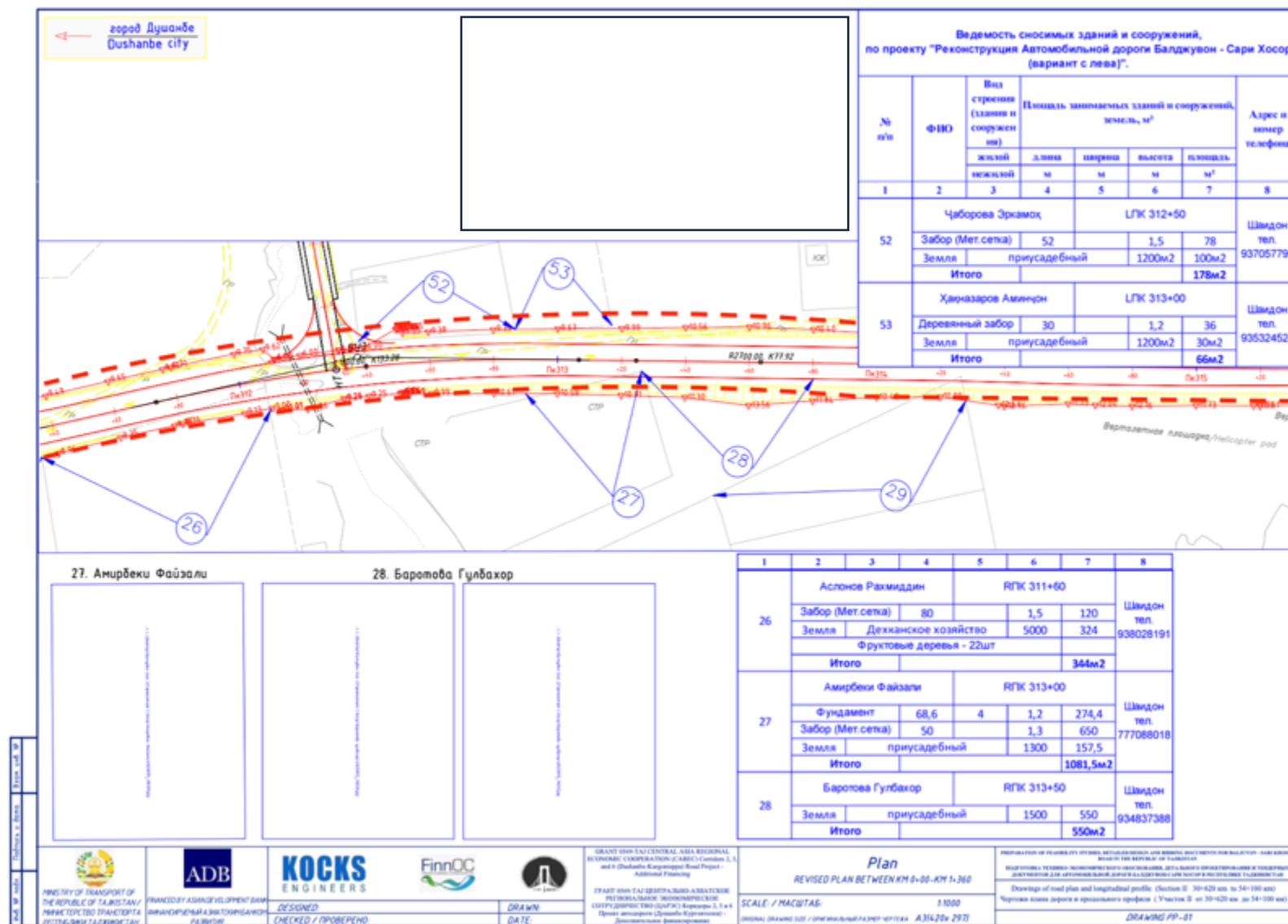
1. Land user between km 30+390 - km 30+460 - item (39) on the map below.
2. Land users between km 30+700 - km 31+960 - items (40, 22, 31, 42, 23, 43, 44, 45, 46, 47, 48, 49, 24, 50, 51, 25, 26, 52, 27, 53, 28, 29, 30, 31, 54, 55, 56, 57, 32, 33, 58, 59, 34, 60) on the map below.



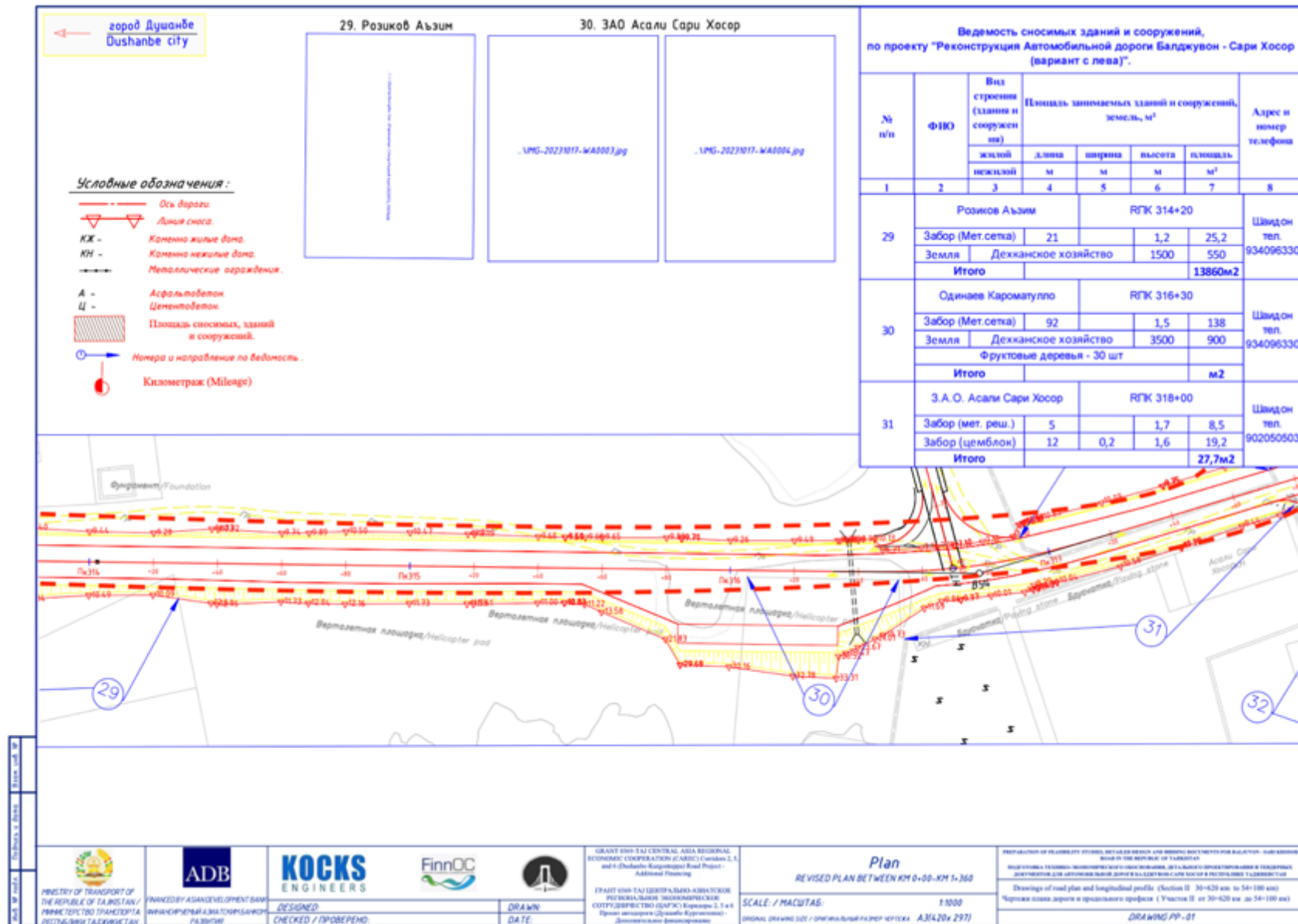




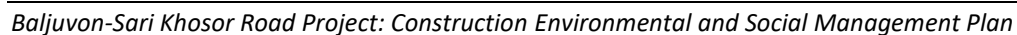


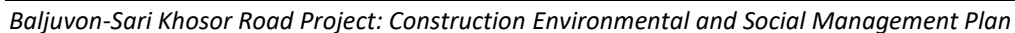






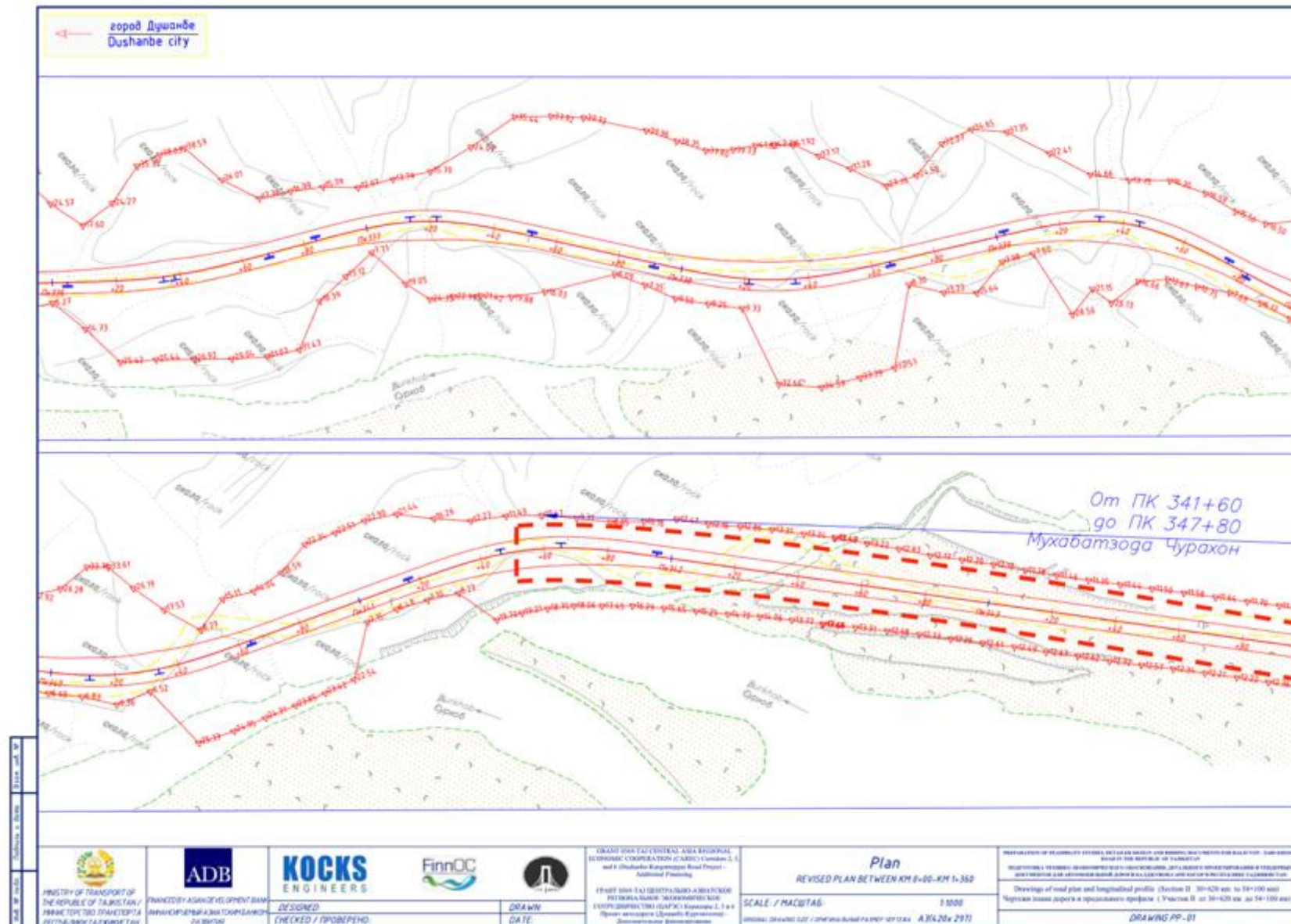




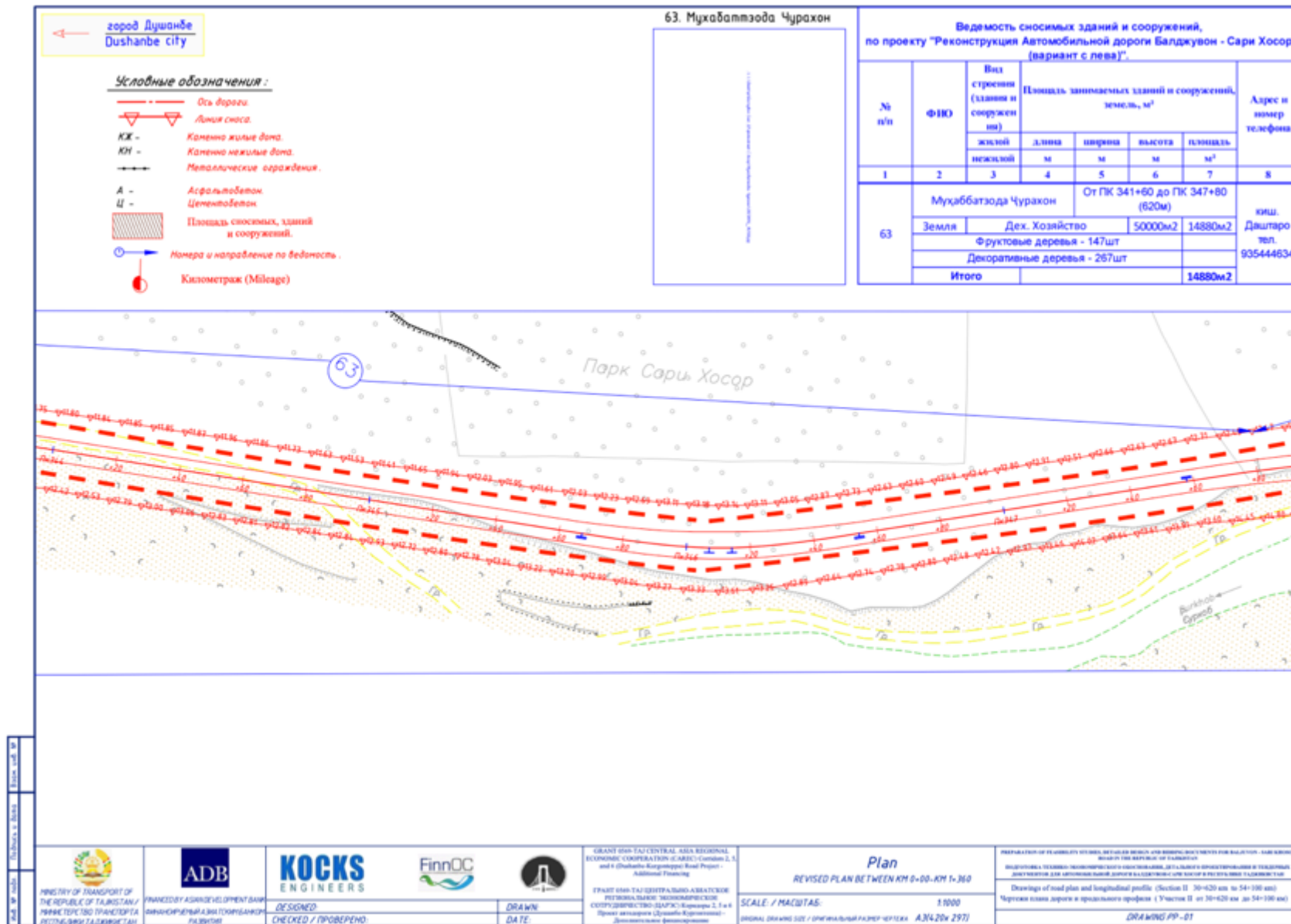


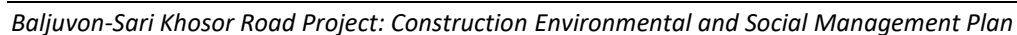
**10. km 34+150 – km 36+000 (boundaries marked with a red dashed line)**

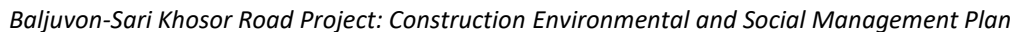
Land users between km 34+150 - km 36+000 - item (63, 64, 65, 66, 67, 68) on the map below.



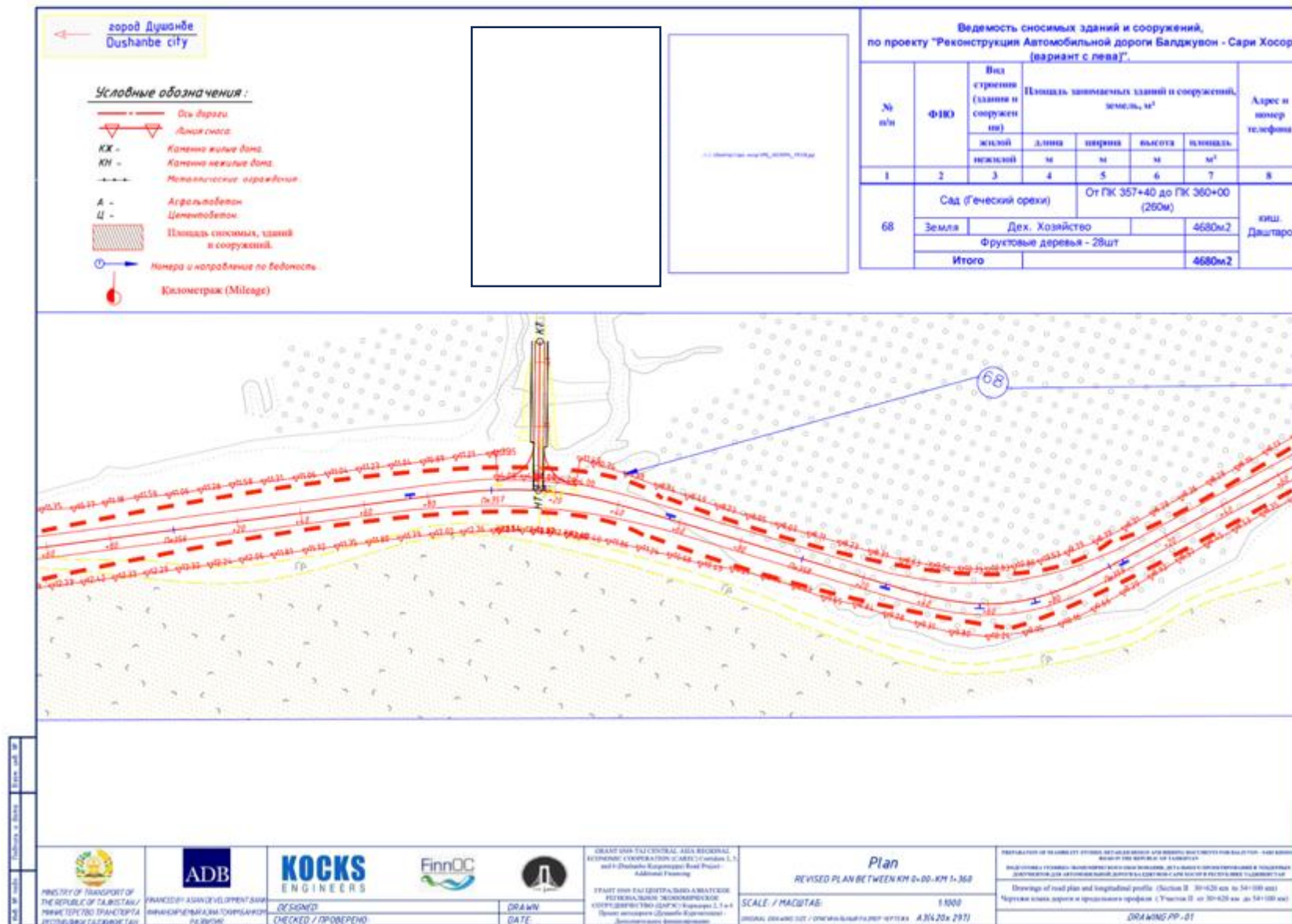




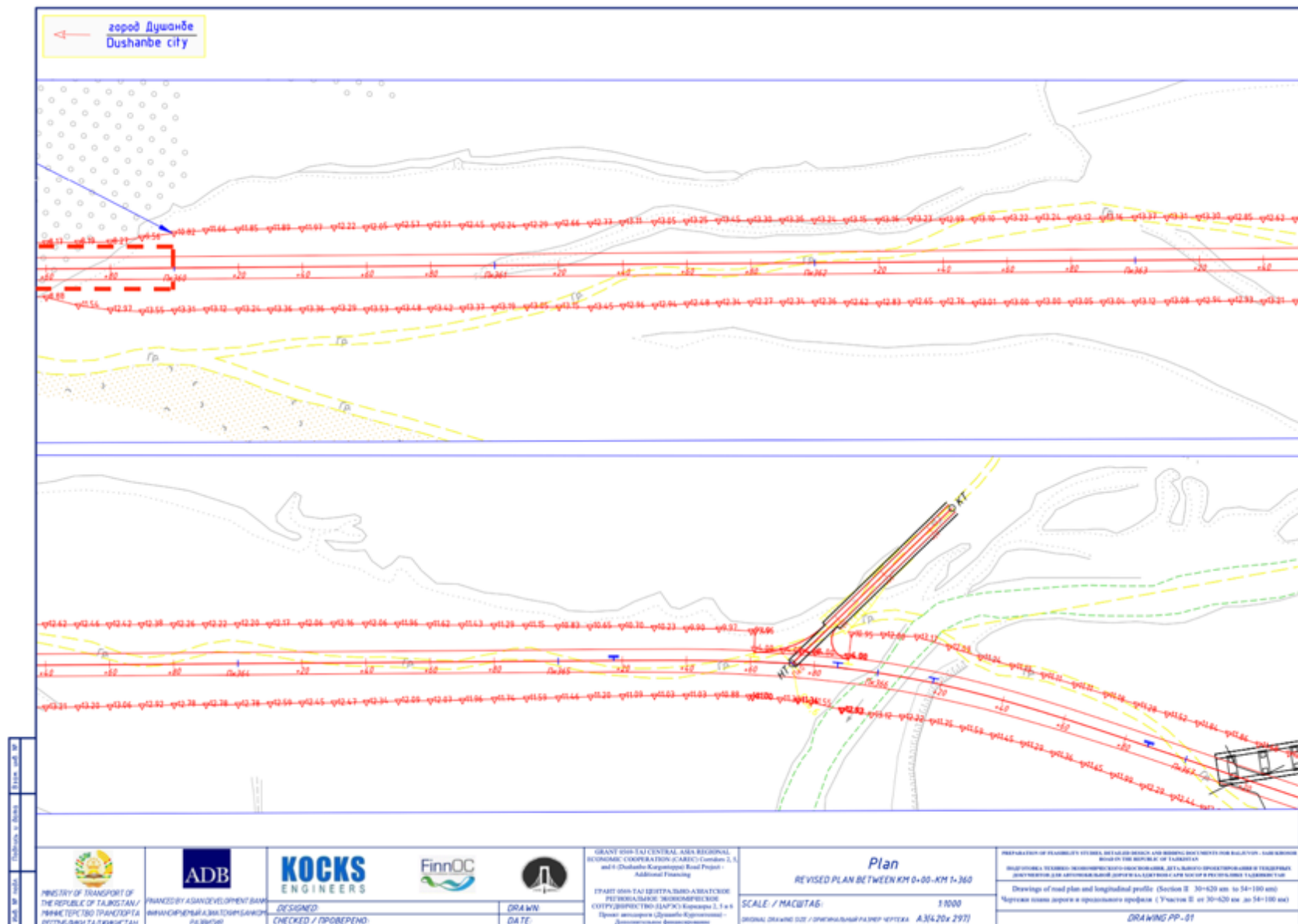






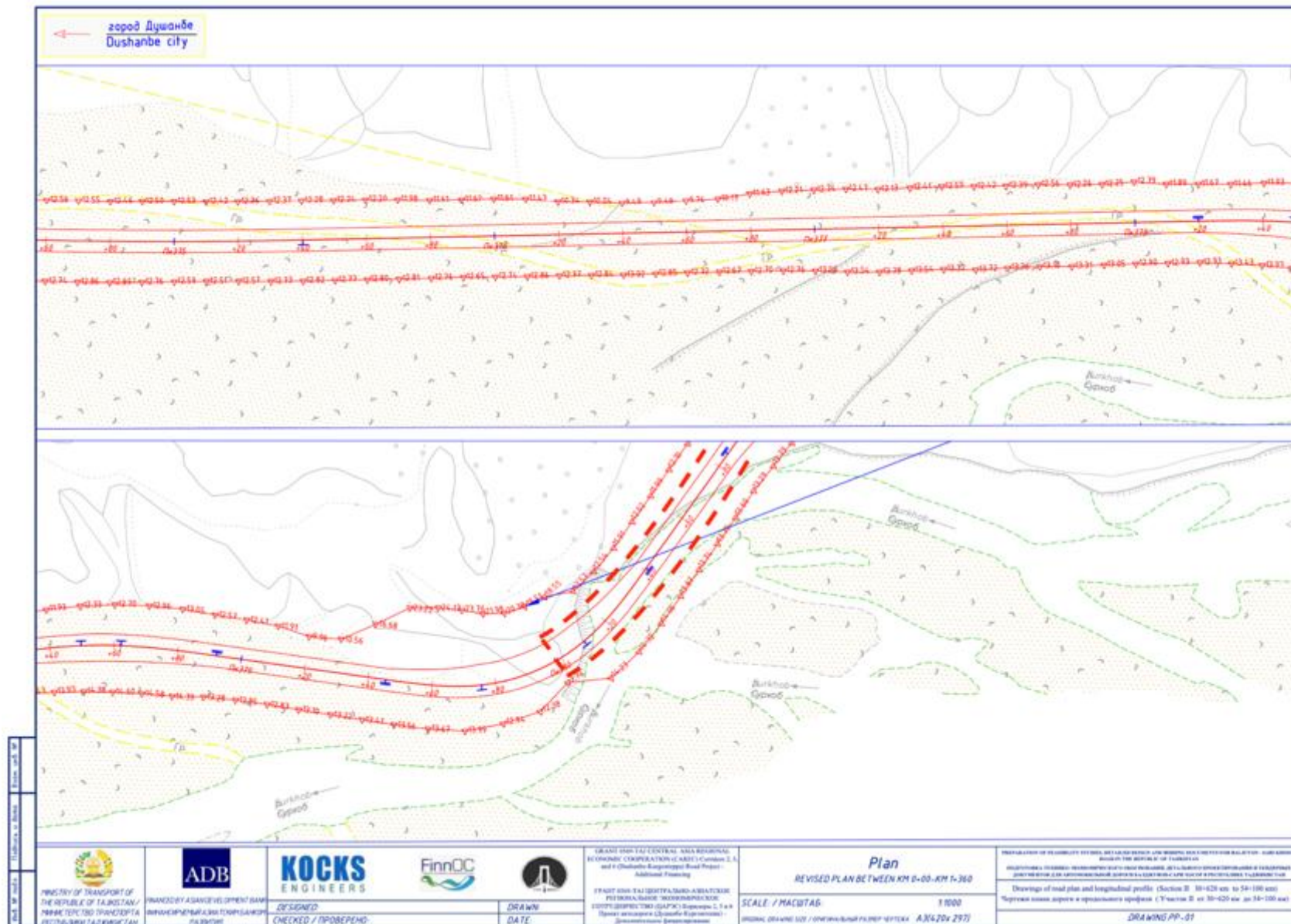


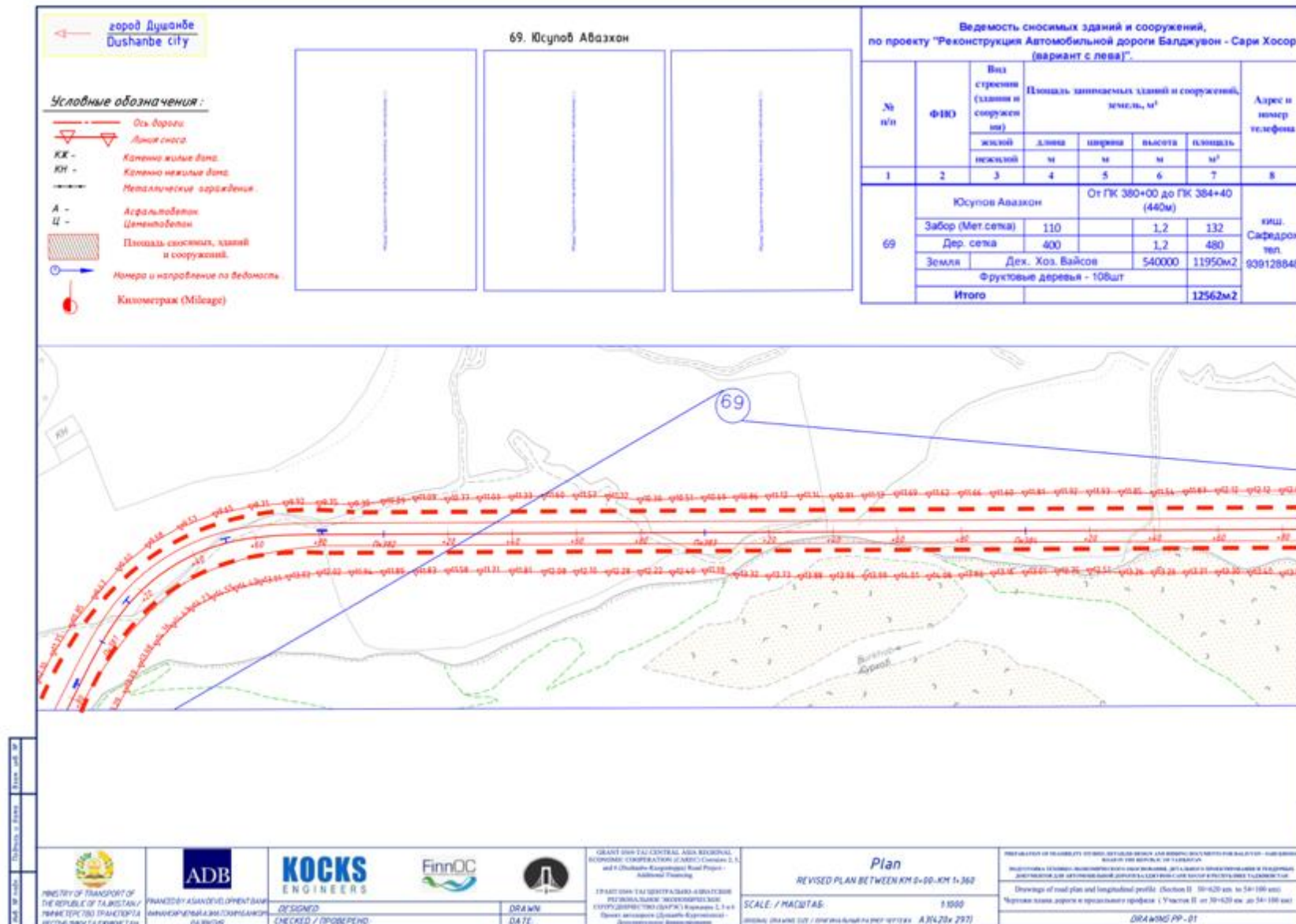




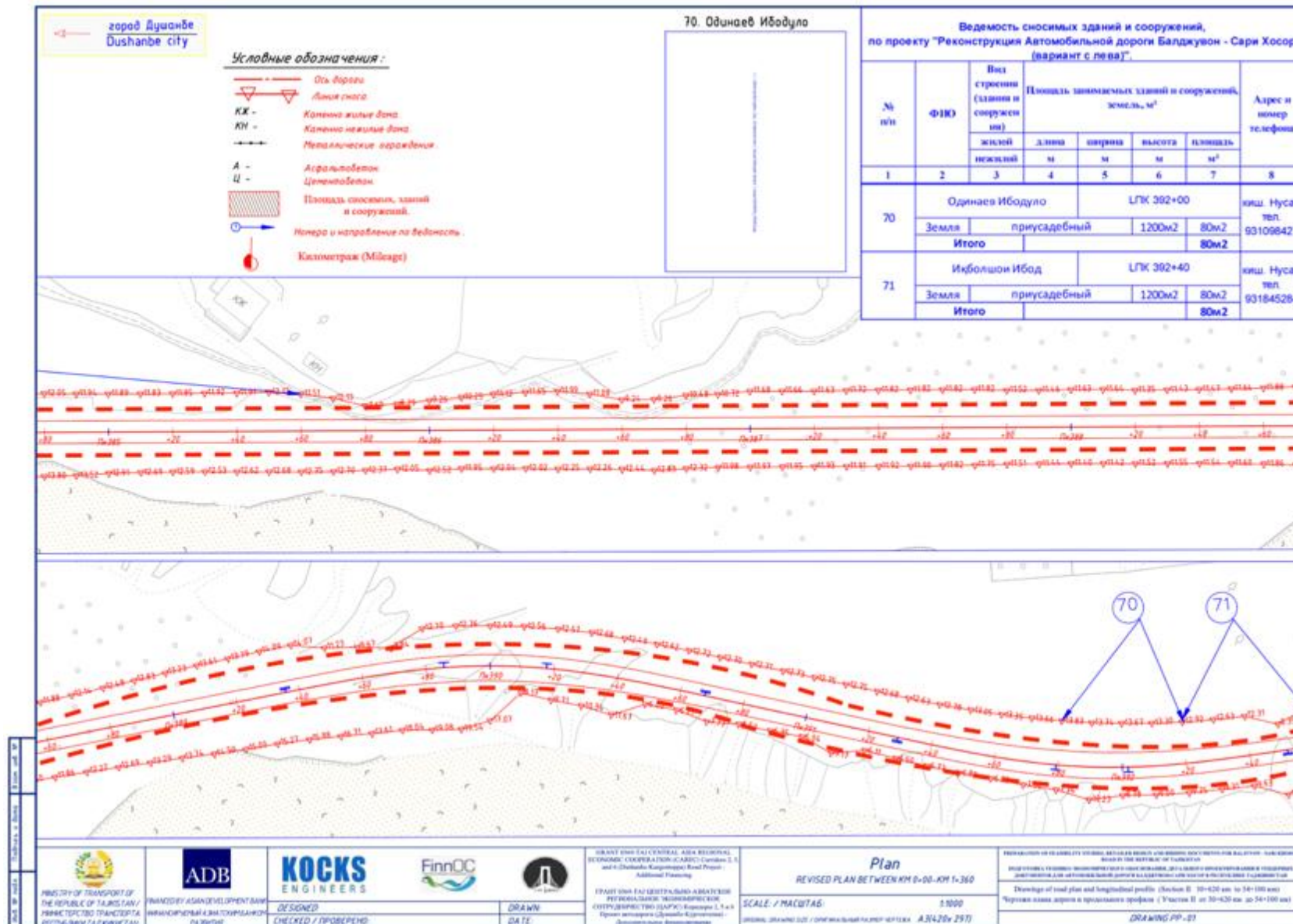
**11. km 38+000 – km 48+800 (boundaries marked with a red dashed line)**

Land users between km 34+150 - km 36+000 - item (69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89) on the map below.



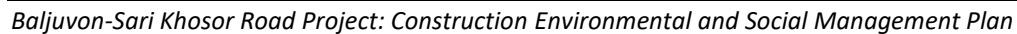


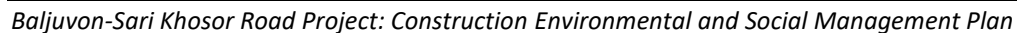




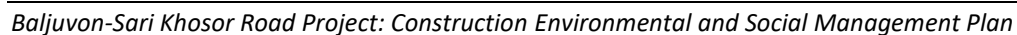


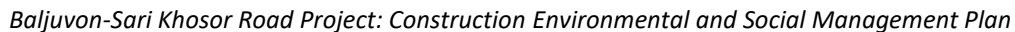


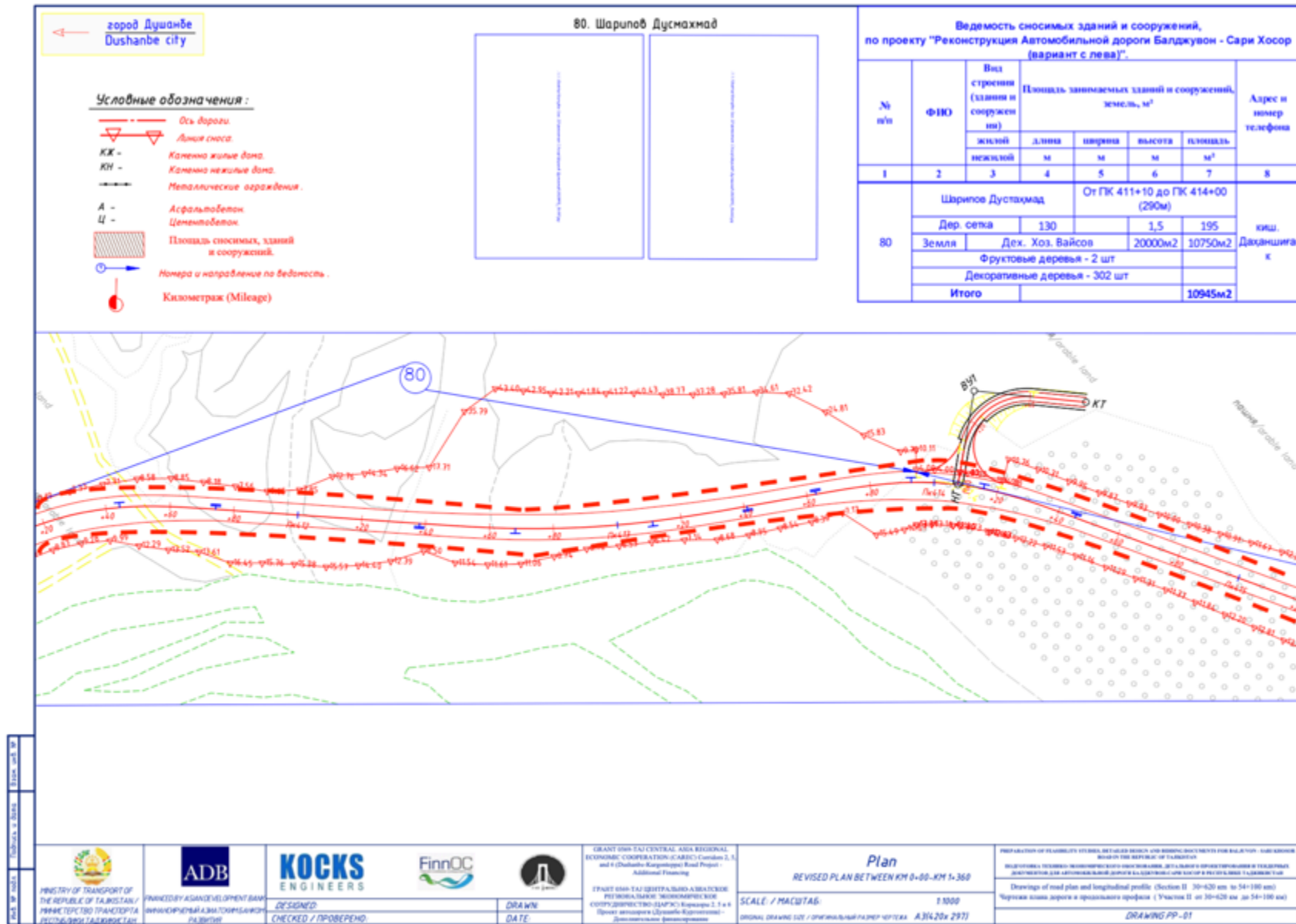


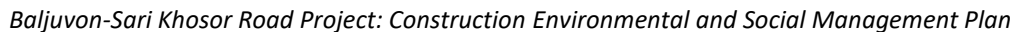




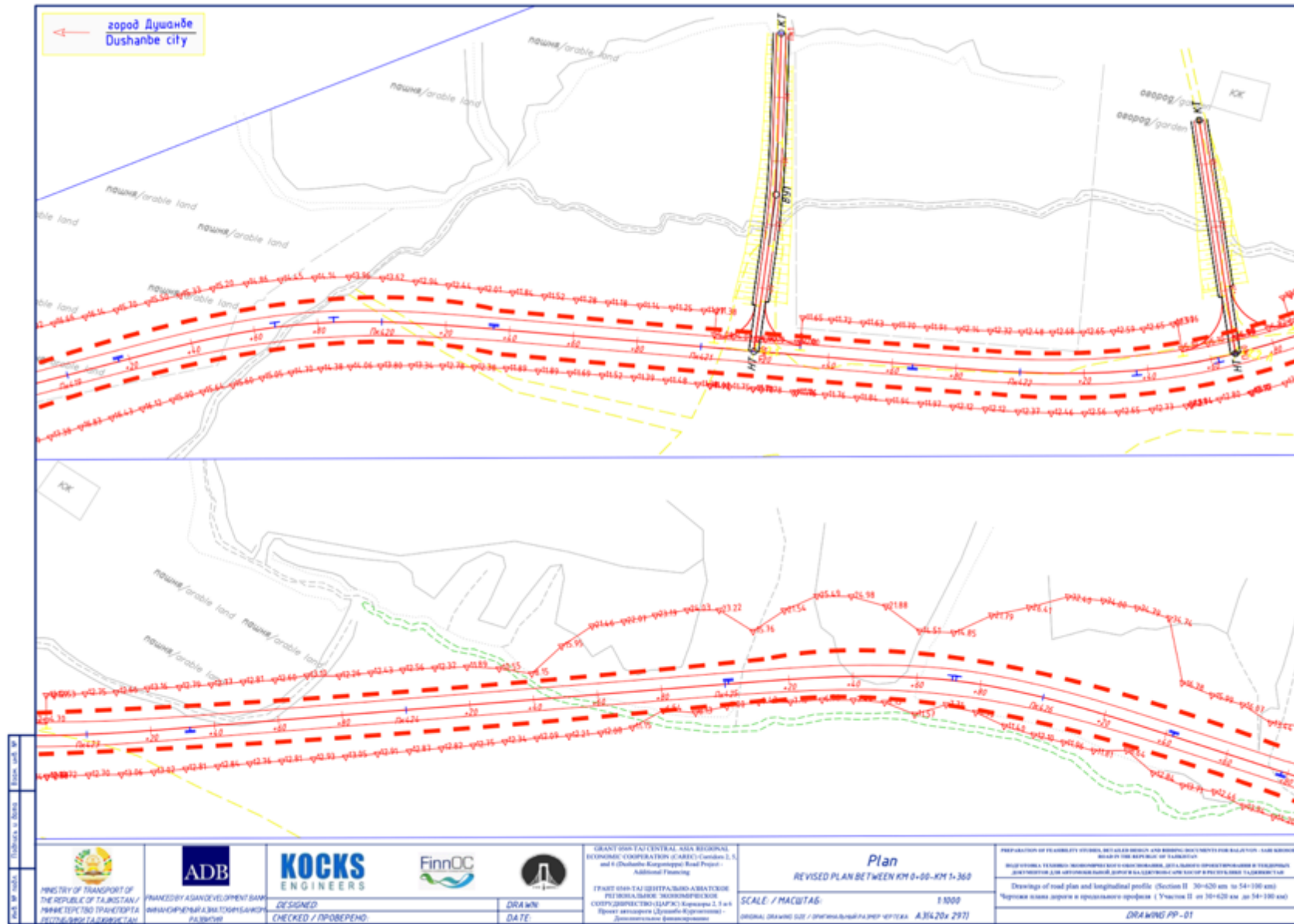


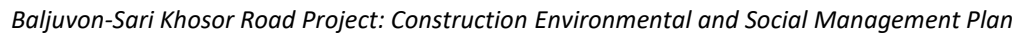


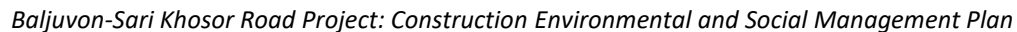


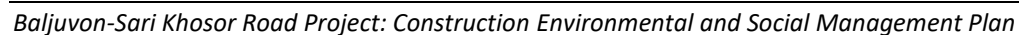




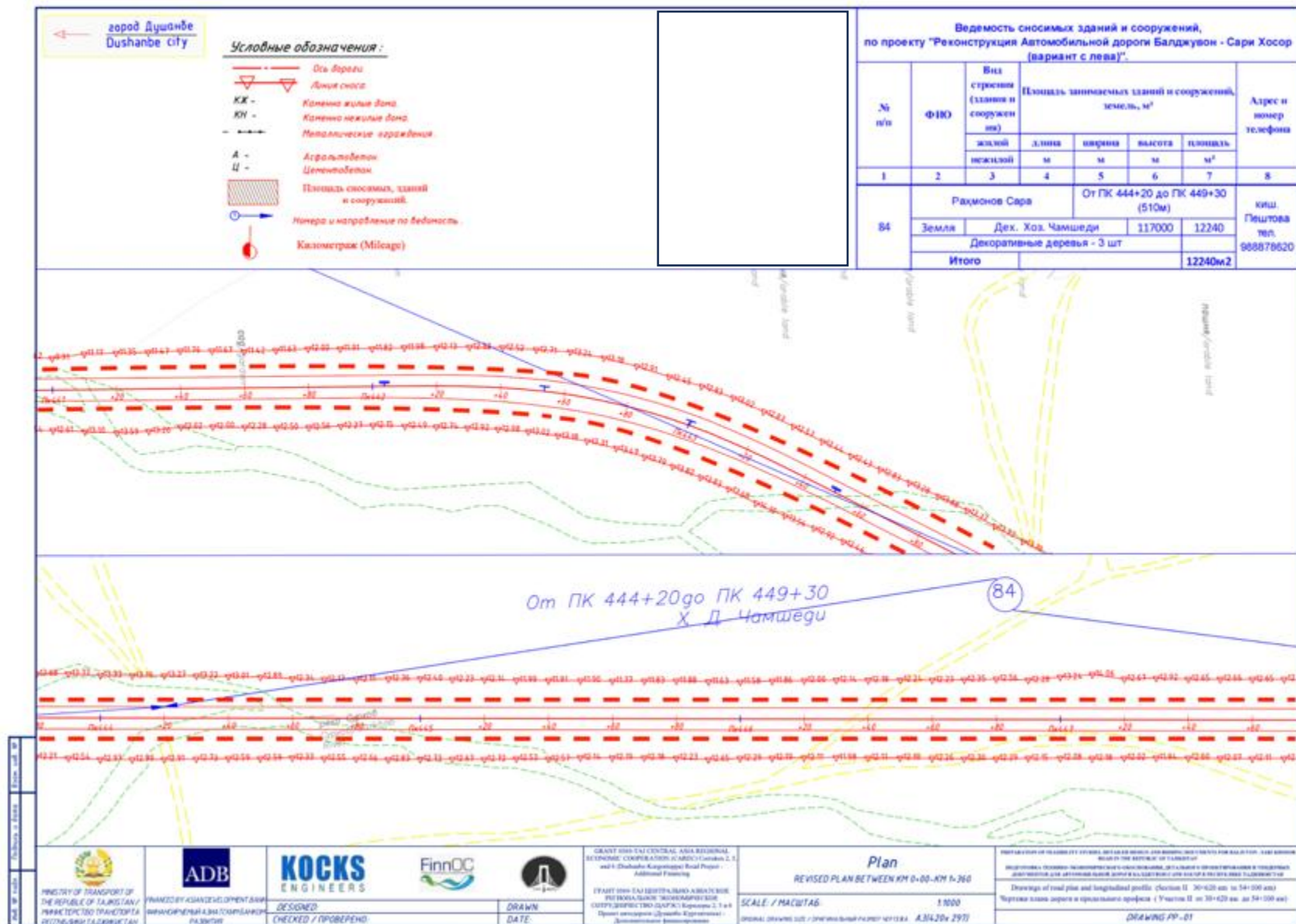


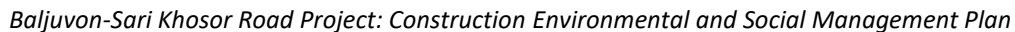


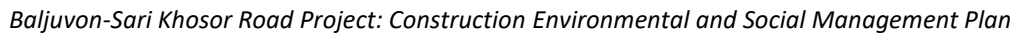




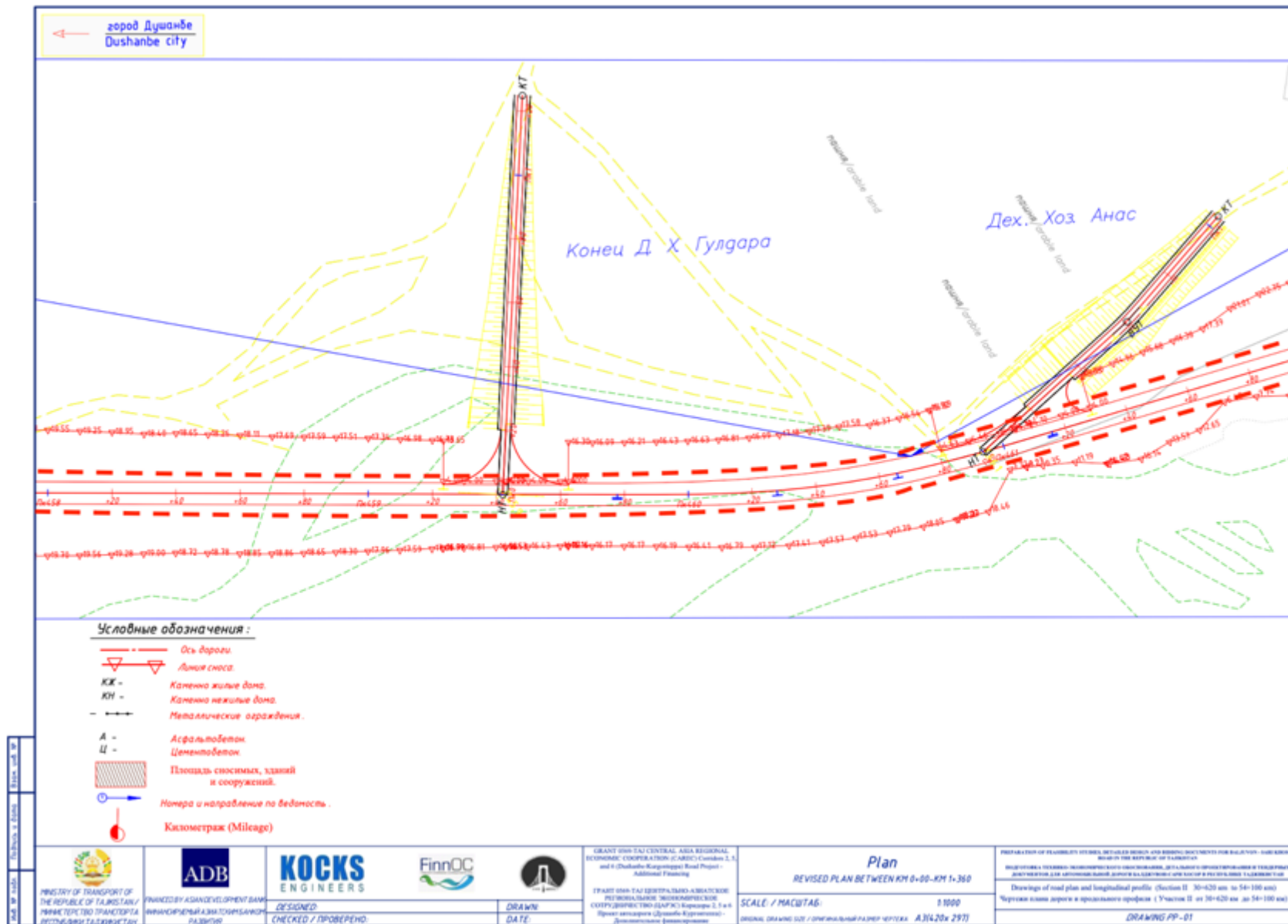


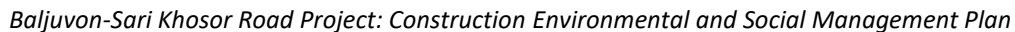


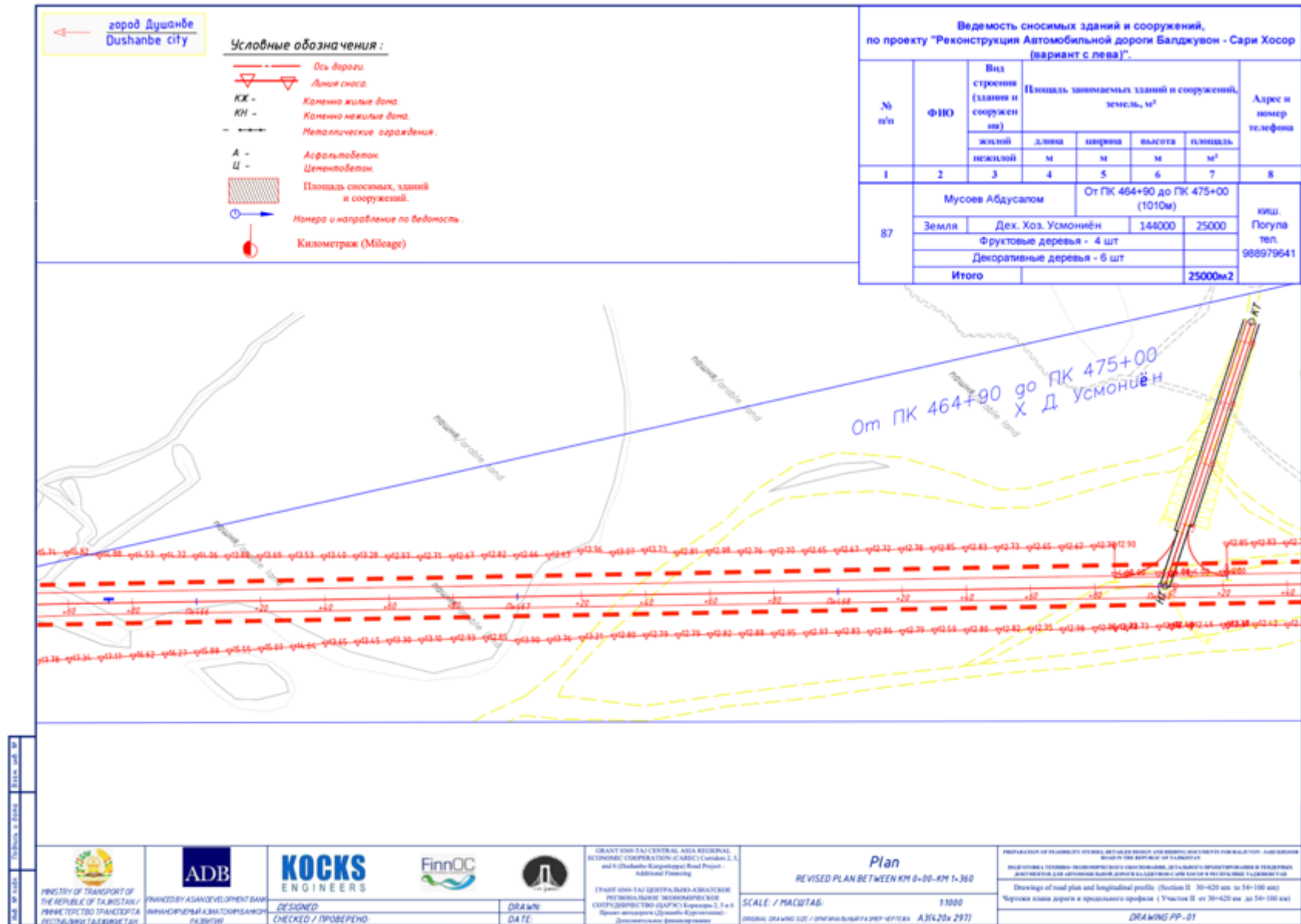


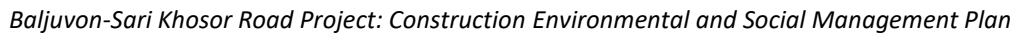


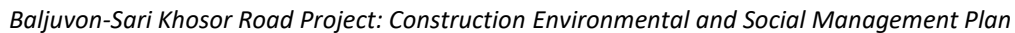




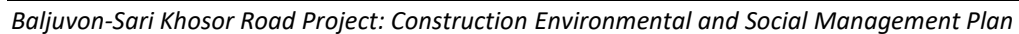


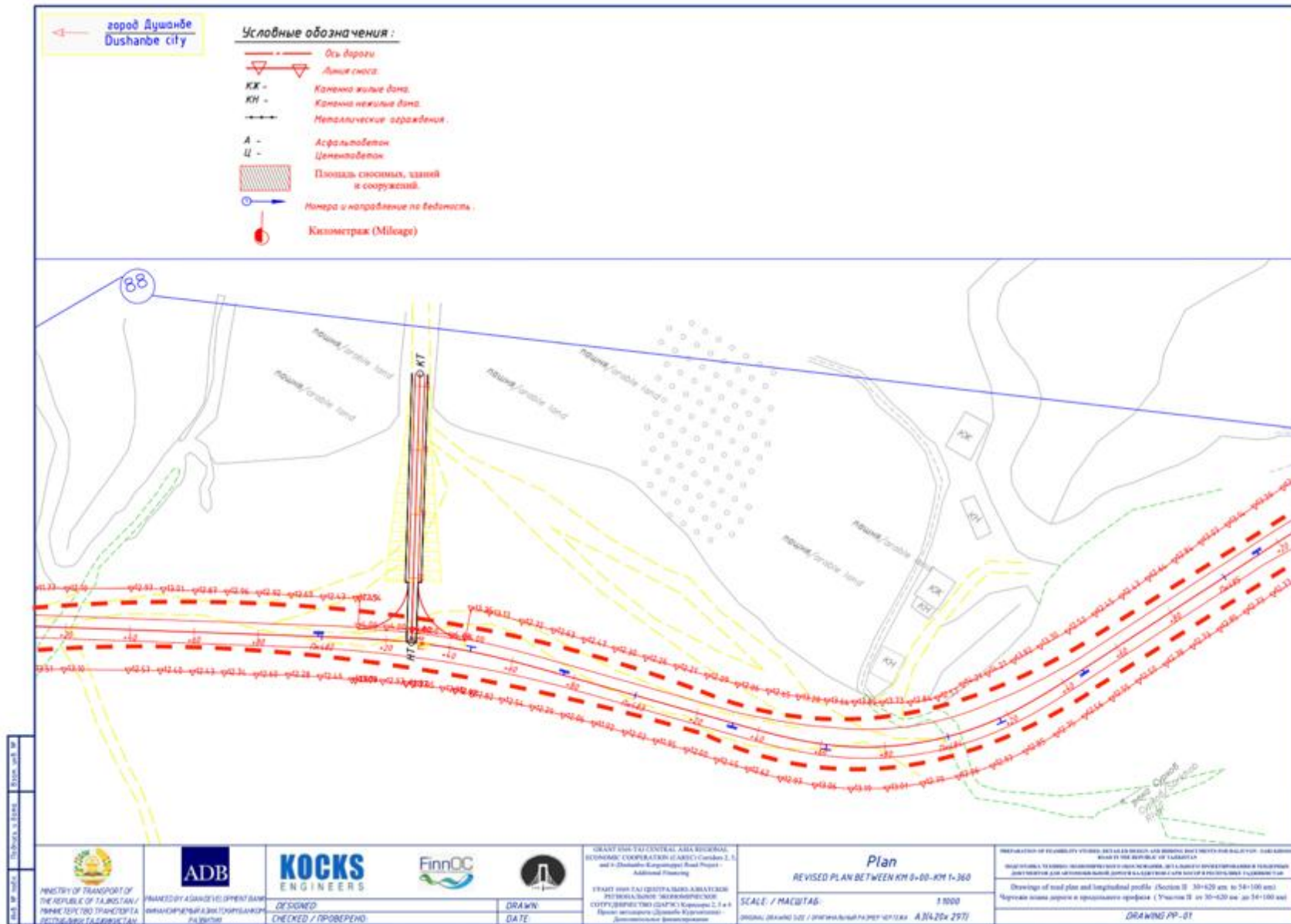


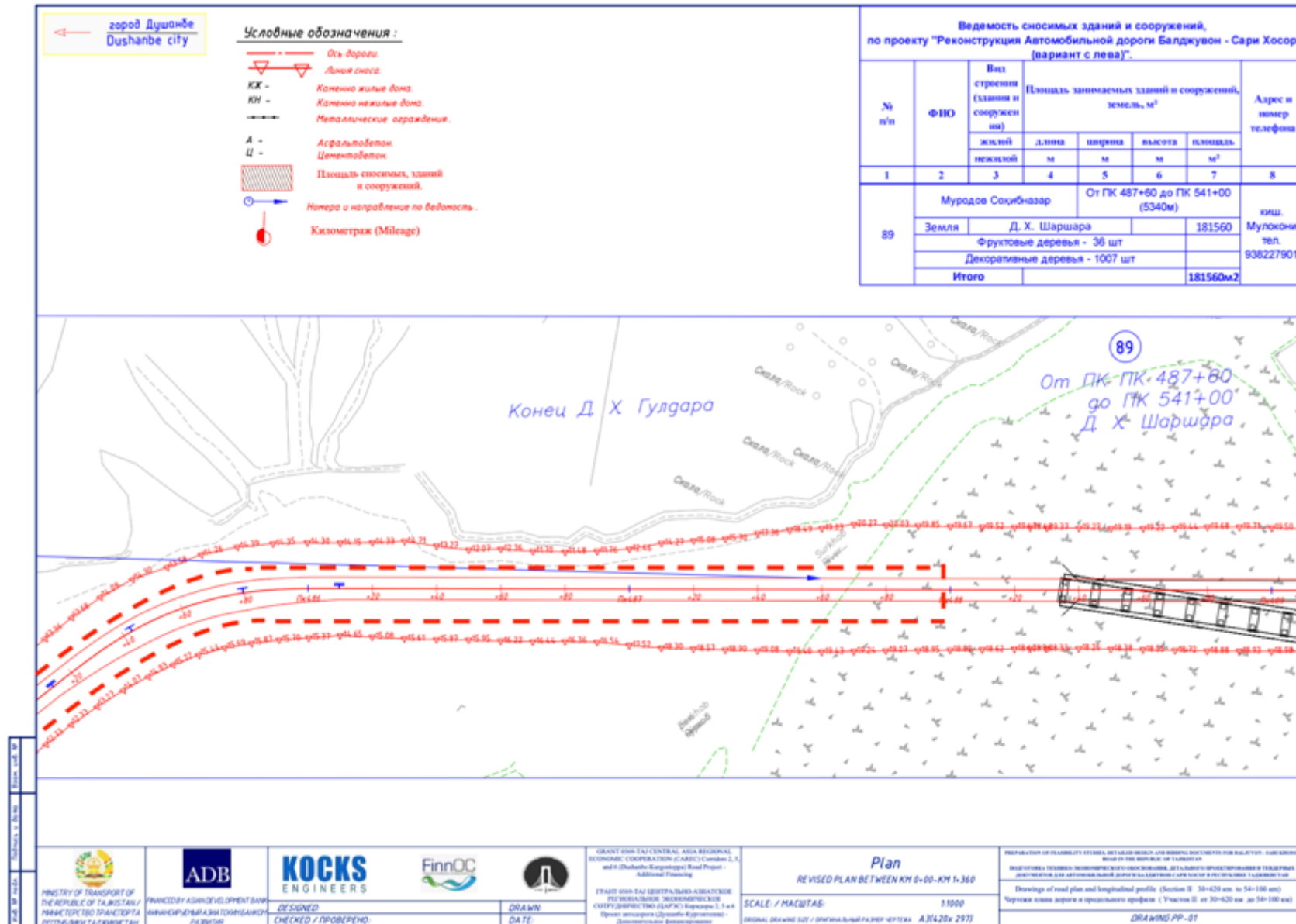












**12. km 51+650 – km 52+250 (boundaries marked with a red dashed line)**

Land users between km 51+650 - km 52+250 - item (90, 91, 92, 93) on the map below.

