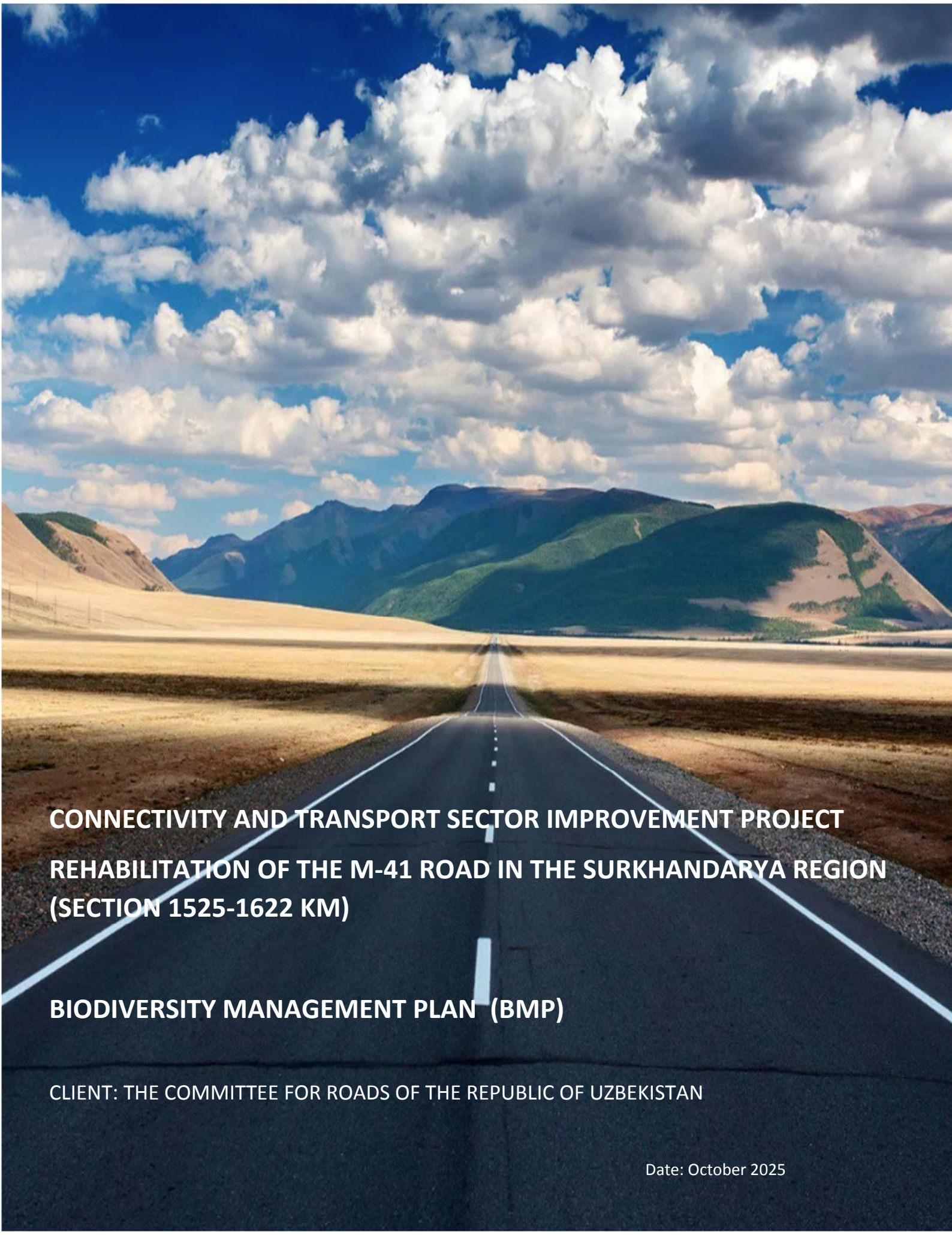

CONNECTIVITY AND TRANSPORT SECTOR IMPROVEMENT PROJECT

REHABILITATION OF THE M-41 ROAD IN THE SURKHANDARYA REGION (SECTION 1525-1622 KM)

BIODIVERSITY MANAGEMENT PLAN (BMP)

CLIENT: THE COMMITTEE FOR ROADS OF THE REPUBLIC OF UZBEKISTAN

Date: October 2025

DOCUMENT INFORMATION

Project Name	Rehabilitation of the M-41 road in the Surkhandarya region (Section 1525-1622)
Consultancy services	Consultancy services to prepare Environmental and Social Impact Assessment (ESIA) and Environmental and Social Management Plan (ESMP)
Document Title	Biodiversity Management Plan (BMP)
Client	Project Implementation Unit Committee for Roads (CR) under the Ministry of Transport
Client Coordinator	Mr. Jahongir Karimov
Consultant	Al Mar Consulting
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ISSUE AND REVISION RECORD

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1.0	05 November 2025	Draft BMP	Various	Julia Alekseeva	Maria Malinovskaya
2.0	05 February 2026	Final BMP	Various	Julia Alekseeva	Maria Malinovskaya

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LIST OF ABBREVIATIONS

AOI	Area of Influence
BAP	Biodiversity Action Plan
BMP	Biodiversity Management Plan
CAR	Committee for Roads under the Ministry of Transport
CSC	Construction Supervision Consultant
E&S	Environmental and Social
ESIA	Environmental and Social Impact Assessment
ESMP	Environmental and Social Management Plan
ESS	Environmental & Social Standards
GIIP	Good International Industry Practice
GoU	Government of Uzbekistan
IES	International Environmental Specialist
IBA	Important Bird and Biodiversity Area,
IUCH	International Union for Conservation of Nature and Natural Resources
KBA	Key Biodiversity Area
MEEPCC	Ministry of Ecology, Environmental Protection and Climate Change
NES	National Environmental Specialist
RoW	Right of Way
WB	World Bank

Table of Contents

1. INTRODUCTION

The Connectivity and Transport Sector Improvement Project is closely aligned with the World Bank Group's Country Partnership Framework (CPF) for Uzbekistan for FY22-26. The Project aims to enhance existing road infrastructure and create conditions for further transport sector reforms. Subcomponent 1.1. M-41 Regional Road Corridor Reconstruction and Supervision will finance the reconstruction of 97km of the M-41 Bishkek-Dushanbe-Termez corridor (section 1525-1622) road into a four-lane, climate-resilient highway, including enhanced drainage, pavement, and embankment protection. Also supports construction of parking facilities with charging stations and other amenities. Half of the corridor will be maintained under a multi-year performance-based contract (PBC).

For legal aspects, the work during reconstruction and operation will follow the Uzbekistan laws and the World Bank's Environment and Social Framework 2018 (ESF). According to both Uzbek Environmental Protection laws and regulations and the World Bank's *ESS1: Assessment and Management of Environmental and Social Risks and Impacts*, the proposed project is rated as "Substantial," with both environmental and social risks individually rated as substantial.

This Biodiversity Management Plan (BMP) details all the requirements necessary to avoid and minimize impacts on Biodiversity and restore its nature conservation value post-construction. The BMP has been prepared following the assessment of potential impacts and relevant and associated mitigation measures as defined in the Environmental and Social Impact Assessment (ESIA). The BMP collates all the biodiversity mitigation into a single document and dictates how it will be implemented during pre-construction, construction and operation, including who is responsible for each action.

The BMP is to be read and implemented in conjunction with the Project's Environmental and Social Management Plan (ESMP) and Biodiversity Action plan (BAP). The BAP goes beyond the avoidance and mitigation of this BMP and details the additional conversation actions and offsets for Egyptian Vulture as sensitive and vulnerable specie. In accordance with WB's ESS6 these species require additional measures beyond mitigation to ensure no net loss and which aim to achieve a net gain in their conservation status.

1.1. BMP AIMS AND OBJECTIVES

The proposed project is rated as "Substantial," with both environmental and social risks individually rated as substantial. This category implies that the scale and nature of potential environmental and social impacts extend beyond the boundaries of the Project sites, triggering the need to develop and implement special mitigation measures.

This Biodiversity Management Plan (BMP) is developed to ensure compliance of the requirements of the World Bank's Environment and Social Framework 2018. The overall goal of the Plan is to identify and the manage risks and impacts to biodiversity associated with the Project activities during the operation phase.

The aim of this BMP is to detail the full range of project management requirements, including mitigation measures designed to avoid, reduce and restore identified adverse impacts to biodiversity as a result of the Project. It will address:

- **Roles and Responsibilities** - details who (individual or organization) is involved in managing biodiversity, who is responsible for carrying out each mitigation action, and who is accountable if the action is not completed.
- **Actions needed** - describes the actions needed to avoid, reduce, or restore anticipated impacts on biodiversity so that they can be effectively implemented using this document.
- **Timeframe for implementation** - confirms when actions must be carried out over the project lifespan (e.g., pre-construction, during construction, and during operation).
- **Verification and reporting** – confirms how each action will be verified and how will this be reported.

The BMP also outlines how each action will be monitored, if relevant and what must happen if an action is not completed or if it is not successful.

2. PROJECT DESCRIPTION

The project aim is to reconstruct the highway road M-41, section 1525-1622 km (97 km) in Surkhandarya region of the Republic of Uzbekistan. The existing road would be upgraded from 2-lane road into 4-lane highway, replacement of existing road infrastructure in accordance with modern standards, incorporation mitigation measures along the road ensuring natural processes and responding to socio-economic needs, and construction the new bridges instead of outdated old. The project road will comply with international standards, suitable for a 20-year service life.

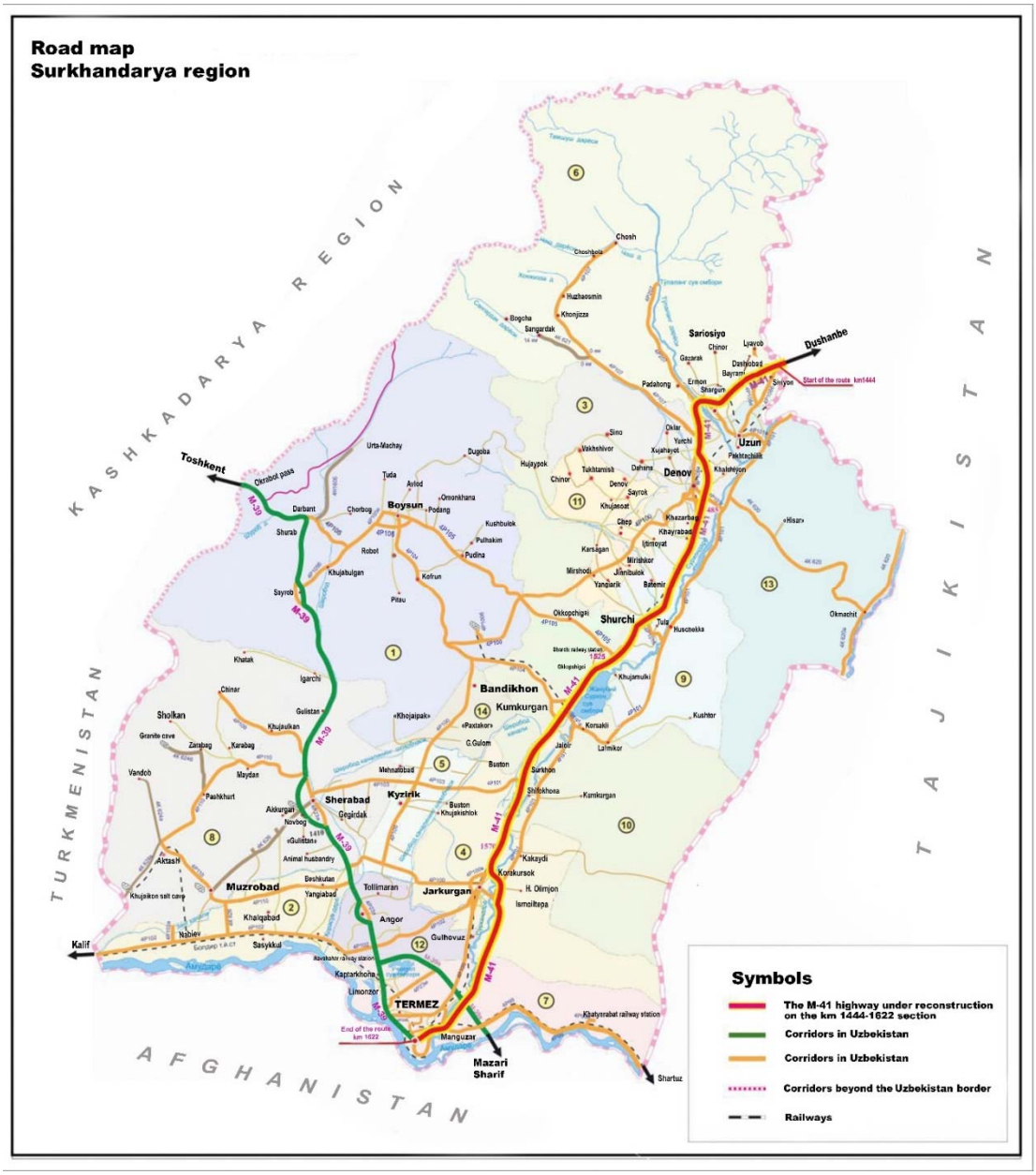
The road is located in Surkhandarya region of Uzbekistan and traverses through three districts, namely Kumkurgan, Dzarkurgan, Termez districts. The Project road passes through urban (23km) and semi-urban areas (18km), the majority of which is agricultural. About 55km is dominated by cropland and irrigated agricultural land. The road connects the 4P 100, 4P 103, 4P101 and M39 motorways, which are part of international transport corridors. It is therefore important in improving the speed and efficiency of transport between border and improving access to the Surkhandarya region.

Table 1: Road sections within district boundaries

District	KM	Distance (km)	Settlements
Kumkurgan district	23 km	1525 -1548 km	10 mahallas – Hurriyat, Munchoktepa, Elabad, Jiydali, Besh Kahraman, Jarkishlak, Gultepa, Navbakhor, Mehrobad, Surkhan-sakhili.
Dzarkurgan district	58 km	1548 -1606 km	9 mahalla – Oltintepa, Surkhon sohili, Obi hayot, Ismoil tepa, Dostlik, Istiklol, Nurli diyor, Oktepa, Gur gur.
Termez district	16 km	1606-1622 km	5 mahallas - Korahon, Amir Temur, Sharof Rashidov, Kuyoshli yurt, Termiz

Between towns the road passes along the suburbs or through the development of twenty-four settlements, but the bulk of the length of the highway crosses agricultural land.

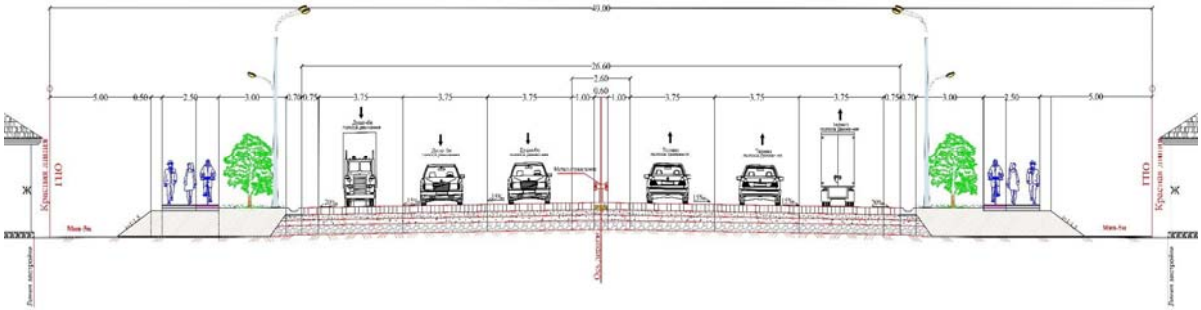
Figure 1: The map of designed road alignment



Road Design

In accordance with the road rehabilitation design, the majority of the road will upgrade the existing 2-lane road into 4-lane highway, replacement of existing road infrastructure in accordance with modern standards, incorporation mitigation measures along the road ensuring natural processes and responding to socio-economic needs, and construction the new bridges instead of outdated old. The width of the 4-lane sections is approximately 26-30m, including the central reservation, drainage, verges and pedestrian pavements (Figure 2).

Figure 2: Typical four-lane cross-section for the Project (sections located within the settlements)



The proposed road structure is concrete cement pavement based comprising a concrete surface above a combination of a crushed stone-gravel-sand mixture treated with cement. The sublayers comprise gravel-sand mixture on top of a soil.

At the time of writing this BMP, the detailed methods of construction are not fully known although some key aspects have been confirmed. For example, habitats and topsoil will be cleared using graders or bulldozers and jackhammers. Pneumatic drills and jackhammers will also be used during excavation and grading but blasting will not be used. The exact area of habitat clearance beyond the road footprint is uncertain. The construction camps, borrow pits and stockpile areas should be located in already modified parcels near the road or in close proximity.

The Road alignment crosses numerous permanent and intermittent drains and gullies requiring the construction of various drainage structures including bridges and overpasses, numerous culverts, retaining walls and slope protection.

3. REGULATORY CONTEXT

National Legislation

Uzbekistan has enacted a considerable amount of national legislation relating to biodiversity and conservation. The legislation is particularly relevant to the Project from a biodiversity perspective is indicated in Table 2.

Table 2: Major Legislation of the Republic of Uzbekistan for biodiversity perspective

Legislation	Year Passed (Amended)	Relevance
The Constitution of the Republic of Uzbekistan	December 8, 1992, amended in accordance with the Law of Uzbekistan dated 28.12.1993, No. 989-XII, and the Law of Uzbekistan dated 24.04.2003 No. 470-II	In accordance with the Constitution: All citizens shall protect the environment (Article 50) • Any property shall not inflict harm to the environment (Article 54) • Land, subsoil, flora, fauna, and other natural resources are protected by the state and considered as resources of national wealth subject to sustainable use (Article 55).
The Law on Nature Protection	No. 754-XII dated December 9, 1992	Establishes legal, economic, and organisational basis for environmental conservation and rational use of natural resources; ii) ensure balance between man and nature; and iii) protect the environmental system and to guarantee the rights of the population to a clean environment. This law also provides the basis of the State Environmental Expertise (SEE) as a mandatory measure for environmental protection required for decision-making processes. It also prohibits the implementation of any project without a positive conclusion of SEE.
Law on protection and usage of flora	No. 543-I dt. December 26, 1997 (last revision was made by Law of Uzbekistan No. 82-II dt. 26.05.2000)	Regulates relations in the field of protection and use of flora (plants) growing in natural conditions, as well as wild plants grown for their restoration and genetic preservation
Law on protection and usage of fauna	No. 545-I dt. December 26, 1997 (last revision was made by Law of Uzbekistan No.59 dt. 10.10.2006	Regulates relations in the field of protection and use of wild animals living in a state of natural freedom on land, in water, atmosphere and soil, permanently or temporarily inhabiting the territory of the Republic of Uzbekistan, as well as kept in semi-free conditions or artificially created environment for scientific or environmental goals.
Law on Protected Natural Territories	No. 710-II dt. December 3, 2004	Enacts the mandatory preservation of unique, valuable natural objects and complexes, genetic wealth of plants and animals, the prevention of the negative impact of human activities on nature, the study of natural processes, the monitoring of the environment, and the improvement of environmental education.

Legislation	Year Passed (Amended)	Relevance
Law on Environmental Control	27 Dec 2013	Regulates the field of environmental protection. The main objectives of environmental protection are prevention, detection, and suppression of violations of environmental legislation; monitoring environmental situations and factors, which can lead to pollution of the environment, irrational use of natural resources, endangering the life and health of citizens.

3.1. National EIA Rules and Procedures for tree cutting

Decree of the President of the Republic of Uzbekistan N0 PD-46 "On measures to accelerate works on landscaping and further effective organization of the protection of trees in the Republic of Uzbekistan" dated on 30.12.2021 relates to preservation of trees and to tree felling:

- Paragraph 1: Extend the moratorium on cutting down valuable species of trees and shrubs that are not included in the state forest fund for an indefinite period. *This means there is no deadline for restrictions on decorative tree cutting.*
- Clause 2, Sub-clause D: It is strictly forbidden to adopt government orders, protocols, written instructions, departmental acts, instructions and decisions of local executive authorities, including instructions for felling, uprooting, damage or destruction of valuable species of trees and shrubs that are not included in the state forest fund.
- Clause 6: The State Committee for Ecology[1] is responsible for monitoring and it should record all permits issued for tree cutting, including pruning for sanitary purposes, in the context of a specific area and each tree.
- Clause 15: The usual procedure of receiving permits for tree cutting is an inventory survey conducted by the MEEPCC.

Resolution of Cabinet of Ministries No86 "On approval of single regulation on procedures for issuing certain permits through a special electronic system" dated on 01.03.2022

Resolution 86 of 2022 concerns "On approval of single regulation on procedures for issuing certain permits through a special electronic system". Current legal act allows to issue permit for various purposes, including collecting species of flora as well as cutting trees, which do not belong to natural parks, forestry fund.

In particular, Annex 14 of Resolution prescribe cases when species of flora are eligible for collecting (preparation) and (or) extracting from the natural environment plant, apart from these which are included in the Red Book, and located on forestry fund land.

Annex 15 of current legislation allows following cases of tree cutting:

- Trees and bushes which are not located in land of forestry fund;
- Trees and bushes that might interfere operation of equipment and devices while construction and reconstruction of buildings, structures and communications;

[1] From February 2023 was transformed to the Ministry of ecology, environmental protection and climate change of the Republic of Uzbekistan (MEEPCC). All responsibilities remain the same as it was for SCEEP

- Trees and bushes that might interfere for implementation of engineering research.

For cutting trees and bushes for above mentioned cases, there is a need to obtain a special permission through the Unified centre for public services. It is necessary to submit an application and determine purposes for cutting and number of trees and bushes that are subject to removal.

Cutting of trees and bushes for sanitary purposes from a part of the trunk and (or) from the base (dry and diseased trees) is carried out without the fees stipulated in clauses 6 and 7 of this passport based on the permission of the bodies of the State Ecology Committee. A permit is not required for pruning or trimming branches of trees and shrubs for sanitary purposes;

Permission for cutting trees is not eligible for following types of land:

- Private land (gardens, land plots that belong to physical and legal entities);
- Trees, plants and bushes located in nurseries and plantations;
- Trees and bushes located in forestry fund land

Resolution specifies following trees and bushes which are not considered as forestry fund:

- Trees and bushes grown in cities and other settlements, as well as those which are planted for landscaping purposes;
- Trees and bushes grown in surrounding of railways and highways, natural and artificial water canals, water basins and other water bodies;
- Trees and bushes grown in surrounding of agricultural fields

Project developer should submit an application to Unified centre for public services with detailed description of project, number of trees/bushes to be cut due to the project implementation. Application is subject to review during 5 working days, and centre will notify project developer on the results of application review.

Based on the provided Land Criteria materials, it is evident that project sites of M-41 have a considerable number of trees. Thus, the Consultant notes that, as per Presidential Decree No. UP-46 dated 30.12.2021, a moratorium on tree felling (for an indefinite period) has been established. This moratorium relates to the felling of 78 designated valuable tree and plant species, as enlisted in the Annex to Resolution of the Cabinet of Ministers No. 93 dated 18.02.2020. In the event that the assessment reveals that the trees on the Project land fall within the scope of the moratorium list mentioned above, it will be required to follow the procedure outlined in **Ошибка! Источник ссылки не найден.** below.

The safeguarding of trees and shrubs within the moratorium, in accordance with the Decree, involves implementing preservation practices when choosing and allocating land plots for projects (including while developing the engineering and communication infrastructure). This includes practices such as transplantation and planting new trees in a specific quantity as compensation.

The moratorium does not apply to [the evaluation of the feasibility and execution of the activities outlined below shall be conducted with the involvement of the relevant state authorities]:

- Sanitary pruning and felling of trees and shrubs damaged by natural factors, pests, plant diseases, those drying or dried, as well as those posing a threat to the safety of human life and property of legal and natural persons;

- Felling of trees and shrubs (poplar and other fast-growing species, mulberry plantations, fruit trees, and shrubs) grown for wood and fruit production;
- Felling of trees and shrubs grown on plantations and/or owned by a legal or natural person.

The procedures for obtaining authorization for tree-related activities under Uzbek laws are as follows:

i) **For trees under the moratorium:** The local mayor (Khokim) or the Ministry of Ecology, Environmental Protection, and Climate Change may issue a decision allowing transplantation and corresponding compensation activities instead of felling activities. The Table 3 and Table 11 below outline the stakeholder mapping and the associated process, including roles and responsibilities, based on the most current understanding of practices at the time this report was completed.

ii) **For trees NOT under the moratorium:** Special permission for tree felling must be obtained following established procedures outlined in Annex 15 to the Resolution of the Cabinet of Ministers No. 86 dated 22.02.2022. The relevant entity submits an electronic application through license.go.uz, pays the state fee, and obtains the necessary authorizing document from the Ministry of Ecology, Environmental Protection, and Climate Change. The procedure to be followed for obtaining special permission is outlined in the Appendix.

Note that in accordance with the provisions of the Presidential Decree No. UP-46, it is strictly prohibited to issue directives from the Government, protocols, written instructions, departmental acts, mandates, and decisions of local executive authorities (i.e., municipalities) that include instructions allowing the felling, uprooting, damage, or destruction of valuable trees/plants included in the list of CoM Resolution No.93 referred to above.

In accordance with the established regulations for tree protection and subsequent landscaping, for the construction of new buildings or structures with a height exceeding 12 meters from ground level and/or having a total area exceeding 500 square meters, the allocation of landscaping/green territory (trees, shrubs, other plants, and seedlings) should not be less than 25 percent of the total land plot area designated for the project. This requirement is not applicable to projects involving the renovation of morally outdated buildings/structures with an expired service life.

Table 3: Stakeholders involved in the inventory and replantation and/or compensation for moratorium trees and shrubs

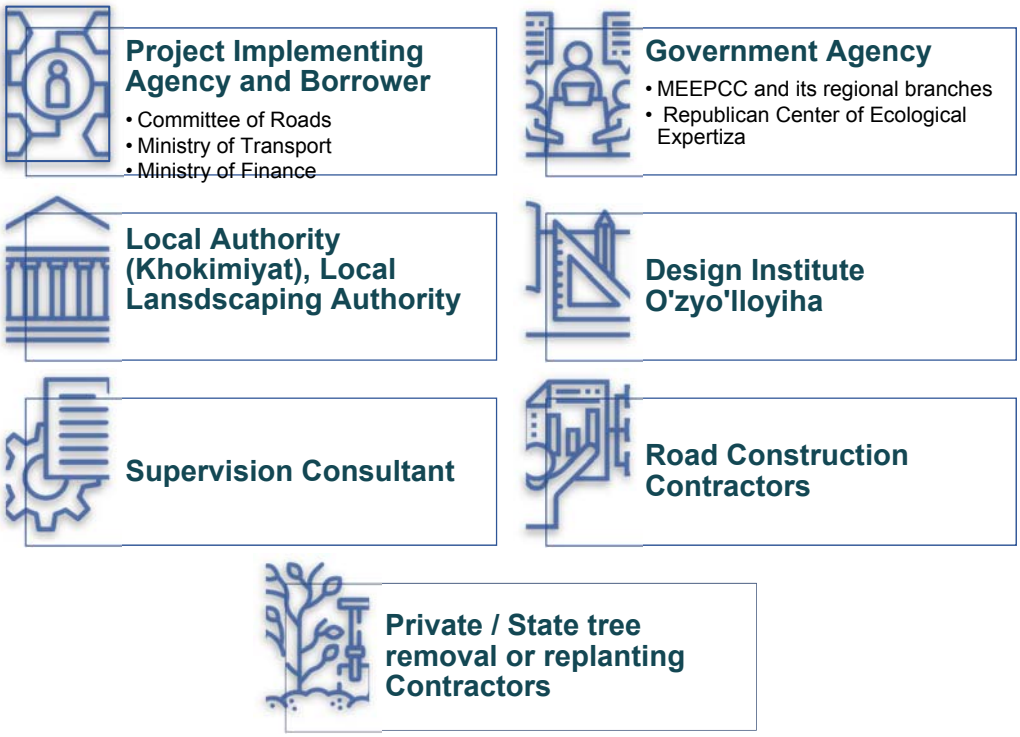


Table 4: Permission procedures for tree felling of non-moratorium trees

Stage	Subjects	Activities	Timescales
1-st stage	Applicant	Appeal to the Public Services Center in an explicit manner or register on the Unified Portal of Interactive Public Services of the Republic of Uzbekistan (hereinafter - EPIGU[2]) for obtaining permission to cut trees and shrubs that are not part of the state forest fund. Payment of Public Service Fee	Optional When contacting
2-nd stage	Public Services Center EPIGU	Submit application to the khokimiyat of the district (city) and to the Ministry of ecology, environmental protection and climate change of the Republic of Uzbekistan (MEEPCC)	Within 1 hour Automatically
3-rd stage	MEEPCC	Study of the condition of trees and shrubs, as well as the compliance of their felling with paragraph 2 of the Administrative Regulation[3]. Sending to the district (city) khokimiyat, as well as to the Public Services Center (when applying in person) or to the applicant (when applying electronically) through the EPIGU of a conclusion indicating the amount of payment for issuing a permit, except for the cases provided for in paragraph two of paragraph 2 Administrative regulations	Within 5 working days
4-th stage	The Public Services Center	After receipt of the conclusion, it is issued to the applicant by affixing his seal on it upon appeal.	During 1 hour
5-th stage	Applicant	After receipt of conclusion, payment of payments for issuing a permit in the amounts specified in the conclusion	Within 4 working days
6-th stage	Khokimiyat of the district (city)	If there is a positive conclusion from the MEEPCC after paying the fee for issuing the permit, except for the cases provided for in paragraph two of clause 2 of the Administrative Regulations, issue a permit and confirm it with its Electronic Digital Signature. In cases provided for in paragraph 2 of Clause 2 of the Administrative Regulations, after receipt of a positive opinion of the MEEPCC, a permit shall be issued. Sending permission to the Public Services Center (when applying in an explicit manner) or to the applicant (when applying in electronic form) through EPIGU.	Within 1 working day
7-th stage	The Public Services Center	Issuance of permission to the applicant by putting his seal on it at the appearance of the appeal.	During 1 hour

[2] EPIGU is a national acronym for Unified Portal of Interactive Public Services of the Republic of Uzbekistan

[3] Administrative Regulations for the Provision of Public Services for Issuing Permits for Felling Trees and Shrubs Not Included in the State Forest Fund (Appendix No. 1 to the Decree of the CM RUz of 31.03.2018 No. 255)

3.2. Other relevant regulations and norms related to road construction

Many important aspects of public administration, use and protection of water resources, nature and agricultural plants are regulated by Decrees of the Cabinet of Ministers or the President, for example:

- About approval of the Regulations on procedure for development and approval of drafts of ecological standard rates (No.14, 21 January 2014);
- "On Improvement of the Environmental Impact Assessment Mechanism" (No.541, 7 September 2020);
- “On improvement of the environmental monitoring system in the Republic of Uzbekistan” (No.737, 5 September 2019);
- Measures to further ordering activities in the field of groundwater use (No.430, 27 June 2017);
- Measures for ordering control and accounting of the rational use of underground water reserves for 2017-2021 (No.PP-2954, 4 May 2017);
- Resolution of the Cabinet of Ministers No.820, 11 October 2018 "On approval of the Regulation on the procedure for compensation payments for environmental pollution and waste in the territory of the Republic of Uzbekistan." The Regulation determines the procedure for applying compensation payments for environmental pollution and waste disposal on the territory of the Republic of Uzbekistan.

Regulatory documents on protection of nature, organization of workplaces, including on the construction site. The relevant regulatory documents on nature protection, protection of human health approved by the government:

- Sanitary Norms and Rules No.0289-10. Sanitary rules and hygienic requirements for the organization of building and construction;
- Sanitary Norms and Rules No.0128-02. Hygienic Classifier of Toxic Industrial waste in the conditions of the Republic of Uzbekistan;
- Sanitary Norms and Rules No.0318-15. Hygienic and anti-epidemic requirements for water protection in the territory of the Republic of Uzbekistan.

WB Policy

The Project is required to meet the environmental and social standards of the World Bank’s Environment and Social Framework 2018. The WB’s Environment and Social Framework 2018 (ESS) sets out policy principles and outlines the delivery process for WB’s Safeguard Policy in relation to environmental safeguards. Requirements for assessing and addressing biodiversity effects of projects are addressed under ESS6: Biodiversity Conservation and Sustainable Management of Living Natural Resources. This requires the borrower/client to identify measures to avoid, minimize, or mitigate potentially adverse impacts and risks and, as a last resort, propose compensatory measures, such as biodiversity offsets, to achieve at minimum no net loss of biodiversity caused by the project.

International Legislation and Policy

Uzbekistan has ratified several international laws and conventions concerning biodiversity, considered of direct relevance to this Project. These conventions require the country to proactively manage the conservation of its ecological resources, an obligation further reinforced through its national regulations as outlined below. Relevant signed conventions include the following:

1) Convention on International Trade in Endangered Species of Wild Fauna and Flora CITES (1973)
2) UN (Rio) Convention on Biological Diversity (1992)

3) UNECE Convention on the Protection and Use of Transboundary Watercourses and International Lakes (UNECE Water Convention) (2007)
4) United Nations Convention to Combat Desertification (1995)
5) UN Convention on Biological Diversity (1995)
6) Paris Convention on Protection of the World Cultural and Natural Heritage (1995)
7) Convention on International Trade in Endangered Species of Wild Fauna and Flora (1995)
8) Convention on Migratory Species of Wild Animals (1998)

4. PROJECT BIODIVERSITY

4.1. INTRODUCTION

M-41 road within the boundaries of the Surkhandarya region is very picturesque, since the route is laid along the wide valley of the Surkhandarya River surrounded by high mountains, crossing either gently hilly or slightly undulating foothill plains. The valley of the Surkhandarya River is actively developed, so the road passes by irrigated lands where grains, oilseeds, technical crops are cultivated, often orchards and vineyards, and crosses numerous villages and urban areas. The road is laid through the territory of about 24 settlements, including through regional center cities such as Kumkurgan and Dzharkurgan. In the final section, the road approaches the northern borders of Termez. 12 km of the project road section runs along the Yuzhno-Surkhan Reservoir.

The majority of the existing road and proposed bypasses run through anthropogenic landscapes (towns, villages, irrigation channels and ditches and irrigated agricultural lands) that was converted for agricultural use many years ago. There is practically no remaining natural habitat in the area, with the majority of flora being limited to crops, and artificially planted trees and shrubs, and the fauna comprising of domesticated animals. Planted native and non-native fruit and ornamental *trees (Catalpa bignonioides, Juniperus virginiana, Morus alba, Platycladus orientalis, Populus afghanica and etc.)*, as well as different herbaceous weeds grow along the Project Road, irrigation channels and between the buildings along the road.

There are no natural forest lands along the entire RoW. There are, however, trees along existing roads which intersect the RoW. A program for essential tree cutting to implement the Project should be approved by the Surkhandarya MEEPCC regional office. A total of 3 303 trees will be affected (See Table 5**Ошибка! Источник ссылки не найден.**). Compensation (in some cases replanting, where possible) for the commercial value of the trees cut should be paid.

Table 5: Loss of trees (Preliminary quantity)

District	Tree cutting (pcs)	
	Low-value tree species, pcs	Valuable tree species, pcs.
Termez district	32	575
Dzharkurgan district	175	2379
Kumkurgan district	19	123
TOTAL	**226**	**3077**

Source: Annex 3 of national EIA

It should be noted that the exact number of trees varies since the final Feasibility Study has not been prepared and approved. Tree inventory in 2024 of the Project Design Institute "O'zyo'lloyiha" during the national EIA preparation identified 3 303 trees that will be affected. (see Annex 1).

The biodiversity baseline characterization for the Project has been developed by a team of national biodiversity experts and is based on a comprehensive review of technical literature, publicly available biodiversity databases, and other sources of “desk-based” information. As well as recent ecological survey data, the baseline has been developed with the IBAT, and

consultation with local government departments, local communities and national and international experts. A range of further secondary data sources were also used including technical assistance reports, published government reports, environmental impact assessments conducted in the same region, government websites, academic papers and research and recognized institutions and relevant government departments.

4.2. PROTECTED AND SENSITIVE SITES

Uzbekistan has five categories of protected natural areas, including national nature reserves (zapovedniks); national parks; ecological centers; wildlife areas (zakazniks); and national nature memorials[4]. There is 1 State Nature Reserve within 70km of the project road, the Surkhan State Nature Reserve. There are also 7 internationally designated sites for Biodiversity within 50km of the project alignment, these comprise 5 IBAs[5] and 2 Key Biodiversity areas (KBAs)[6]. One additional protected site is within 50km, Hodjapil, although it is in Turkmenistan.

The nine protected and designated areas within 50 km of the Project alignment are presented in Table 6 and illustrated in Figure 3.

Table 6: Protected areas near project alignment

Name	Designation	Distance (km)	Direction
Kugitang and Boysuntay Mountains	KBA	50	N & W
Darasay Gorge	IBA	>15	E
Middle reaches of the Sherabad River	IBA	20-25	S
Yuzhno-Surkhan Reservoir	IBA	2-3	S
Gissar State Nature Reserve[7]	IBA	20-23	N
Uzbek Babatag	KBA	23	E
Surkhan State Nature Reserve	State Nature Reserve	>70	SW
Koytendag	IBA	>70	SW
Hodjapil[8]	Protected	>65	SW

IBA = Important Bird and Biodiversity Area, KBA = Key Biodiversity Area

Figure 3 illustrates the protected areas in relation to the proposed project. The analysis of protected areas comprises both nationally protected areas and internationally recognized zones with emphasis on Key Biodiversity Areas (KBAs).

The project AOI does not intersect any of these protected areas / KBAs. These protected areas are associated with either mountainous terrain or wetlands, and therefore support ecosystems that differ substantially from ecosystems within the study area. These protected areas are therefore not expected to be influenced by the proposed development and are not considered critical habitat features associated with the project.

[4] Environmental Performance Review – Uzbekistan. Third Review. UN, 2020

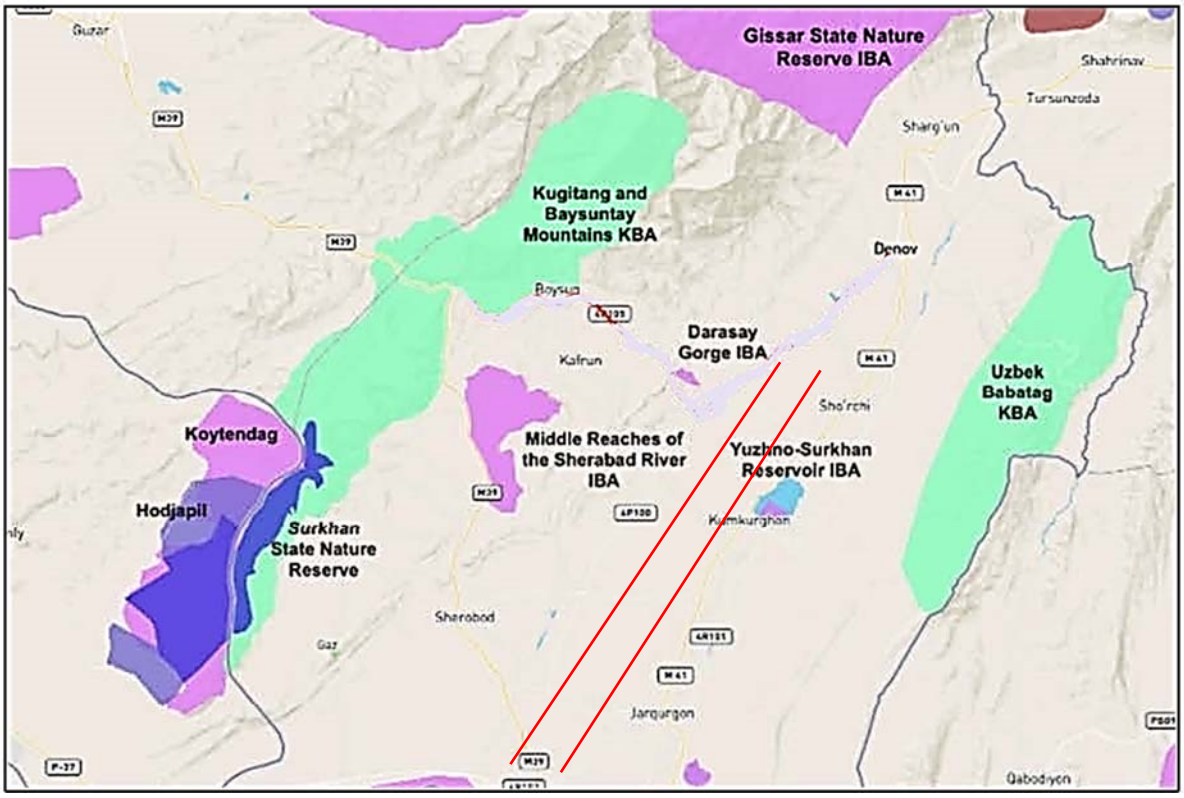
[5] An IBA is an area identified using an internationally agreed set of criteria developed by BirdLife International as being globally important for the conservation of bird populations.

[6] A KBA is an area of international importance for biodiversity conservation identified and designated using globally standardized criteria developed by the IUCN, Birdlife international and other partners.

[7] This IBA is named after the State Nature Reserve of the same name but is a larger area. The State Nature Reserve itself is further than 50km from the project road.

[8] This protected site is in Turkmenistan and thus does not fall under the same designations as those in Uzbekistan.

Figure 3: Protected areas located close to the Project road corridor



The closest protected area to the Project is Yuzhno-Surkhan Reservoir IBA, which is 3 km to the north-east and therefore outside of the Project AoI. 12 km of the project road section runs along the Yuzhno-Surkhan Reservoir. This reservoir is situated in the foothills of hilly steppe 2-3 km from Kumkurgan town in the bed of the Surchandariya river. The water level is not stable, but it does not flood or freeze in winter.

Figure 4: The closest protected area to the Project - Yuzhno-Surkhan Reservoir

The **Yuzhno-Surkhan (South-Surkhan) Reservoir** IBA is approximately 3 km from the Project. Data from 2007 shows this IBA supporting significant congregations of nonthreatened migratory waterbirds (>35,000). There is a deficiency of more recent data so on a precautionary basis it is assumed the IBA still supports similar numbers of waterbirds. However, there are no major water bodies or water courses near the Project, nor any other landmark that would function as a stop-off or bottleneck, that would cause these birds in migration to interact with the Project road.

The **Darasay Gorge** is another IBA located 15 km north of the Project alignment. It was designated as an IBA by Birdlife International in 2007 due to the presence of multiple IBA trigger species including one internationally Endangered species, the Saker Falcon. In 2007 at the time of the survey, 1-3 pairs were estimated to nest in the Gorge. There is no recent evidence to suggest that it is still present.

The **Gissar State Nature Reserve** IBA is located 22km North of the Project alignment. The IBA is not a protected area under Uzbekistan Law but was designated by Birdlife International as it is home to many threatened species of bird, including populations of the Endangered Egyptian Vulture and Saker Falcon. The IBA is much larger than the State Nature Reserve that gives it its name, the protected site itself is more than 50km from the project road

4.3. HABITAT BASELINE

The Project passes through varying degrees of modified habitat, the majority of which is agricultural. About 97km is dominated by cropland and settlements and areas of less modified Steppe/semi-desert. The MEEPCC identifies this habitat as a western Pamiro-Alai foothill plain and adyrs ecosystem, which has been severely affected by agricultural activities. Typically, where habitat has not been converted to cropland it is used for livestock grazing.

The botanical baseline data collection was developed using a combination of desk-based review of secondary information sources and primary data gathering through field surveys conducted within the Project area. Desktop research included a comprehensive review of available technical literature on the flora of Uzbekistan, as well as review of publicly available databases including, the IUCN Red List of Threatened Species.

Surkhandarya has almost completely changed the natural landscape to a cultural one. Woody vegetation is represented along with native species of vegetation and also acclimatized species from other regions.

Photographs of the major vegetation types located along the Project Road are presented in Photo 1.

Photo 1: The major vegetation types located along the Project Road

Surkhan river

Canal Zang

Urban roadside vegetation

Village Munchoqtepa in Kumkurgan district with planted trees and anthropogenic herbaceous vegetation

Cabbage field in Kumkurgan district

Cotton fields in Termez district

Baseline research identified 452 species of fauna and flora that are potentially present within 60km of the Project. These included 26 globally threatened species (IUCN), including 2 Critically Endangered (CR), 5 Endangered (EN), and 19 Vulnerable (VU) species, as well as species listed in the Uzbekistan Red Data Book. Table 7 details the results:

Table 7: Fauna and flora present or potentially present within 60km of the project

Group	Critically Endangered	Endangered	Vulnerable	Near Threatened, Least Concern, Data Deficient	Total
Birds	1	5	9	222	279

Mammals	0	0	5	68	73
Reptiles	1	0	2	25	28
Amphibians	0	0	0	0	0
Fish	0	0	3	11	14
Plants	0	0	0	58	58
Total	**2**	**5**	**19**	**384**	**452**

Following a review of the scientific literature, and consultation with national experts, it was determined that only 15 of the threatened species initially identified had the potential to regularly occur in the Project area. These species are listed in Table 8.

Table 8: IUCN threatened species that have the potential to regularly occur in the Project area

Latin name	Common name	IUCN Category
Aquila nipalensis	Steppe eagle	EN
Falco cherrug	Saker falcon	EN
Neophron percnopterus	Egyptian vulture	EN
Ovis vignei bocharіensis	Bukhara Urial	EN (subspecies)
Cyprinus carpio	Wild Common Carp	VU
Luciobarbus brachycephalus	Aral Barbel	VU
Luciobarbus capito	N/A (Fish Species)	VU
Gazella subgutturosa	Goitered Gazelle	VU
Vormela peregusna	Marbled polecat	VU
Streptopelia turtur	European Turtledove	VU
Aquila heliacal	Eastern imperial eagle	VU
Clanga Clanga	Greater spotted Eagle	VU
Chlamydotis macqueenii	Asian houbara	VU
Testudo horsfieldii	Central Asian Tortoise	VU
Picipes rhizophilus	N/A (Fungus species)	VU

Several species that are not internationally threatened (IUCN) but are listed in the Uzbekistan Red Book are also thought to be present or potentially present in the Project area. These are detailed in Table 9.

Table 9: Uzbekistan Red Book species that have the potential to regularly occur in the Project area

Latin name	Common name
Tulipa tubergeniana	Tulip
Otostegia bucharica	N/A
Hieraaetus pennatus	Booted Eagle
Aquila chrysaetos	Golden eagle
AegyPIUs monachus	Cinereous (Black) vulture
Gyps himalayensis	Himalayan vulture
Capra falconeri	Markhor
Glyptosternon reticulatum	Turkestan catfish

Critical habitat thresholds are triggered for one species - the Egyptian Vulture (Table 10**Ошибка! Источник ссылки не найден.**). The Saker Falcon is endangered and regularly present in the AoI but its population is not sufficient to trigger Critical Habitat. The Bukhara Urial is also endangered, but large local population is not likely as since the usual habitat is located more than 60 km from the project zone, and it is not sufficient to trigger Critical Habitat.

Table 10: Results of the scoping assessment for Critical habitat thresholds

Latin name	Common Name	Population Sizes	Assessment Results	CH Conclusion
Neophron percnopterus	**Egyptian vulture (EN)**	12,000 individuals globally and only 134 breeding pairs (c.270 individuals) in Uzbekistan. Three local populations constituting approximately 154 resident individuals	The 154 resident individuals found locally do not trigger critical habitat thresholds	Critical Habitat
Ovis vignei bochariensis	**Bukhara Urial (EN)**	Approximately 800 individuals in the world. Recent (2014 – 2018) data suggests as many as 295 individuals present in the Kugitag and Baysuntay mountains to the south-west of Denau, Shurchi, Kumkurgan district.	295 Bukhara Urial individuals do not trigger critical habitat thresholds. And a large local population is not likely as since the usual habitat is located more than 50 km from the project zone.	Non Critical Habitat
Falco cherrug	**Saker falcon (EN)**	12,000 individuals globally. Unknown how many are currently in Uzbekistan. The population present in the AoA is estimated to be between 8 and 16 individuals.	8 to 16 individuals is not sufficient to trigger critical habitat thresholds for this species	Non Critical Habitat

4.4. FLORA

The M-41 highway passes through predominantly agricultural land, where numerous types of vegetables, fruits and cereals are cultivated, in addition to animal fodder crops such as alfalfa. Flora in the Project area typically comprises shrub, grasslands, ephemeral vegetation and human-planted orchards. Prominent species include juniper, wormwood wheatgrass and xerophyte shrubs (*Juniperus zeravschanica, Artemisia tenuisecta, A.Boldshuanica, Elytrigia trichophoral, Festula sulcala, Elytrigia trichophoral). Ephemeral vegetation is common in combination with wild almond, and Carex pachystylis, Poa bulbosa, Taeniatherum crinitum, Psoralea drupasea, Phlomis sp.sp, Cousinia resinosa, Convolvulus subhirsulus, Taeniatherum crinitum, Psoralea drupasea, Phlomis* sp.). Common planted species include juniper, cherry, mulberry, apricot, poplar, loch and apple.

The vegetation cover of residential and industrial zones in cities and towns is represented by components of cultivated vegetation, which are formed by tree plantings from ornamental deciduous and coniferous species (hazel, poplar, ash maple, eastern elm, Weymouth pine, eastern juniper), walnut-fruit and stone fruit species, rosaries. Garden plots and agricultural lands are dominated by fruit trees, fodder and vegetable crops.

Along the outer edge of the roadsides, wastelands and inconvenient areas, meadow-weed forbs dominate with a predominance of grasshoppers and thorny species - cornflower, cousins, safflower, camel thorn.

The Tulip (*Tulipa tubergeniana*) is the only threatened flora (Uzbekistan Red Book) present in the project area. The species is, however, sparsely distributed and individuals are typically located between 50 and 100m from the existing road.

Along the irrigation ditches along the perimeter of the fields and country roads, a dense cover of azhrek, lactuk, sow thistle, sweet clover, as well as prickly grass caper and yantak develops.

Outside the borders of cities, agricultural crops dominate - grain, as well as vineyards and orchards of pomegranate, peaches, quinces and persimmons.

In the floodplain of the Surkhan River, tamarix and lawns of azhrek and gumaya are found. Willows, tamarix, poplars and maples grow along the banks of the river.

4.5. FAUNA

As already described, the majority of the non-urban land surrounding the existing road and proposed bypasses is turned over to intensive agriculture, leaving very few areas of unmanaged land. As a result of the extensive impact of the long-established area of agriculture, wildlife in the project area is predominantly restricted to species that are tolerant of permanently agricultural conditions.

Birds

The most common birds are the little dove, tree sparrow, common starling, mynah, rook, carrion crow, magpie, blackbird, magpie and Afghan vest.

The biotopes of the oases, as well as in the adjacent desert expanses, consist of household buildings and elm plantings. House sparrows, tree sparrows, barn swallows, little doves, and common crows are typical for populated areas.

In residential biotopes with a predominance of household plots and among artificial tree and shrub plantings and herbaceous groups, there are many birds, for which there is enough food in oasis biocenoses. Tree seeds and cereal weeds serve as favorite food for granivorous and wintering bird species. The most typical birds of the city and countryside are rock pigeons, little doves, house and tree sparrows, and the common mynah. Blackbird winters in the city.

Several threatened species are understood to regularly occur in the Project area. These include resident populations of the globally Endangered (IUCN) Egyptian vulture (*Neophron percnopterus*) and Saker falcon (*Falco cherrug*). And several nationally threatened species (Uzbekistan Red Book) were recorded including Booted eagle (*Hieraaetus pennatus*), Golden eagle (*Aquila chrysaetos*), Black vulture (*AegyPIUs monachus*) and Himalayan vulture (*Gyps himalayensis*).

Secondary research revealed that two globally Vulnerable species (IUCN) that may be present, however they were not recorded during field surveys and little data is available. The European Turtle Dove (*Streptopelia turtur*) is potentially present, however there has only been a single recorded sighting in region, in the Gissar State Nature reserve, over 20 km to the north. If this species is present at all in the Project Area, it is likely in very low numbers.

The Asian Houbara (*Chlamydotis macqueenii*) is also potentially present although there have been very few recorded observations of this species in the Surkhandarya region. There are larger populations elsewhere in Uzbekistan, with the main Breeding population in the Kzylkum desert and surrounding regions. Therefore, it is unlikely to occur or breed in the Project area, and if it does in small numbers.

Mammals

In residential areas in cities and towns, artificial plantings of ornamental, fruit trees and shrubs predominate. In the private sector, vegetable crops and grapes are planted on personal plots along with fruit trees. Therefore, the animal world includes those representatives who live in close proximity to humans. These include pets, insects, birds, and rodents. The burrows of small rodents (gophers, field mice) can be found in the fields. Garden rats, house mice and others live in gardens. Toads and frogs live near irrigation ditches.

Foxes, hares settle on rarely visited areas of agricultural land, and birds and rodents are still numerous. Rare representatives of fauna in a densely populated area do not appear and do not settle.

Four IUCN threatened species are potentially present, the Bukharan Urial (*Ovis vignei bochariensis*, EN) Goitered Gazelle (*Gazella subgutturosa*, VU) and Marbled Polecat (*Vormela peregusna*, VU). The nationally threatened Markhor (*Capra falconeri*, Uzbekistan Red List) is also known to occur in the wider region.

Bukhara Urial *(Ovis vignei bochariensis)* is an extremely rare and Endangered (IUCN) subspecies of Urial, with an approximate known global population of only 800 individuals. The literature and consultation with species experts confirm there is an important local population of Bukhara Urial present in the Kugitang and Boysuntay mountains (see Figure 3) that has the potential to interact with project road at its most westerly end. This population potentially comprises at least 200 individuals, although the exact population is unknown. The literature shows there is also a smaller population of Bukhara Urial in the Gissar State Reserve, although the exact numbers are unknown.

The exact distribution of the local Bukhara Urial population is unknown. It is known, however, that the species preferred habitat consists of rolling hills with grass and forb vegetation with some tree and shrub cover (open woodlands) and with some rock outcrops (experts pers comms). The species is highly mobile and migrates seasonally, males are known to migrate over 100 kilometres. It is elusive and rarely sighted by locals. The few sightings from the local community occurred in the mountainous regions (preferred habitat for this species) to the north of the Project. It is therefore very unlikely that Bukhara Urial regularly occurs in the project area.

The Goitered Gazelle is rare in the Surkhandarya region, with the regional population estimated at just 30-50 individuals. With no data or known sightings close to the Project alignment, it is unlikely to occur in the AoI.

The Marbled Polecat occurs across much of Central Asia and is generally rare and mosaically distributed. With no data or known sightings close to the project alignment it is thought to be unlikely to occur in the AoI.

In addition to wild fauna, it is worth highlighting grazing and stable animals, which are typical for rural settlements. Grazing of domestic and camp animals takes place on the outskirts of villages and in river valleys. In the morning and evening hours, animals often move along the roads, and in the event of crossing the road, herds or individual animals create emergency

situations on the roads, which necessitates the need for the construction of livestock crossings.

Reptiles

Reptiles were observed in various locations along the Project Area including the Dice Snake (*Natrix Tessellata*, LC), the Spotted Whip Snake (*Hemorrhois ravergieri*), Bogdanov's Gecko (*Tenuidactylus bogdanovi*, LC) and the wall lizard species *Eremias Regali*. None of these are listed as globally or nationally threatened. Both species of snake found are non-venomous and not dangerous to humans.

Burrows indicating the presence of the Central Asian Tortoise *Testudo horsfieldii* (IUCN VU) were observed in Darasay Gorge IBA only. The literature suggests that the region supports a lower density of tortoises than elsewhere in Uzbekistan, stating that it 'is rarely found in the foothills of the Surkhandarya or Boysuntau Ridge's. Therefore, although present this species likely occurs in low numbers and may be restricted to Darasay gorge rather than occurring along the whole alignment.

5. APPROACH TO MITIGATION HIERARCHY

The ultimate objective of a BMP is to avoid, minimise and restore (if necessary) the impacts on biodiversity as a result of the Project. To achieve this, the "Mitigation Hierarchy" is applied to potential impacts identified during the ESIA screening and planning process as shown in Figure 5. Using this approach, avoidance is prioritised, followed by minimisation and restoration, with measurable offsets only applied as a last resort where residual impacts are unavoidable, or as an additional conservation measure.

Figure 5: Applied Mitigation Hierarchy in relation to Project

Avoid	Minimise	Restore	Offset
As a matter of priority, the client should seek to avoid impacts on biodiversity and ecosystem services.	When avoidance of impacts is not possible, measures to minimise impacts to biodiversity and ecosystem services should be implemented	When avoidance and minimisation of impacts is not possible, measures to restore biodiversity and ecosystem services should be implemented	Biodiversity offsets may be considered only after appropriate avoidance, minimisation and restoration measures have been applied. Biodiversity offsets should be designed to achieve no net loss or a net gain.

The first step in the mitigation hierarchy is **avoidance**. Where it is possible to do so, all anticipated environmental impacts must be avoided due to careful project planning or mitigation measures. For example, trees may be felled during road construction, which represents potential habitat loss and could destroy bird nests. In order to avoid this impact as far as possible, trees should not be felled unless it is absolutely necessary for construction, and there will be a ban on felling trees for firewood.

The second step in the mitigation hierarchy is **minimisation**. Where it is not possible to avoid an impact entirely mitigation measures must be introduced that minimize the scale and magnitude of the impact on biodiversity as much as possible. For example, during construction, the felling of some trees may be unavoidable to make way for road construction. Therefore, to minimize the impact on nesting birds tree felling should completed between September and March when birds are not breeding.

The third step in the mitigation hierarchy is **restoration**. Where impacts on biodiversity cannot be avoided or minimised entirely, and thus negative impacts are expected to occur, restoration activities must be put in place to counteract these impacts, such that the overall there is no net loss of biodiversity as a result of the project. For example, the impact of habitat loss due to tree clearance cannot be minimised entirely, as some trees will still be lost due to the project. In order to achieve no net loss of biodiversity, habitat restoration is thus needed, in this case trees must be replanted in suitable locations to restore the habitat that has been lost. For this project, trees will be replanted at a ratio of 1:10, and this will be outlined in the tree planting program.

Any offsets and additional conservation actions are outside of the scope of this document and instead will be detailed in the accompanying Biodiversity Action Plan (BAP) which focuses on additional conservation actions for the most sensitive species.

6. ROLES AND RESPONSIBILITIES

The responsibility of implementing the BMP will change as the construction phase finishes and the Project becomes operational. Accountabilities and responsibilities are summarised in Table 11.

Table 11: BMP responsibilities

Individual / Organisation	Role in the BMP
Committee for Automobile Roads under the Ministry of Transport (CR) as the Executing Agency, supported through its Project Implementation Unit (PIU)	❖ Accountable for procuring and ensuring the Construction Supervision Consultant (CSC) and all construction works are compliant with the ESIA, Environmental and Social Management Plan (ESMP) and BMP. ❖ Overall accountability during pre-construction, construction and operation. The CAR will hire the CSC to finalise the detailed design and oversee construction. ❖ Ensure compliance with environmental laws and regulations. ❖ Provide funding and resource support to implement the BMP; ❖ Managing the BMP and related Plans final approval; ❖ Verifying the BMP and related Plans are regularly updated; ❖ Assists in obtaining permission to cut/replant trees ❖ Coordinating and monitoring the BMP implementation; ❖ Auditing the implementation of BMP and related Plans. ❖ Prepare and approval of the Tree Management Plan prior to commence of civil works. ❖ Pay compensation to the regional MEEPCC: • Pay compensation to the regional MEEPCC for tree felling according to MEEPCC conclusions • Ensure fair and timely compensation to finance restoration efforts and compensation for lost natural resources. • Prepare and reporting of payments activities. ❖ Monitor the **Tree Management Plan**.
Design Institute O'zyo'lloyiha	❖ **Finalizing FS:** • Development of final FS which takes into account biodiversity protection requirements and minimizes or eliminate all tree cutting along project road. • Detailed trees inventory along the project corridor; • Conduct environmental assessments according to national legislation and implementation MEEPCC recommendations for the protect natural resources and biodiversity. • Implementation of design solutions aimed to minimize or eliminate trees felling along the project road. • Provide, where possible, bypass routes or alternative design solutions to preserve trees and other natural landscape features. ❖ **Detailed tree inventory along the project corridor:** • Conduct a detailed inventory of all trees along the project corridor to determine the species, age, condition and ecological significance of the trees. • Database creation of trees with their location and characteristics, which will allow replanting or protective measures to be planned. • Identification and documentation of rare or protected tree species that require special conservation measures. • Develop inventory maps to help plan and implement measures to minimize tree felling.

Individual / Organisation	Role in the BMP
	• Inclusion of inventory results in the general design documentation to ensure their consideration at all stages of design and construction. • Prepare the Tree Management Plan. ❖ **Integration of biodiversity protection measures into design solutions:** • Development and implementation of design solutions aimed to protect and preserve habitats of rare species of birds and animals. • Plan and implement measures to replant trees which can be preserved into safe and suitable locations. • Develop recommendations to create new green areas or restore lost natural features to compensate for tree felling. ❖ **Coordination with stakeholders:** • Working with local authorities, environmental organizations and other stakeholders to coordinate design decisions and measures to protect biodiversity. • Conduct public consultations with local communities to inform them about planned activities and receive feedback. • Inclusion of recommendations and suggestions from stakeholders in project documentation.
Relevant district khokimiyats in Surkhandarya region	❖ **Conduct meaningful consultations:** • Conduct meaningful consultations with MEEPCC, CAR, CSC and Contractor. • Discussion of all project aspects related to biodiversity protection, including tree transplantation measures, protection of rare species and minimization of environmental impacts. • Ensure consistency among all project participants and coordinate their efforts to meet environmental requirements. ❖ **Ensuring sufficient land plot for tree transplantation** • Ensuring sufficient land plot for tree transplantation • Allocation and preparation of sufficient land for replanting trees to be preserved. • Ensure conditions for successful transplantation and further growth of trees, including soil preparation, water supply and care. • Monitoring the implementation of transplantation measures and assessing their effectiveness.
Regional MEEPCC	❖ **Sign tree allocation order:** • Sign tree allocation order which is required for Project as per final design option • Sign and approve the tree distribution plan required for the project in accordance with the final design. • Account all trees to be felled, replanted or preserved to minimize losses and ensure compliance with environmental standards. • Monitoring the implementation of the approved Tree Management Plan. ❖ **Study of the condition of trees and shrubs:** • Study of the condition of trees and shrubs, as well as the compliance of their felling • Assess the need to cut, replant or preserve each tree and shrub.

Individual / Organisation	Role in the BMP
	• Draw up survey reports with a detailed description of the condition of the plants and justification for the decisions made. ❖ **Sending a conclusion indicating the amount of payment for issuing a permit:** • Sending a conclusion indicating the amount of payment for issuing a permit to the district khokimiyat • Determination of the compensation amount for felling permit in accordance with established standards and rules. • Submission of the conclusion with the amount of payment to the relevant district khokimiyat for approval and further actions. ❖ **Prepare and send their conclusions/permits to district khokimiyats:** • Registration of official conclusions and permits for felling trees and shrubs based on the conducted surveys. • Include all necessary data and rationale in the conclusions to ensure transparency and legitimacy of the process. • Send prepared conclusions and permits to district khokimiyats for further use in the process of project implementation. ❖ **Issue permits for tree cutting:** • Issue permits for tree cutting based on the conclusions of the regional MEEPCC. • Check and confirm the validity and necessity of cutting down trees, taking into account environmental requirements and standards. • Ensure transparency of the permitting process and informing the public about planned activities.
The Construction Supervision Consultant (CSC)	❖ **Responsible for ensuring compliance of all civil works with the ESIA:** • Monitor all construction activities in accordance with the requirements of Environmental and Social impact assessment (ESIA). • Ensure all construction activities conducted with minimal impact on the environment and biodiversity. • Monitoring and reporting on compliance with environmental standards and regulations. ❖ **BMP and ESMP implementation during construction:** • Responsible for the implementation of this BMP during construction alongside the implementation of the Project's Environmental and Social Management Plan (ESMP). • Compliance will be managed through the direct procurement of an Environmental Specialist(s) (National and International). • Certain tasks detailed in the BMP may be delegated directly to a Biodiversity Specialist if the CSC deems it necessary. • The CSC will also complete their own Project-specific plans, which will need to be fully compliant with the ESMP and BMP. ❖ **Visual inspection of all habitat:** • Visual inspection of all habitat trees must be completed by qualified person prior to felling of habitat trees. • Assessment of the trees condition and making decisions about the need to preserve, replant or felling. ❖ **Tree Management Plan:** • Incorporate measures to conserve, replant and care for trees to minimize impacts on biodiversity.

Individual / Organisation	Role in the BMP
	• Monitoring the implementation of the tree care plan during construction.
CSC International Environmental Specialist (IES)	• The IES will be procured by the CSC and will be responsible for overall implementation of the BMP. • Responsible for ensuring all documentation complies with WB ESSs and applicable national laws. They are also responsible for designing the training of all relevant staff on environmental matters. • Support the CAR in preparing environmental monitoring reports for the CAR at least semi-annually during construction and annually during operation but more regularly if required. A summary of their role and responsibility is provided in the ESIA.
CSC National Environmental Specialist (NES)	❖ **Document preparation and implementation of all environmental plans:** • The NES will be procured by the CSC and assist the NES in document preparation and implementation of all environmental plans. • Responsible for managing the implementation of the BMP on the ground during construction e.g. delivering toolbox talks, confirming the presence of protection fencing, carrying out pre-clearance checks, checking open works daily for trapped fauna and other activities. ❖ **Management of BMP implementation:** • Negotiate with Contractors and confirm that all necessary protective measures are in place at construction sites. • Conduct other BMP activities that do not require specific biodiversity competencies. ❖ **Site Coordination and Control:** • Coordinate and supervise all site activities pertaining to the implementation of the BMP. • Ensure compliance with all biodiversity conservation measures. ❖ **Keep track of monitoring results and other reporting:** • Keep track of monitoring results and other reporting mechanisms and ensure corrective measures are implemented. • Ensure that corrective action is taken when non-complies or violations are identified. ❖ **Interact with the Contractors:** • Interact with the Contractors and instruct them on the implementation of the measures described in the BMP. • Ensure compliance with environmental requirements and standards by all contractors.
Biodiversity Specialist (International and/or National)	❖ **Technical support and consultation:** • Provide technical support and consultation to implement the Biodiversity Management Plan (BMP). • Ensure implementation of biodiversity protection measures, especially if the IES and NES do not have sufficient time and if any measures are not successful. ❖ **Management and coordination:** • Work under IES management and contracted to the CSC to carry out tasks related to biodiversity protection. • Ensure flexible management of biodiversity protection measures in order to achieve the set goals. ❖ **Cooperation with expert organizations:**

Individual / Organisation	Role in the BMP
	• Cooperation with trusted and reputable expert organizations to obtain professional assistance and knowledge. • Interaction with the Uzbekistan Society for the Protection of Birds for consultations related to ornithology and bird protection Uzbekistan Society for the Protection of Birds, contactable via: Email: roman.kashkarov@iba.uz • Interaction with the Institute of Zoology, Academy of Sciences for consultations related to zoology and animal protection Institute of Zoology, Academy of Sciences, Uzbekistan E-mail:ebykova67@mail.ru
Nominated Tree Contractor	❖ **Responsibility for any defects and tree planting:** • Responsibility and liability for any construction related defects, including success of tree planting and translocation will extend for 24 months during operation. • Ensure successful planting and replanting of trees, including 24-month warranty. ❖ **Preparation of the replanting program:** • Preparation of the replanting program, with input from local residents and district forest departments, concerning replacement species (if the trees cut cannot be replaced with the same species).
Civil Contractor (Contractor)	❖ **Physical construction activities:** • Responsible for all physical construction activities. • Liaise directly with the CSC and accurately implement all required safeguard and mitigation measures. ❖ **Visual inspection of all habitat trees:** • Visual inspection of all habitat trees must be completed by qualified person prior to felling of habitat trees ❖ **Preparation of the cutting plan:** • Preparation of the Tree cutting plan.

7. BIODIVERSITY MITIGATION PLAN

Most of the impacts on biodiversity occur during construction activities, either directly (e.g., mortalities caused by the activities) or indirectly (e.g., due to habitat deterioration that may cause a change in distribution and abundance of biodiversity in the area). Consequently, a large proportion of the effort needed for the implementation of this BMP falls within the construction phase.

Table 12 contains the list of specific avoidance and mitigation actions and instruction on how they should be implemented. The detail in the table includes:

- **Mitigation Aim:** The aim of each mitigation measure in avoiding, minimizing or restoring impacts upon Biodiversity.
- **Action required:** Detail on the specific actions required to achieve each mitigation aim.
- **Timing & Frequency:** When during the project lifespan the activity will be undertaken, and how often.
- **Responsible:** Who (individual or organisation) from the list in **Table 12** **Ошибка! Источник ссылки не найден.**is responsible for carrying out the required action.
- **Accountable**: Who (individual or organisation) from the list in **Table 12** is ultimately accountable if the action is not carried out to a satisfactory level.
- **Verification**: How will it be verified that the action has been carried out to a satisfactory level.

Table 12: Management and Monitoring

For the purposes of this table, **Responsible** refers to the party that is in charge or the owner of implementing the action. **Accountable** refers to the party who is ultimately answerable or liable if the action is not implemented. It is therefore expected that the accountable party monitors the actions of the responsible party.

#	Mitigation Aim	Action Required	Timing & Frequency	Responsible for Implementation	Accountable for action	Verification
1	Ensure compliance with the BMP during construction	Employment of an independent, competent IES and an independent, competent NES. The preferred IES/NES candidates must be approved by the CAR to ensure professional competence and independence.	Employment at soon as the CSC is contracted and before construction starts.	CSC	CAR	Proof of IES, NES and biodiversity specialists' contract, submission of a pre-construction Environmental approval report and monthly compliance reports (on the implementation and compliance with the ESMP/CESMP, the BAP and the BMP).
		The IES will update any formal documents if required and ensure that all activities are delivered in accordance with relevant laws and project commitments.		IES	CSC	
		The NES will manage the implementation of the BMP to ensure compliance. They will complete an audit each month, pre-construction and during construction. They will also provide an evidenced based report of BMP activities and progress to the CAR monthly.		NES	CSC	
2	Minimise degradation of vegetation and landscape.	Design Institute reviews the construction plans to ensure vegetation is only removed if unavoidable.	Pre-construction and during construction	Design Institute	CSC	Maps of sensitive species produced by Design Institute. Proof of access road plans and a Traffic Management Plan. Proof of temporary fencing around sensitive plants.
		Contractors only remove vegetation from modified habitats and as per the IES's approved plan. CSC should use physical barriers as temporary fencing to protect vegetation.		Contractor	CSC	

#	Mitigation Aim	Action Required	Timing & Frequency	Responsible for Implementation	Accountable for action	Verification
		All vegetation removal must be done under the supervision of the CSC NES. NES to ensure the workforce will not deviate from the plan. A pre-clearance survey will be completed by the NES to identify any Tulips (*Tulipa tubergeniana*) within 100 m of the construction footprint and at the locations designated for disposal of unsuitable materials and project facilities, as this species has been identified as particularly sensitive. Tulips will be identified and mapped by the NES.		CSC	IES and NES	
		Temporary fencing will be constructed around any Tulips within 100 m of the construction footprint to ensure their protection. Fencing must not be solid to allow light through and must not be secured in the ground to avoid damage to roots.		Contractor	CSC	
		Trees will only be removed by the Contractor based on the MEEPCC permission letters, with the NES supervision, and construction workers must not remove trees for firewood or any other reason. CAR will assist in obtaining permission letters		Contractor	CSC	
		Access roads will be marked before the beginning of the construction activities. No construction vehicles will be permitted outside these access roads.		Contractor	NES	
		Natural breaks in vegetation will be identified by the NES and will be used as preferred access routes where possible.		Contractor	CSC	

#	Mitigation Aim	Action Required	Timing & Frequency	Responsible for Implementation	Accountable for action	Verification
		Construction camps, borrow pits, soil deposits will be installed outside protected areas/ natural habitats by prioritising their locations in already modified habitats (e.g., agricultural, industrial)		Contractor	NES	
		Traffic Management Plan and an Access Road Plan will be submitted to local authorities (see ESIA and ESMP for details).		Contractor	CSC	
3	Avoid disturbance to breeding / nesting birds	All vegetation clearance will be undertaken between September and March to avoid impacts to breeding birds.	Survey pre-construction and within 24 hours of clearance if during breeding season	Contractor	NES	NES provides a report and approval for each survey
		If vegetation removal must occur during the breeding season (between April and August), the NES must complete a check for nesting birds within 24 hours of the planned removal and provide written approval for the works to commence.		NES	CSC	
4	Avoid loss of fauna due to poaching	The NES will conduct a toolbox talk to raise awareness of the threatened species present and the potential risks to them. Photos and ecological characteristics of key species will be covered. After this training, workers will understand how to identify sensitive species, what to do if they are encountered and who and how to report their sightings.	Before project start and during construction.	NES	CSC	Training presentation prepared. Signatory list showing attendance of all workers.
		All site workers and contractors must attend the toolbox talks.		Contractor	NES	
		A hunting ban will be enforced for all workers. A total ban will be placed on potential hunting equipment such as traps and firearms, with regular checks on		Contractor	NES	

#	Mitigation Aim	Action Required	Timing & Frequency	Responsible for Implementation	Accountable for action	Verification
		camps being carried out to enforce the measure with fines given to offenders. Dogs will always be prohibited on site. Construction workers are also banned from the killing of any snakes. If snakes are discovered on sight they will be left alone and allowed to disperse.				
5	Minimise habitat fragmentation	IES will work with the engineers to determine how many wildlife crossings (incl. underpasses/culverts but not only) are required and where they need to be placed.	Pre-construction and during construction	IES	CSC	All planned underpasses successfully installed.
		The NES will ensure the natural vegetation leading into the ravines/underpasses is maintained to encourage fauna to pass under road		NES	CSC	
		Newly planted hedgerows will also be used either side of ravines/underpasses to 'funnel' fauna under the road (rather than over it), unless a physical barrier (e.g., buildings) already acts as a funnel.		Contractor	NES	
6	Avoid disturbance to Egyptian vulture	No construction camps, or construction facilities, such as a concrete batching plant, will be constructed within 5 km of the IBA. The capture of falcons is also prohibited under all circumstances.	NES site visits before construction and monthly during construction	Contractor	NES	Map of location of construction facilities.
		Checks will be conducted by the NES for nesting birds near the road. If any birds are found, construction must be halted until nesting is over.		NES	CSC	

#	Mitigation Aim	Action Required	Timing & Frequency	Responsible for Implementation	Accountable for action	Verification
7	Avoid impacts to Yuzhno-Surkhan Reservoir IBA	The NES will provide all construction workers and contractors with training on the locations and sensitivity of the Yuzhno-Surkhan Reservoir IBA.	Preconstruction and during construction	NES	CSC	Signatory list showing attendance at tool box talk
		No excavation works will take place within 5 km of IBA. All works will be carried strictly within the construction footprint when within 1km of this site.		Contractor	NES	
		All works within 5 km of t Yuzhno-Surkhan Reservoir IBA will have access to professional spill kits in accordance with international best practice. All workers will be trained in using the spill kits and their contents will be checked every month. Any fuels and lubricants and refuelling will be completed in a spill resistant area.		Contractor	NES	Water quality management plan and purchase of spill kits
		NES will complete or oversee the completion of a water quality management plan detailing how contamination of all water courses will be avoided and managed.		NES	Contractor	
8	Minimise roadkill	Speed limits will be imposed and clearly signed using high quality metal signs on posts. Specifically, signs will be placed 100 m of project settlements and every 1 km between confirming a maximum speed of 50 km/hr in this area. Signs of equal quality and clarity will warn drivers of possible animal crossings, particularly near culverts and underpasses.	Signs erected during construction	NES	CSC	Physical presence of signs and records of speed limit
		Weekly surveys of road during construction by NES to identify any roadkill present. Particular attention will be paid to any Egyptian Vultures.		Contractor	NES	

#	Mitigation Aim	Action Required	Timing & Frequency	Responsible for Implementation	Accountable for action	Verification
		Construction vehicles will be limited to 50 km/h (or less), informed by signs. Signs highlighting increased risk of sensitive ecological features will also be used.		Contractor	NES	
9	Avoid disturbance to fauna	Construction sites and access roads will be fenced and signed, to avoid any impact to areas out of the construction footprint. A temporary fence will be installed around compounds and worksites to prevent entry of mammals during the night.	Site visits every 3 months to confirm use of signs and / or fences	Contractor	NES	Physical presence of signs and fences
		Noise emission will be limited as much as possible: speed limit for vehicles, maintenance programs of machinery, avoidance of emission of noise during the night.	Pre-construction and during construction			Records of speed limit violations, written maintenance plans
		Emission of dust will be minimised using solid fencing and/or water sprays to suppress dust.	During construction			Presence of solid fences and sprays during dust-inducing works
		Pre-clearance site checks will be conducted before the commencement of all works to ensure no mammals are present within the working area and avoid the unnecessary killing or injury. Any open works (e.g., borrow pits, trenches) will be checked daily for mammals and any animals found will be helped to safety.	Daily / As required	NES	CSC	Site survey records including number of mammals and any animals found in open works and number of fences used
10	Restoration of damaged and	Develop and document habitat restoration/revegetation measures on temporary construction areas through the Soil Erosion,	Calendar or schedule of works	NES	CSC	Report from survey of areas after restoration and revegetation activities are

#	Mitigation Aim	Action Required	Timing & Frequency	Responsible for Implementation	Accountable for action	Verification
	fragmented habitats	Reinstatement & Landscape Management Plan as per ESIA.	for Landscape Management Plan			conducted. Includes photographs of restoration measures. Audit of 1:10 new trees planted post-construction
		Topsoil will be removed from all project footprint areas and temporarily stored in designated areas near the edge of the works, away from watercourses. The topsoil will be protected and not mixed with any other material. Topsoil will be re-deposited as soon as possible once works are completed in any area. Soil stockpiles will be sampled or ameliorated if necessary. The original contours of the land will be restored as closely as possible. Rehabilitated areas must be regularly maintained and monitored to maintain a high basal cover and limit soil erosion due to water runoff and wind.		Contractor	NES	
		Any Tulips in the construction footprint will be moved to appropriate habitat, under the instruction of the NES.		Contractor	NES	
		Prepare detailed **Tree Management Plan**. The Borrower (CAR) will be responsible for ensuring this plan is followed correctly, including the requirements for tree planting and tree maintenance during the construction phase and defects liability period. No non-native Species are to be used during implementation of tree planting program and for any tree that is removed, two saplings (50+ cm) must be planted in their place. Saplings must be planted in suitable habitat, at least 2 metres apart from each other and at least 5 metres from the road. Planting		Contractor	NES	

#	Mitigation Aim	Action Required	Timing & Frequency	Responsible for Implementation	Accountable for action	Verification
		time shall be restricted to spring (March till April) and/or autumn (September till October). Trees will be replanted at a ratio of 1:10.				
11	Avoid introduction of non-native species	No planting of non-native species will occur. Where re-planting of native trees occurs, only topsoil taken from that local area will be used.	During Landscape planting	Contractor	NES	Report of restored areas with non-native species presence (if any).
12	Responsible chemical use	Use of poison without permission or previous approval is not permitted. Every use of poison will be subject of licensing and authorisation. The authorisation document will contain information's about requestor, reason of request, type of poison, place of use and quantity.	Pre-construction and construction	Contractor	NES	Report by NES if wildlife poisoning incidents occur
13	Responsible waste management	Waste created during the construction activities will be managed under the ESMP, to limit the disturbance to fauna because of presence of wastes and spills. Hazardous materials will be properly stored and fenced.	Pre-construction and construction	Contractor	NES	Quantities of wastes and management description
		Wastes and any other product containing hazardous chemical substances (e.g., fuel) will not be stored in the proximity of freshwater features. Excavated materials will not be dumped into freshwater features, nor will they be stored in their proximity, to avoid any increase of the turbidity levels. International best practice spill kits must be present where any works are being carried out close to a watercourse.		Contractor	NES	Distances from storage areas to the freshwater features

#	Mitigation Aim	Action Required	Timing & Frequency	Responsible for Implementation	Accountable for action	Verification
		Good site practice regarding the storage of waste and food will be implemented. Temporary barriers and covers will be used to prevent wildlife from accessing waste disposal areas and similar areas		Contractor	NES	Number of temporary barrier and covers used
		Contractors will be required to conduct regular debris clean-up activities immediately upon possession of the work site and to maintain the assigned sections throughout project construction including by regular collection and hauling of wastes to government-approved landfill locations. Sign boards will be installed along the project road at 5 km intervals to remind drivers not to throw garbage along the road.		Contractor	NES	Weekly inspection by NES to ensure debris is being cleared properly and promptly
14	Minimise cumulative impacts on biodiversity	Project planner, IES, and CAR representatives to confirm details of other road construction timelines to minimise any potential logistical interference and minimise common areas of land disturbance. Also, to harmonise any re-instatement / revegetation measures.	Pre-construction and during construction	IES	CSC	Written report

8. MONITORING AND ADAPTATIVE MANAGEMENT

The CAR, with the support of the CSC, must ensure that the monitoring and implementation of the mitigation measures set out above is completed. Monitoring will assess the effectiveness of these measures and act to alert the project if any additional adaptive measures are required, e.g., if a measure is not completed or is not successful.

The avoidance and mitigation measures outlined above are generally best practice and relatively easy to implement. It is therefore expected that the correct and appropriate management and reporting by the NES to the CSC and then to the CAR and using the above table as a prompt will be sufficient to ensure compliance and completion of all measures. For example, whether signage has been erected or toolbox talks completed. For a small number of actions however, more involved monitoring may be required, e.g., the successful translocation of sensitive plants. The monitoring approaches are outlined below.

8.1. WILDLIFE MONITORING

The area is important for some rare and endangered species, including Egyptian Vulture. The NES will establish a reporting system to collate and monitor observations of priority wildlife before construction commences, to be implemented throughout construction and operation phases. Priority species are those listed in the ESIA. All staff, contractors and local residents will be encouraged to report any field signs or evidence to the NES and photographs and key ecological characteristics of the Egyptian Vulture will be included in the toolbox talk. It will be made clear that evidence includes dead animals, particularly those subject to road collisions and any sighting of priority species within 10km of the project. The reporting system will be managed by the NES and supported by the CSC. The information will be used to assess the need for any adaptive measures. Should any adaptive measures be required (e.g., target species are subject to road collisions or restoration planting is widely unsuccessful), the Biodiversity Specialist(s) (**Ошибка! Источник ссылки не найден.**) should be contacted immediately, and tailored management measures will be developed collaboratively to ensure no net loss of the species.

8.2. HABITAT RESTORATION

All rare or sensitive plant species present in the construction footprint will also be translocated to a suitable location near the road. A detailed tree planting program will be developed and implemented post-construction. All trees planted will be at a ratio of 10:1 compared with those lost. The success of all new planting will be monitored for the first three years following translocation or planting, or until successful establishment has been achieved.

Monitoring will involve the NES checking the presence of the planned number of translocated and new trees, and shrubs every 3-6 months. The NES will monitor and report any concerns to the Contractor and CSC, as required. Any missing plants or those that appear unhealthy may require active remedial management by the Contractor. If necessary, the advice of a suitability qualified Biodiversity Specialist(s) may be required, e.g. if plants are unhealthy or dying. Any plants that die must be replaced with a healthy, mature individual of the same species. The long-term monitoring of all new planting will

be a contractual requirement of the Contractor for the first 24 months of operation, after which the CAR will take the responsibility.

9. BMP IMPLEMENTATION

Implementation of this BMP will require the CSC to understand the Plan's contents and take overall responsibility for the day-to-day management, during the pre-construction and construction phases and early stages of operation. The objectives of the BMP and demonstrable evidence of successfully implementing similar Environmental or Biodiversity Management Plans must be included in the Contractor's procurement process of the IES and NES. The Plans success will also depend on the quality of the IES and NES that are procured and the staff associated with managing construction and supporting them. Sufficient financial support as outlined in the ESMP, management systems and the ability to manage the wildlife sensitively are also required. Details of the varying roles and responsibilities is presented earlier (Table 11**Ошибка! Источник ссылки не найден.**).

9.1. REPORTING COMMITMENTS

During construction, the NES will report to the CAR monthly, within 7 days of the end of each month, through the CSC. These reports will consist of progress monitoring, quality assurance/quality control, schedules of contract payments and variation orders, graphical representations of progress against program based on the approved contract schedules, charts of physical progress on major items, status of any delays, contractual claims, summary of environmental and social issues with relevant photographs, details of all financial projections and details of impediments to the works and proposals for overcoming them. The CAR will report to WB every six months on the environmental mitigation process. The IES will report on the progress of this BMP and the associated BAP quarterly, and the CAR will report to WB on all environmental requirements and material changes associated with the BMP, BAP and ESMP semi-annually. During construction, there will be weekly meetings between the NES, CSC and CAR, and the CAR will complete regular audits of the NES's progress, reporting and document management (e.g., toolbox talk records).

9.2. BMP UPDATES

This BMP will be updated, if necessary by the IES, to reflect any significant changes. For example, if any design changes require the loss of additional vegetation, particularly natural habitat. Any material changes to the BMP will be included in the change of process by CAR and if relevant should be completed with the approval of the Biodiversity Specialists highlighted in Table 11.

9.3. ESTIMATED BMP BUDGET

A tentative budget for implementing the Biodiversity Management Plan over five years is reflected in Table 13. The stakeholder engagement activities featured above cover a variety of social issues, which may be part of other project documents, so it is possible that they have also been budgeted in other plans. However, the table below summarizes all the stakeholder engagement activities in one place for better coordination and monitoring. PIU will review this plan every six months to determine if any changes to stakeholder classification or engagement are required. If so, the plan will be updated, and a new revision distributed. The budget will be revised accordingly.

Table 13: Estimated BMP budget

Description	Unit	Q-ty	Coefficient to the BEC*	Rate	Total (in USD)
Permission cost to transplant 1 valuable tree**	Piece	3 077		100,00	307 700,00
Transplant costs for 1 tree	Piece	3 077		100,00	307 700,00
Tree care costs over 3 years	Piece	3 077		90,00	276 930,00
Permission cost to cut 1 low-valuable tree					
0-4,1 cm	Piece	155	1	34,26	5 310,51
8,1-12 cm	Piece	15	2	68,52	1 027,84
12,1-16 cm	Piece	37	3	102,78	3 803,01
16,1-20 cm	Piece	4	5	171,31	685,23
20,1-24 cm	Piece	1	7,5	256,96	256,96
24,1-28 cm	Piece	9	9	308,35	2 775,17
28,1-32 cm	Piece	2	11,5	394,01	788,01
32,1-36 cm	Piece	3	16,5	565,31	1 695,94
Cost on planting new trees to compensate removed trees	Piece	17660		60,00	1 059 600,00
Protection of trees during the construction activities	Lump sum				50 000,00
Other BMP measures	Lump sum				50 000,00
Subtotal					**1 760 572,65**
Contingency (10%)					**176 057,27**
Total					**1 936 629,92**

*The coefficient to the Base Estimated Cost is given in accordance with APPENDIX 4 of the Resolution of the Cabinet of Ministers of the Republic of Uzbekistan No. 464 dated August 22, 2022.

**Depends on the diameter of the tree. The cost is given as average.

On December 24, 2025, the scientific conclusion from the Tashkent Botanical Garden named after Academician Rusanov at the Institute of Botany of the Academy of Sciences of Uzbekistan was received about the value of mulberry trees. According to this conclusion, only 4 mulberry trees among the trees examined are classified as natural valuable species falling under the scope of Resolution No. 93:

- 2 trees - in Termez district;
- 1 tree - in Dzharkurgan district;
- 1 tree - in Kumkurgan district.

The remaining mulberry trees are varietal and are not subject to the Resolution No. 93. Therefore, the possible number of valuable mulberry trees will be 837, not 3,077.

If MEEPCC confirms this scientific conclusion, in this case the BMP budget will be updated and revised accordingly. The estimated budget in this case is given in the Table below:

Table 14: Estimated BMP budget (taking into account the scientific conclusion about the value of mulberry trees)

Description	Unit	Q-ty	Coefficient to the BEC*	Rate	Total (in USD)
Permission cost to transplant 1 valuable tree**	Piece	837		100,00	83 700,00
Transplant costs for 1 tree	Piece	837		100,00	83 700,00
Tree care costs over 3 years	Piece	837		90,00	75 330,00
Permission cost to cut 1 low-valuable tree					
0-4,1 cm	Piece	155	1	34,26	5 310,51
4,1-8 cm	Piece	269	1,5	51,39	13 824,45
4,1-12 cm	Piece	14	1,5	51,39	719,49
8,1-12 cm	Piece	574	2	68,52	39 332,00
12,1-16 cm	Piece	320	3	102,78	32 890,87
16,1-20 cm	Piece	150	5	171,31	25 696,00
20,1-24 cm	Piece	111	7,5	256,96	28 522,56
24,1-28 cm	Piece	470	9	308,35	144 925,42
28,1-32 cm	Piece	246	11,5	394,01	96 925,30
32,1-36 cm	Piece	89	16,5	565,31	50 312,76
36,1-40 cm	Piece	65	22	753,75	48 993,70
44,1-48 cm	Piece	1	31	1 062,10	1 062,10
More than 64 cm	Piece	2	54	1 850,11	3 700,22
Cost on planting new trees to compensate removed trees	Piece	28 860		60,00	1 731 600,00
Protection of trees during the construction activities	Lump sum				50 000,00
Other BMP measures	Lump sum				50 000,00
Subtotal					**2 482 845,36**
Contingency (10%)					**248 284,54**
Total					**2 731 129,90**

*The coefficient to the Base Estimated Cost is given in accordance with APPENDIX 4 of the Resolution of the Cabinet of Ministers of the Republic of Uzbekistan No. 464 dated August 22, 2022.

**Depends on the diameter of the tree. The cost is given as average.

ANNEX 1: TREE INVENTORY CONDUCTED BY THE SURKHANDARYA REGIONAL MEEPCC

t/r	Name	Number of valuable trees			Number of low-value trees			Total
		Termez	Kumkurgan	Dzharkurgan	Termez	Kumkurgan	Dzharkurgan	
1	Acacia			21				**21**
2	Almonds	13	4	2				**19**
3	Virginia juniper		15	21				**36**
4	Jiida	2		73				**75**
5	Poplar	29	3	2				**34**
6	Tol	11	4	29				**44**
7	Turanga poplar			325				**325**
8	Mulberry tree	487	26	1 731				**2 244**
9	Thuja	14	50	110				**174**
10	Pine	17	14	65				**96**
11	Maple		6					**6**
12	Platanus		1					**1**
13	Elm	2						**2**
14	Walnut (Júglans régia)				4	4	11	**19**
15	Apple-tree					1	1	**2**
16	Apricot				9	1	11	**21**
17	Quince				4	9		**13**
18	Peach					4		**4**
19	Ailanthus				15			**15**
20	Tamarix						152	**152**
TOTAL		**575**	**123**	**2 379**	**32**	**19**	**175**	**3 303**