




Kemin-Balykchy Biodiversity Management Plan	 Public Joint-Stock «National Electric Grid of Kyrgyzstan» (NEGK) Principal office: Zhibek Zholu Avenue, 326, Bishkek Kyrgyz Republic, 720070 www.nesk.kg
[insert document reference number]	

Biodiversity Management Plan Kemin - Balykchy OHTL

Project Company		Project Management Unit	TBC
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ABBREVIATIONS AND ACRONYMS

BFD	Bird Flight Diverter
BMP	Biodiversity Management Plan
CAP	Corrective Action Plan
CH	Critical Habitat
CESMP	Construction Environmental and Social Management Plan
CHS	Community Health & Safety
CLO	Community Liaison Officer
CR	Critically Endangered
E&S	Environmental and Social
EBRD	European Bank for Reconstruction and Development
EPC	Engineering, Procurement and Construction
ESIA	Environmental and Social Impact Assessment
ESMP	Environmental and Social Management Plan
ESMS	Environment and Social Management System
GIP	Good Industry Practice
GIIP	Good International Industry Practice
HSMS	Health and Safety Management System
HSSE	Health, Safety, Social, and Environmental
IBAT	Integrated Biodiversity Assessment Tool
IFC	International Finance Corporation
IUCN	International Union for Conservation of Nature
JHA	Job Hazard Analysis
KPI	Key Performance Indicator
LC	Least Concern
NEGK	National Electric Grid of Kyrgyzstan
NH	Natural Habitat
NNL	No Net Loss
NT	Near Threatened
OESMP	Operation Environmental and Social Management Plan
OHTL	Overhead Transmission Line
OHS	Occupational Health & Safety
PBF	Priority Biodiversity Feature
PBR	Potential Biological Removal
PIU	Project Implementation Unit
PR6	Performance Requirement 6 (EBRD)
PS6	Performance Standard 6 (IFC)
ROW	Right of Way
SS	Substation
VU	Vulnerable
WBG	World Bank Group

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1 INTRODUCTION

1.1 Overview

Project construction and operation activities have the potential to generate a wide range of environmental impacts on ecologically valuable receptors. This management plan presents information specifically related to biodiversity management and monitoring, referred to as the Biodiversity Management Plan (BMP). The requirements set out in this plan are collated from the Project Environmental and Social Impact Assessment (ESIA)¹ prepared on behalf of Public Joint-Stock Company National Electric Grid of Kyrgyz Republic (“NEGK”) for the construction of an approximate 53 km 500 kV overhead transmission line (OHTL) in Kyrgyz Republic between the existing Kemin substation (SS) in Chui region (Figure 1 and Figure 2) and a new substation named “Balykchy, SS”, 6.4 kilometres outside Balykchy city in the Issyk-Kul region (see Figure 2).

The Project's primary purpose is to facilitate the evacuation of electricity generated by renewable energy power plants under development to the national power grid. Implementing the Project will also significantly improve the transmission networks’ reliability, efficiency, stability, quality and security of the electricity supply.

EBRD has appointed Juru Ltd “Juru”, supported by local social consulting firm Evidence CA, to conduct the Environmental and Social Impact Assessment (ESIA) following EBRD's 2019 Environmental and Social Policy. This document provides a framework Environmental and Social Management Plan (ESMP), which outlines mitigation measures, minimum standards, monitoring requirements, and key performance indicators.

1.2 Objectives


The objectives of this BMP are to:

- Describe the proposed activities that may give rise to impacts;
- Conform to all applicable laws and permits;
- Avoid undue harm to biodiversity;
- Outline actions and measures necessary for the effective management and monitoring of biodiversity;
- Specify monitoring and evaluation criteria, including KPIs to demonstrate NNL where applicable; and
- Set out specific mitigation measures for particular habitats and species.

1.3 Scope

This BMP covers the design, procurement, construction, operation of the OHTL right of way (ROW), works at the Kemin substation, work at the new Balykchy substation, access roads (existing and new), temporary

¹ Evolving, D. O. O. 2016. Environmental Impact Assessment Study – on construction of a wind farm in Bogoslovce, Municipality of Sveti Nikole and Municipality of Stip. Produced for THOR IMPEX D. O. O. E. L., Skopje

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laydown areas, and in relation to the opening up of any new borrow pits. A separate decommissioning plan will be prepared at the relevant time as necessary.

The OHTL ROW is a 78m servitude (30m either side of the outermost conductor).

It aligns with the environmental and social requirements in Chapter 2, including national regulations and the standards of EBRD as set out in ESP 2019 and relevant supporting Performance Requirements (PRs).



The BMP applies to works NEKG (the operator), the Engineering Procurement Construction (EPC) Contractor, and all third-party subcontractors.

1.4 Links to other plans


Juru Ltd., on behalf of NEKG has also developed a construction Environmental and Social Management Plan (CESMP) and Operation Environmental and Social Management Plan (OESMP) which provide the framework for implementing the requirements of this BMP. The CESMP and OESMP are dynamic and will be reviewed and updated periodically to continually improve Project impact management. Other interfacing plans will be developed by the EPC Contractor when appointed. All EPC Contractor plans are required to be developed with due regard to this BMP.

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Policy / Plan and Procedure	NEGK	NEGK PIU	EPC Contractor	Notes
Environmental and Social Action Plan (Lender)	X – Oversight and Implementation	X - Implemented by NEGK PIU during the pre-construction and construction phase.	X - Support NEGK PIU for actions allocated to the Contractor	Part of loan agreement with Lender
Construction - ESMP	X – Develop	X - Implement and oversight responsibilities during pre-construction/construction as defined in the ESMP	X - Implementation actions allocated to the Contractor	Prepared by ESIA Consultant on behalf of the Project.
Operation – ESMP	X – Develop	X - Implement and oversight responsibilities during pre-construction/construction as defined in the ESMP	X – Implement actions allocated to the Contractor	Prepared by ESIA Consultant on behalf of the Project.
Stakeholder Engagement Plan	X - Develop	X – Implement during the pre-construction and construction phase.	X - Support NEGK to implement engagement activities during construction with the NEGK PIU	Prepared as part of the ESIA process.
LARF	X - Develop	X - Implement by NEGK PIU	X - Ensure all work does not encroach outside land identified in the LARF.	Already developed as part of the ESIA process.
Livelihood Restoration Plan (LRP)	X - Oversight	X - Develop LRP and implement pre-construction actions	X - Adhere to LRP for any land requirements that were not identified during the initial draft of the LRP and closed during pre-construction.	Aligned with the LARF
HR Policy / Labour management plan (including local employment protocol)	X - Oversight	X for NEGK employees	X – for Contractor and subcontractor employees	Aligned with the CESMP / OESMP.
E&S Policy		X – Approve and oversee implementation by Contractor	X - Develop and implement	Requires lender and NEGK

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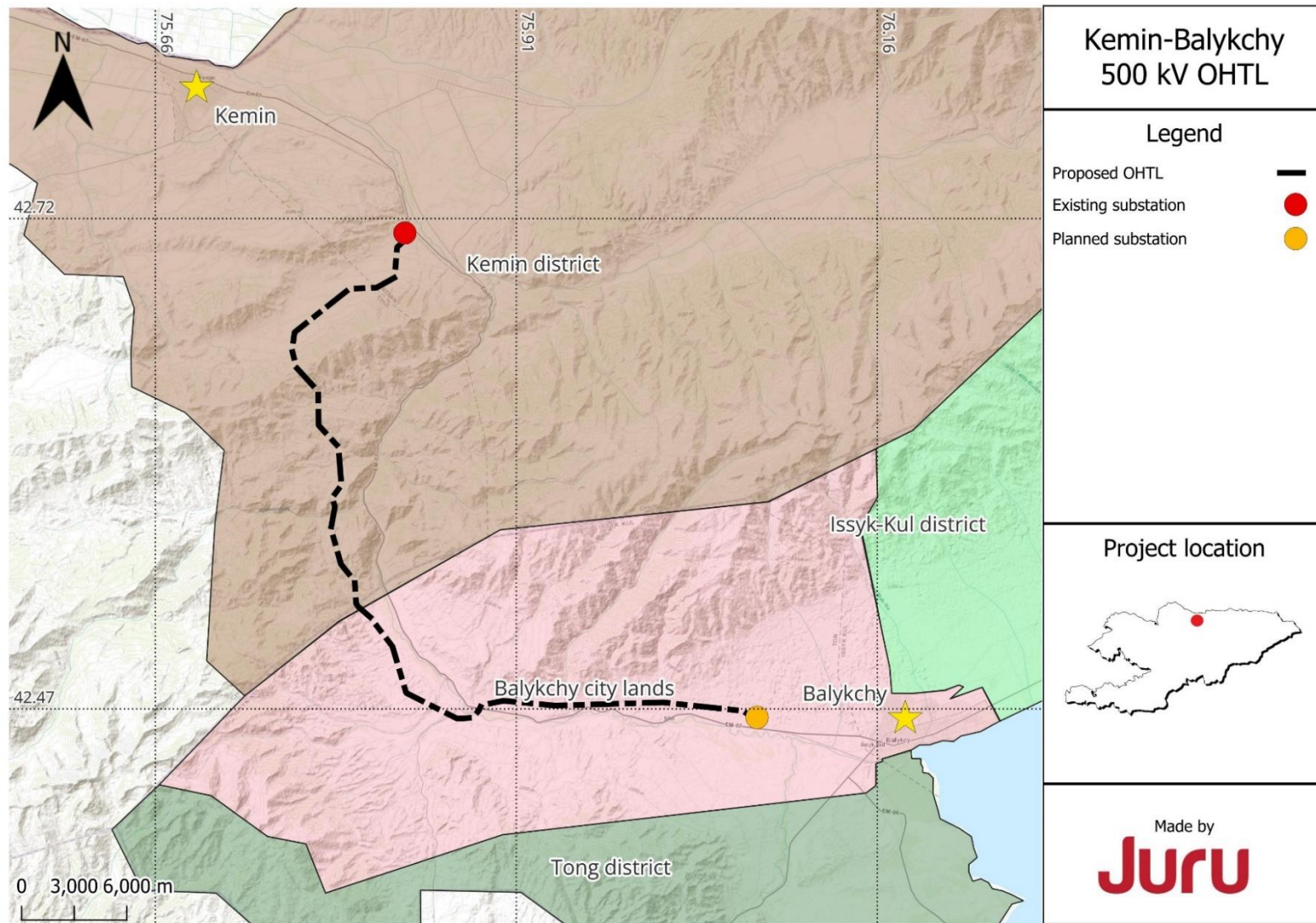
Policy / Plan and Procedure	NEGK	NEGK PIU	EPC Contractor	Notes
				approval before work begins.
H&S Plan including training plan, medical services plan		X – Approve and oversee implementation by Contractor	X - Develop and implement	Requires lender and NEGK approval before work begins.
Emergency Response Plan including Pollution (spill) Incident Control Plan		X – Approve and oversee implementation by Contractor	X - Develop and implement	Requires lender and NEGK approval before work begins.
Vegetation Clearance and Rehabilitation Plan (temporarily cleared areas)		X – Approve and oversee implementation by Contractor	X - Develop and implement	Requires lender and NEGK approval before work begins.
Social Management Plan including worker accommodation plan		X – Approve and oversee implementation by Contractor	X - Develop and implement	Requires lender and NEGK approval before work begins.
Biodiversity Management Plan	X	X - Implementation of NEGK obligations X –oversee Contractor implementation	Implementation of obligations assigned to the Contractor	Requires lender and NEGK approval before work begins.
Environmental Plan (air, noise, waste dust, water use, water run off)		X – Approve and oversee implementation by Contractor	X - Development and implementation	Requires lender and NEGK approval before work begins.
Cultural Heritage Management Plan including chance finds procedure		X – Approve and oversee implementation by Contractor	X - Development and implementation	Requires lender and NEGK approval before work begins.

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Policy / Plan and Procedure	NEGK	NEGK PIU	EPC Contractor	Notes
Communication plan (aligned with NEGK SEP)		See SEP above	X - Development and implementation	Requires lender and NEGK approval before work begins.
Security Management Plan		X – Approve and oversee implementation by Contractor	X - Development and implementation	Requires lender and NEGK approval before work begins.

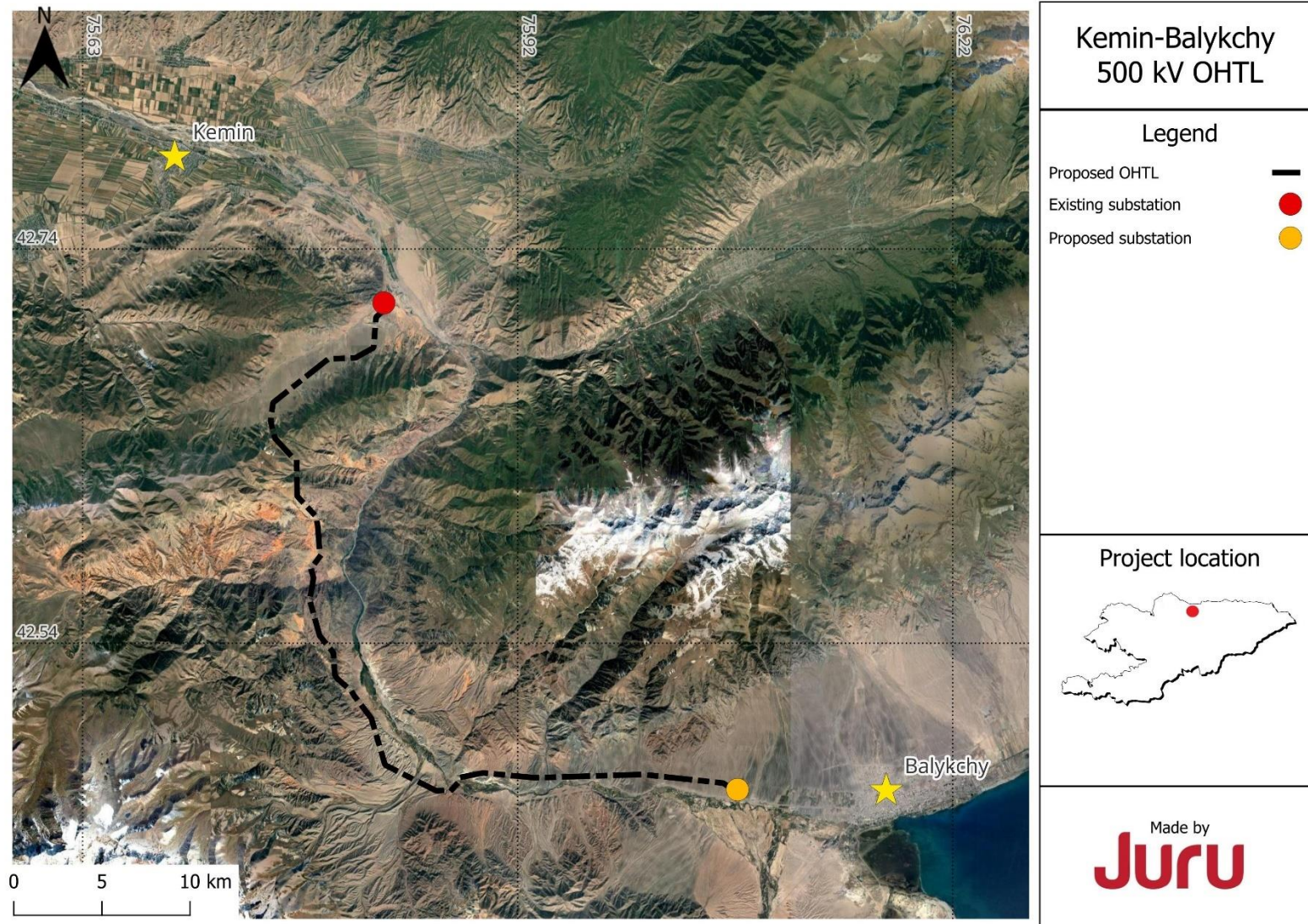
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Figure 1: Project overview



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Figure 2: Proposed OHTL Routing



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2 PROJECT OVERVIEW

2.1 Overhead line

The primary components of the K-B OHTL and substation Project are:

- 52.9 km of 500kV OHTL between the settlements of Cholok (Chui region, 13 km from Kemin city) and a new substation (Balykchy) near Kok-Moynok-1 settlement, (Issyk-Kul region, 6 km away from Balykchy city)
- Related activities in support of the OHTL works will include:
- End-user works at the Kemin SS - A new substation bay will be installed within the substation footprint.
- New 14.3 ha standalone substation - Balykchy SS 6 km west of Balykchy (Figure 3 and Figure 4)
- 78 m servitude under the OHTL (including the area for tower footprint, and the health protection set back of 30 m on either side of the outermost conductor).
- Upgrades to existing access routes (gravel) or new access routes (gravel) suitable to provide access to the OHTL ROW and new substation.


A summary of the key characteristics of the OHTL is provided in Table 1

Table 1: Summary of OHTL characteristics

Feature	Description
Circuit type	Single
Number of phases	3
Approximate length of OHTL	52.9 km
Elevations along the route, m ASL (meters above sea level)	1,286 to 2,407
Total length of new access road	Estimated between 50km to 70km (worst case estimate)
Tower Type	PB5, PB4, R2, U1, U2k
Tower height	24.3 to 38 m
Typical Span / Maximum span	250 m to 350 m / 1000m
Optical Ground Wire (OPGW)	Yes

A total of 5 types of towers are planned to be used, made of galvanized steel: 2 variations of H-guyed towers, 1 type of suspension towers and 2 angle or deviation towers. The height parameters for the main tower types are presented in Table 2 below:

Table 2: Tower height parameters

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Tower type	Tower height (m)	Height to the wire (m)
PB4	32.2	27.2
R2+5	38.0	32.0
U2k	24.3	21.8

Tower footprint and foundation requirements are summarised in Table 3.

Table 3: Foundation characteristics (source: Juru and NEGK)

Tower Requirement	R2+5 500 kV (self-supporting)	PB 4 500kV (guyed)	U2k 500 kV (angle)
Number of foundations	Four foundation columns at ground level	Two foundation columns at ground level	Four foundation columns at ground level
Average footprint	9.048m x 6.272m (56.75 m ²) (the footprint is defined as the outer of the foundation columns at ground level).	18.4m x 19.2m (353.28 m ²) (total) (the footprint is defined as the outer border of the guy wires).	7.5m x 5m (37.5 m ²) (the footprint is defined as the outer of the foundation columns at ground level).
Foundation type	Actual size and type will depend on the type of tower and the sub-soil conditions. The main types are “piled”, “pad and chimney”, and “anchors”. Angle towers will require more extensive foundations.		
Notes	Area inside the footprint can return to natural habitat but not easily used for grazing.	The area inside the footprint can be used, although may restrict the movement of machinery – not preferred in agricultural areas due to guy wires.	Area inside the footprint can return to natural habitat but not easily used for grazing.

2.2 New Balykchy substation

The proposed Balykchy substation (SS) as shown in Figure 3 is located 6 km west of Balykchy city. Key requirements for the development works include:

- Operational area of approximately 492m x 290m
- New access from EM11 highway of approximately 1 km
- Land acquisition
- Site preparation and levelling
- Substation construction works (including transformers and switchgear)
- Delivery of abnormal loads such as transformers
- Connection for the new 500kV OHTL.


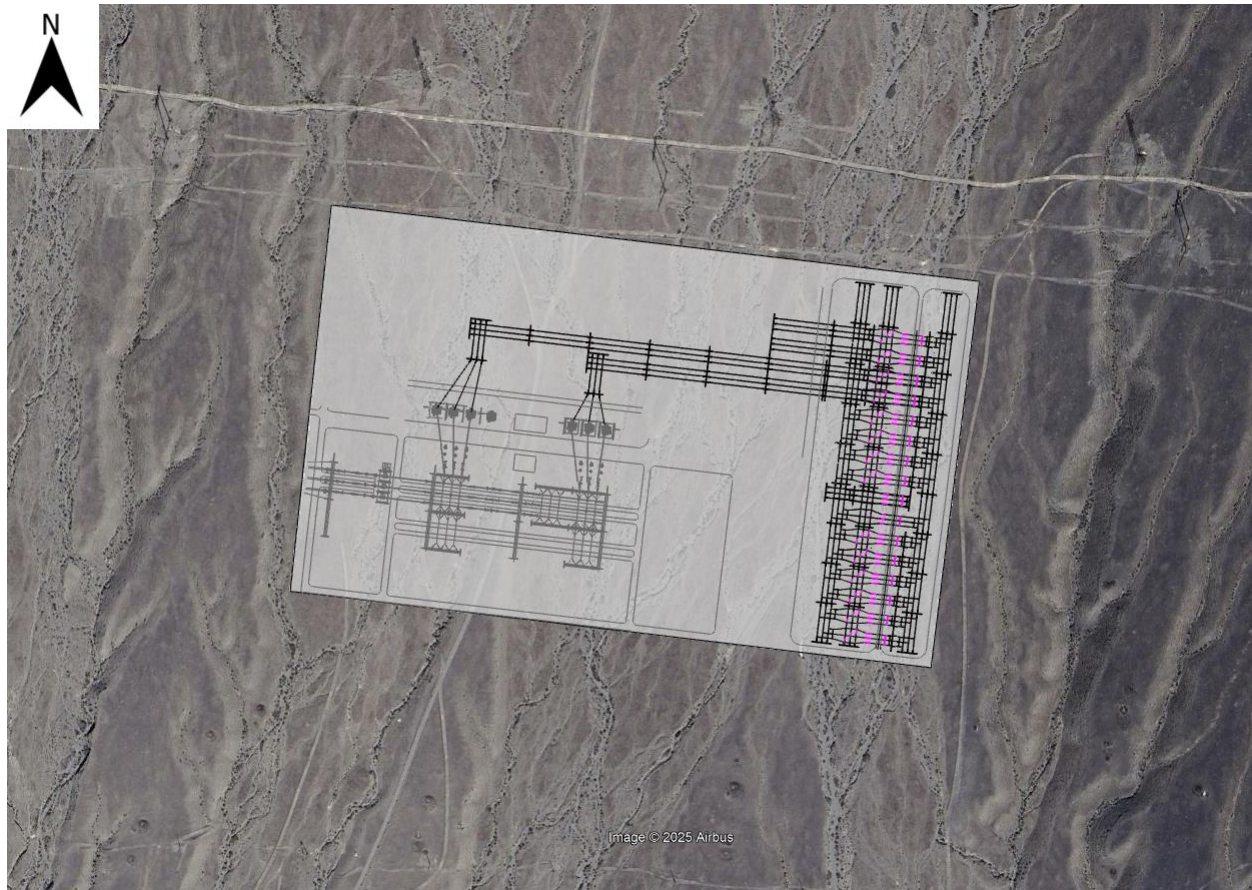
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Figure 3: Proposed Balykchy SS layout



The coordinates of the Project are provided in Table 4 and Table 5.

Table 4: Kemin-Balykchy OHTL preliminary coordinates


Northing (Y)	Easting (X)
42.71250	75.83514
42.71140	75.83646
42.70550	75.82740
42.68998	75.82565
42.68484	75.81316
42.68431	75.79448
42.66211	75.75637
42.65293	75.75468
42.64413	75.75766
42.63203	75.77274
42.61477	75.77300
42.60454	75.78581

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Northing (Y)	Easting (X)
42.59970	75.78719
42.58423	75.78882
42.57781	75.78249
42.57321	75.78434
42.56209	75.78159
42.54392	75.78848
42.53513	75.79805
42.52391	75.79896
42.52212	75.80051
42.51575	75.81047
42.51312	75.81253
42.50188	75.82416
42.47813	75.83365
42.46494	75.86909
42.46543	75.87950
42.46901	75.88393
42.47182	75.88562
42.47410	75.90114
42.47164	75.93699
42.47329	76.01145
42.46893	76.06681
42.46694	76.07083
42.46686	76.07187

Table 5: Balykchy substation preliminary coordinates

Northing (Y)	Easting (X)
42.46616	76.07146
42.46567	76.07741
42.46827	76.07782
42.46875	76.07187

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3 REGULATORY AND INSTITUTIONAL FRAMEWORK

3.1 National requirements


National requirements are set out in:

- Constitution of Kyrgyzstan
- The Law of the Kyrgyz Republic On “Nature Protection”, 1999, as Amended in 2024
- The Law of the Kyrgyz Republic On “Environmental Control”, 2009 as Amended in 2019
- The Law of the Kyrgyz Republic On “Environmental Protection” dated June 16, 1999, No. 53 (as amended and supplemented on June 13, 2024, No. 95)
- The Law of the Kyrgyz Republic No. 151 “General Technical Regulation on Ensuring Environmental Safety in the Kyrgyz Republic”, dated May 8, 2009 (as amended of July 8, 2019)
- The Law of the Kyrgyz Republic dated June 20, 2001, No. 53 “On the Protection and Use of Plant Resources” (as amended and supplemented as of March 23, 2020)
- The Law of the Kyrgyz Republic dated June 17, 1999, No. 59 “On Wildlife” (as amended and supplemented as of March 23, 2020)
- The Forest Code of the Kyrgyz Republic dated July 8, 1999, No. 66 (as amended and supplemented as of February 7, 2024)
- The Law of the Kyrgyz Republic dated January 11, 2001, No. 4 “On the Management of Agricultural Lands” (as amended and supplemented as of August 4, 2020)
- The Law of the Kyrgyz Republic, dated June 20, 2001, No. 53, "On the Protection and Use of Plant Resources"
- The Law of the Kyrgyz Republic dated June 17, 1999, No. 59, "On Wildlife" (as amended and supplemented as of March 23, 2020).

Most laws are framework in nature, while specific requirements are outlined in government resolutions or established through interaction with the relevant regulators. The main provisions from the laws include the following:

The Law of the Kyrgyz Republic, dated June 20, 2001, No. 53, "On the Protection and Use of Plant Resources" (as amended and supplemented as of March 23, 2020) is the key legislation related to biodiversity protection. The law obliges individuals and legal entities to:

- Comply with the requirements for the protection and use of plant resources established by legislation and other regulatory legal acts.
- Prevent the deterioration of habitats for plant resources and adhere to environmentally friendly practices while collecting and harvesting wild plant materials.
- Avoid disrupting the integrity of natural plant communities, contribute to preserving their species diversity, and enhance the productivity of herbaceous and forest vegetation, seeds, fruits, and other products.

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- Provide comprehensive assistance to state authorities responsible for maintaining the state cadastre, monitoring plant resources, and controlling the protection and use of plant resources.
- Prevent the degradation of other natural resources;
- Respect the rights of lessees, other temporary users, and neighbouring users of plant resources.
- Fulfil other requirements for the protection and rational use of plant resources as stipulated by the legislation of the Kyrgyz Republic.

The Law of the Kyrgyz Republic dated June 17, 1999, No. 59, "On Wildlife" (as amended and supplemented as of March 23, 2020).

When conducting state EE for projects involving the construction and reconstruction (expansion, technical re-equipment) of enterprises, facilities, and other structures, as well as the implementation of new equipment, technologies, materials, and substances, the impact on the condition of wildlife, migration routes, and reproduction conditions of animals must be considered.

The locations of enterprises, facilities, and other structures, as well as the introduction of new equipment, technologies, materials, and substances affecting the condition of wildlife, must be coordinated with the republican state environmental protection authority of the Kyrgyz Republic.


Forest Code of the Kyrgyz Republic dated July 8, 1999, No. 66 (as amended and supplemented as of February 7, 2024).

According to Article 34, when land plots occupied by forests are withdrawn for state or public needs, the issue of preserving or cutting down forest stands and the procedure for using the resulting timber is decided simultaneously, based on the proposals of the republican state forestry management authority (in fact, Forest Service).

According to a subordinate act (Annex to the Resolution of the Cabinet of Ministers of the Kyrgyz Republic dated January 29, 2025, No. 43), for the purpose of withdrawing lands from the State Forest Fund and forests located on lands of other categories of the land fund for state and public needs, forest inventory ('lesoustroystvo') is conducted. As a result, forest inventory reports are prepared, containing quantitative and qualitative characteristics of forest resources, calculations of damages and losses to forestry production, lists of proposed measures, and cartographic materials at a scale of 1:25,000.

The forest inventory project for the concerned site is to be approved by the territorial body of the relevant subordinate unit of the authorized body in the field of land resources and land relations, and it is confirmed by the republican state forestry management authority. The cost of the forest inventory is borne by the forest user.

According to Article 12 of the **Law of the Kyrgyz Republic, "General Technical Regulation on Ensuring Environmental Safety in the Kyrgyz Republic"**, for preserving wildlife and plant resources during the

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design, construction, and operation of high-voltage power transmission lines. Measures noted as relevant to the project are as follows:

1. Clearing of tree and shrub vegetation corridors for construction is prohibited during animal breeding periods.
2. Measures must be implemented to protect wildlife, including restricting work during periods of mass migration, in breeding and moulting areas, during the rearing of young, spawning, foraging, and migration of fish fry.
3. Measures must be taken to prevent and reduce the risk of bird fatalities due to contact with live wires at points of attachment to support structures. Transmission lines, poles, and insulators must be equipped with special bird protection devices, including those that prevent birds from nesting in areas where they could encounter live wires. The use of uninsulated metal structures as bird protection devices is prohibited.

Additionally, this requirement is established in the guidelines for forecasting and assessing changes in the state of the environment during the construction, operation, and decommissioning of planned activities (**Annex 9 to the Regulation on the Procedure for Conducting Environmental Impact Assessment in the Kyrgyz Republic**):

1. Protection of plant life objects:


- Compensatory planting, compensatory payments for the value of removed or transplanted plant life objects, landscaping, and site improvement;
- Transplantation of plant life objects (including the development of plans for rare plant species) ²;
- Other measures.

2. Protection of wildlife objects:

- Construction of facilities to ensure the unobstructed passage of wild animals across transport routes, dams, and other obstacles along their migration paths; construction of wildlife breeding centers and other facilities for breeding wild animals to preserve migration routes and areas of concentration;
- Other measures.

The protection of vegetation in the riverbank area is defined by the Regulation on Water Protection Zones and Strips of Water Bodies in the Kyrgyz Republic (**according to the Resolution of the Government of the**

² Note: by practice, the plant transplantation or relocation plans must be discussed and agreed upon by the Academy of Sciences of the Kyrgyz Republic

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Kyrgyz Republic dated July 7, 1995, No. 271). By paragraph 10, the cutting of tree and shrub vegetation within the water protection zones of rivers is prohibited, except for forest maintenance and sanitary logging. The water protected zone of Chu river is 150m.

3.2 International standards


The following international guidelines and standards are relevant:

- EBRD Performance Requirement 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources;
- IFC Guidance Note 6 (GN6)³;
- EBRD Guidance Note 64
- EBRD Technical Memorandum⁵
- WBG General EHS Guidelines (April 2007) - cover the four areas of the environment; occupational health & safety (OHS); community health & safety (CHS); construction and decommissioning.
- WBG EHS Guidelines Electric Power Transmission and Distribution (April 2007).
- Convention on Biological Diversity (Official Gazette of RM no. 54/97);
- Convention for the Protection of the European Wildlife and Natural Habitats (Bern, 1972) (Official Gazette of RM no. 49/97);
- Convention on the Protection of Migratory Species of Wild Animals (Bonn, 1979) (Official Gazette of RM no. 38/99); and
- CORINE - Coordination of Information on the Environment.

³ IFC 2019, Guidance Note 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources, World Bank Group, Washington, DC, USA. Note that this guidance note is relevant in that EBRD PR6 references IFC PS6 for some aspects

⁴ European Bank of Reconstruction and Development (EBRD), 2022. EBRD Performance Requirement 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources: Guidance Note. September, 2022. EBRD

⁵ European Bank of Reconstruction and Development (EBRD), 2023. Memorandum: Determining biodiversity management requirements related to airspace around wind energy facilities. June 26, 2023.

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4 POTENTIAL IMPACTS

The ESIA (July 2025) has identified the following potential impacts on biodiversity associated with the construction and operation of the Project:


- Introduction of invasive species;
- Habitat loss and degradation;
- Loss of sensitive plant species;
- Disturbance to, and displacement of animals;
- Injury/death of terrestrial (non-flying) animals;
- Bird collisions with powerlines;
- Bird electrocutions on powerline pylons/towers;

4.1 Sensitive receptors

The ESIA identifies the following Priority Biodiversity features (PBF's) as sensitive biodiversity receptors potentially or actually⁶ occurring in the area of influence:

- Plants:
 - *Malus sieversii**
 - *Amygdalus bucharica*
 - *Tulipa ostrowskiana**
 - *Tulipa zenaidae**
 - *Tulipa greigii*
 - *Chesneya villosa*
- Fish:
 - *Rhynchocypris dementjevi**
 - *Schizothorax pseudoaksaiensis**
 - *Phoxinus issykkulensis*
 - *Triplophysa labiate*
 - *Leuciscus schmidtii*
- Amphibians:
 - Asian Frog, *Rana asiatica*
- Birds:
 - White-headed Duck, *Oxyura leucocephala*
 - Demoiselle Crane, *Anthropoides virgo*
 - Common Crane, *Grus grus*

⁶ Receptors that were actually documented within the Project area in the course of the baseline surveys are indicated with an asterisk

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- Sociable Lapwing, *Vanellus gregarius*
- Arctic Loon, *Gavia arctica*
- Great White Pelican, *Pelecanus onocrotalus*
- Dalmatian Pelican, *Pelecanus crispus*
- Bearded Vulture, *Gypaetus barbatus**
- Egyptian Vulture, *Neophron percnopterus*
- Cinereous Vulture, *Aegypius monachus**
- Himalayan Griffon, *Gyps himalayensis**
- Eurasian Griffon, *Gyps fulvus**
- Greater Spotted Eagle, *Clanga clanga*
- Steppe Eagle, *Aquila nipalensis**
- Imperial Eagle, *Aquila heliaca**
- Golden Eagle, *Aquila chrysaetos**
- Saker Falcon, *Falco cherrug**
- Other migratory waterbirds (multiple species)
- Mammals:
 - Marbled Polecat, *Vormela peregusna*
 - Snow Leopard, *Panthera uncia*

4.2 General land cover

4.2.1 Habitats

Habitats within the Right-of-Way (ROW), defined as a 78m – wide corridor extending 30m out from either side of the outermost OHTL conductor, were mapped using a combination of field surveys and analysis of remote sensing data, and then classified using the most recent IUCN habitat classification scheme. This ROW spans 338 hectares and represents the area most directly affected by vegetation clearance, edge disturbance, and maintenance activities. The ROW traverses predominantly natural terrain, with Rocky Outcrop Shrubland (21.3%), Stony Foothill Arid Steppe (21.0%), Montane Steppe Grasslands (17.9%), and Rangeland (Mountain) (16.6%) being the most extensive habitat types (Table 6). These habitat types are characteristic of the regional foothill and montane zones. Smaller proportions of Montane Xerophytic Shrubland, Alpine Shrub, and Scree Slopes reflect localized topographic and climatic variation. Anthropogenically modified areas such as Urban Area (0.2%) and Water Body (0.1%), occupy very limited portions of the ROW. Overall, the corridor remains largely natural in composition.


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Table 6: Habitat Types within the 78m wide Right of Way along the OHTL Corridor

Habitat name	Area in hectares
Alpine shrub	20.83533
Bare Canyon Cliff	0.227855
Montane Steppe Grasslands	60.46201
Montane Xerophytic Shrubland	16.454496
Rangeland (Mountain)	56.144414
Red Sandstone Desert Grassland	3.763119
Riparian Forest	3.733367
Riverside forest	2.853707
Rocky Outcrop Shrubland	72.135337
Scree Slopes	8.585852
Stony foothill arid steppe	71.00458
Urban area	0.529975
Water body	0.477093

4.2.2 *Invasive plant species*

The botanical baseline surveys identified 3 invasive species, out of over 300 total plant species documented within the project area:


1. *Impatiens parviflora* (found in 2 out of 72 botanical survey plots sampled in the baseline study).
2. *Nassella trichotoma* (found in 1 out of 72 botanical survey plots sampled in the baseline study).
3. *Salvia aethiopsis* (found in 1 out of 72 botanical survey plots sampled in the baseline study)

5 ROLES AND RESPONSIBILITIES

5.1 NEGK general responsibilities (pre-construction and construction)

NEGK is the developer of the Project, and is, therefore, ultimately responsible for E&S compliance and submission of reports to Lenders, all of which will be managed by an Environmental and Social Safeguard Specialist, who is appointed under the Project Implementation Unit (PIU) (see below).

NEGK will be responsible for ensuring that design-phase biodiversity mitigations are incorporated into the selection of specific OHTL components, as well as the terms and conditions of the EPC contract. Prior to construction, NEGK will hire a third-party ecologist to conduct the required pre-construction surveys for sensitive plants and PBF bird nests. During construction NEGK will define a project implementation unit (PIU, see below) to oversee the details of the construction works being implemented by the EPC. During operation,

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all ongoing obligations will be managed directly by NEGK, who will be supported by a third-party ecologist subcontractor.

5.2 NEGK Project Implementation Unit (construction only)


NEGK E&S Safeguard Specialist will be accountable for the following:

- Overall implementation of this BMP During the final design and procurement (pre-construction) phase, construction phase, and operation phase;
- Oversee biodiversity implementation and monitoring as defined in this BMP for the construction phase, to be implemented by the EPC contractor.
- Incorporation of biodiversity requirements into the terms and conditions of the EPC RFP and contract
- Procuring and managing third party ecologist(s) who is/are capacitated to provide biodiversity monitoring support as needed both during pre-construction and operations phases, per the BMP
- Communication of the BMP to the EPC Contractor in advance of works during the contracting stage;
- Performance of regular inspections during construction, auditing against the BMP
- Review of Contractor reporting.
- Assign a member of the PIU with specific responsibility for overseeing biodiversity implementation and monitoring as defined in this BMP for the construction phase; and
- Operational biodiversity management, including supervision of third-party ecological subcontractor(s) to implement operations-phase biodiversity monitoring, as well as any additional mitigation programs that may be required to achieve NNL of PBFs.

5.3 EPC Contractor general responsibilities (construction only)

The EPC Contractor (s) is responsible for the following:

- Develop a site Environment, Social and Health and Safety Management System (ESMS and HSMS) and all supporting construction procedures and method statements to implement the general biodiversity protection measures required during construction as set out in this BMP.
- Develop own BMP in accordance with the requirements of this Plan
- Ensure that all sub-contractors have site procedures or method statements to align with this sub-plan or are committed to undertaking maintenance work under the lead O&M Contractor (s) EMS / HSMS.
- Comply with national legislation and regulations for the management of Biodiversity
- Implement Good International Industry Practice (GIIP) for the prevention of pollution and the protection of the environment, health and safety of the workers, and protection of public health during construction;
- Identify site clearance needs and report to NEGK if required for the purpose of O&M work;
- Ensure consistent implementation of this Plan at the site;
- Implement land management in line with this plan and GIP;

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- Disseminate information on this Plan to employees and sub-contractors (e.g. through site induction);
- Ensure that persons responsible for implementing the Plan have the required competencies;
- Manage, monitor, and record the day-to-day requirements of this Plan.
- Implement training of workers and subcontractors, as required by this Plan.

5.4 EPC NEGK (Operation)

- Oversee implementation of operations-phase biodiversity management measures, as specified in this Plan, to be implemented by one or more third party contractor ecologist(s).

5.5 Third Party Ecology Contractor(s) (pre-construction, operations)

- Conduct pre-construction surveys for sensitive plants
- Conduct pre-construction surveys for active nests of PBF birds within 1 km of the OHTL
- Perform sensitive plant rescue/relocation, as needed
- Conduct minimum of one year of bird fatality monitoring beneath the OHTL at the beginning of the operations phase
- Immediately following construction, and until successful mitigation of impacts to sensitive plants to the NNL mitigation standard has been demonstrated, monitor the success of the sensitive plant rescue/relocation operations that were implemented during the construction stage (if applicable), and perform additional mitigation, as needed, to achieve NNL.

5.6 Workers

All site workers should receive an EHS orientation (induction), including applicable items of the BMP, prior to undertaking their work on the site. Workers should be made aware of the ecological receptors present in the Project Area and all measures contained within this document will be included in the site induction. All workers are to be informed of their responsibility to the environment including but not limited to:

- Protection of all ecological receptors. Staff to be informed of discipline procedures for failure to comply with this
- Adherence to site wide speed limits and informed that they will be enforced by site security staff.
- Adherence to prohibitions on poaching, or any harassment of wildlife
- Reporting any spills of fuel, lubricants or other potentially polluting materials.
- Good housekeeping and disposal of all waste in accordance with site-wide policies, which should include recycling as much waste material as possible.
- PBF species identification in accordance with the BMP (Asian Frog, *Rana asiatica*)

5.7 Summary of Key Obligations

A summary of key obligations for activities defined in the mitigation tables below is provided in Table 7. Further explanation is provided in the management and mitigation tables below.



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Table 7: Summary of key obligations for activities

Activity	NEGK HSSE Director	EPC Contractor (construction, overseen by NEGK PIU)	Contactor Biodiversity Specialist (overseen by NEGK HSSE Director)
Incorporate pre-construction design elements (BFD, Raptor-safe pylon design)	X		
Procure third party ecology contractor(s)	X		
Conduct pre-construction biodiversity surveys (PBF nesting birds, sensitive plants)			X
Perform sensitive plant rescue/relocation			X
Incorporate BMP requirements into EPC RfP and contract	X		
Implement construction-phase biodiversity mitigation measures		X	
Train workers in biodiversity protection policies and mitigation measures		X	
Perform day to day oversight and audits of construction phase BMP implementation	X		
Rehabilitate soils and vegetation in areas temporarily disturbed during construction		X	
Conduct operations-phase monitoring of bird fatalities below OHTL			X
Conduct operations-phase monitoring of the success of rare plant rescue/relocation efforts, and implement additional rare plant mitigation, if needed			X
Report on BMP implementation (all Project phases)	X		

5.8 Competence and training

The EPC Contractor must ensure that all persons performing duties under this BMP are competent based on the appropriate education, training and/or experience; and shall retain records on site to define training

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needs and substantiate competencies. Training needs will be defined as part of project planning and job hazard analysis (JHA).

The induction requirements for all employees are outlined in the project CESMP and must include reference to this BMP including the following specific requirements:

- Rules for protecting biodiversity;
- Prohibition of fires, poaching, hunting or removal of any species from site;
- Importance of remaining within designated work areas, site traffic routes;
- Rules for waste management and pollution prevention and control;
- What to do in the event of finding a bird or bat carcass (operation phase only);
- How to recognize Asian Frog, and avoid disturbing or otherwise impacting them, if discovered

The NEGK HSSE Director shall have the necessary qualifications to conduct inspection and monitoring during the construction and operation phase.

Training for EPC Contractor site managers(s) and subcontractors will cover:

- This plan;
- Regulatory requirements and applicable standards; and
- Inspection and monitoring obligations.


5.9 Community interface

The Stakeholder Engagement Plan sets out the general requirements for project interface with the local community and wider stakeholders.

NEGK Community Liaison Officer (CLO) will support the EPC Contractor to disseminate information concerning potential impacts (including biodiversity related impacts) in a manner agreed with local communities. The CLO will notify residents as to:

- Start of construction / operation phase;
- Emergency contact information;
- What to do in the event of finding a bird or bat carcass; and
- Grievance redress mechanism (e.g. for land or dust complaints).

The EPC Contractor will inform the CLO of relevant activities with ample time to enable the CLO to pass on the information to the local communities.

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6 MONITORING AND MITIGATION REQUIREMENTS

6.1 Prior to construction

Table 8 describes biodiversity management measures that should be implemented prior to construction




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Table 8: Biodiversity management measures to be implemented prior to Project construction


Impact	Receptors	Requirement/Objective	Action/Mitigation Measure(S)	Responsibility	Timing	Key Performance Indicators
Bird electrocution due to hazardous OHTL design	Eagles, vultures, owls, storks	Minimize bird electrocution risk	Select “raptor safe” pylon designs, incorporating, at minimum, the following elements: <ul style="list-style-type: none"> • electrified cables suspended below, rather than above support structures; • ≥2m of insulators at each attachment point of a powerline to a support structure; • ≥2m separation between electrified cables; • jumper cables suspended below 	NEGK (incorporation of specifications into EPC RfP and Contract) EPC (final selection of pylon designs, procurement of required materials)	During design/selection of final pylon structures (design and contracting by NEGK)	Final pylon designs conform to the specified minimum requirements for raptor safe design

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			insulators/support structures.			
Bird collision with OHTL due to limited visibility of overhead (static) cables	Cranes, pelicans, swans, ducks, geese, other large-bodied waterbirds, raptors and vultures	Minimize bird collision risk	<p>Select and procure Bird Flight Diverters (BFD) to be installed on overhead, or static lines of the OHTL following GIP, with BFD installed roughly once every 10 meters on each of the overhead (static) lines, within four specific segments, totaling 8.722 km in length, that have been identified as having elevated collision risk due to proximity to features that may concentrate eagle/vulture flight activity as listed below and in Figure 4 below:</p> <ul style="list-style-type: none"> Narrow sections (two) of gorges with potential nesting habitat and elevated flight traffic of eagles and vultures Chu River crossing, with potentially 	<p>NEGK (incorporation of specifications into EPC RfP and Contract)</p> <p>EPC (final selection and procurement of BFD)</p>	During EPC contracting	Sufficient BFD procured to cover the four specified, high-risk portions of the OHTL (totaling 8.722 km). 1 BFD every 10m on each of two overhead wires over 8722m = 1745 BFD required

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			<p>elevated flight traffic of waterbirds</p> <ul style="list-style-type: none"> Portion of line in proximity to NABU wildlife rehabilitation center, to avoid proximity to collision-prone rehabilitated birds near their release site 			
Loss of sensitive plants due to soil disturbance	<i>Malus sieversii</i> , <i>Amygdalus bucharica</i> , <i>Tulipa zenaidae</i> , <i>T. ostrowskiana</i> , <i>T. greigii</i> , <i>Chesneya villosa</i> ,	Identify sensitive plant individuals within the Project's soil disturbance footprint prior to construction so that they can be rescued/relocated	Conduct preconstruction sensitive plant survey in the areas where soil disturbance will occur during construction (pylon bases, new access roads, laydown areas) within the portion of OHTL that has been identified as having sensitive vegetation (see Figure 5) , to look for all species described as PBF, as well as any other rare plants with similar redlist status, that may be present in such areas.	NEGK (procuring and managing the ecologist) Third party ecologist (performing the surveys and marking the locations of sensitive plants found with metal nails)	Surveys must be conducted during the flowering period of geophytes in this region, between April 15 and May 10)	Documentation that all soil disturbance areas in the sensitive plant zone have been surveyed by a qualified ecologist during the required seasonal time period, and all sensitive plant species have been marked for subsequent rescue/relocation

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			Mark the locations of any sensitive geophytes (including all plant species listed at left except for <i>Malus sieversii</i>) discovered within areas to be disturbed during construction with a metal nail, so that subsequent to the plants' brief springtime flowering period, the underground structures (e.g. bulbs) of these plants can be found by the ecologists using a metal detector, and the bulbs can be rescued/relocated to nearby non-disturbed areas,			
Loss of sensitive plants due to soil disturbance	<i>Malus sieversii</i> , <i>Amygdalus bucharica</i> , <i>Tulipa zenaidae</i> , <i>T. ostrowskiana</i> , <i>T. greigii</i> , <i>Chesneya villosa</i> ,	Relocate Project infrastructure and temporary/permanent soil disturbance areas away from areas containing sensitive plants, if possible	Using the results of the pre-construction rare plant surveys, adjust Project infrastructure and locations of areas of permanent and temporary soil disturbance away from the locations of sensitive plants to the extent possible	NEGK (PIU - oversight) EPC - implementation	Spring, 2026	Documentation of any adjustments in micro-siting of Project infrastructure and/or soil disturbance areas, to avoid impacts to sensitive plants

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Ecological damage to sensitive riverine and riparian habitats and biodiversity	Fish and other aquatic biodiversity in rivers, riparian forests and associated biodiversity	Avoid impacts to sensitive riverine and riparian biodiversity receptors	Micro-siting of pylons and access roads to avoid any areas within 25 m of the Chui, Konorchok, or Kok-Moynok Rivers, or riparian forest groves along the rivers.	NEGK (PIU - oversight) EPC - implementation	Prior to start of construction	Documentation of any adjustments in micro-siting of Project infrastructure to avoid impacts to river and riparian habitats
Ecological damage to sensitive vegetation and associated biodiversity	Sensitive plants and associated biodiversity, other terrestrial plants and wildlife	Minimize loss of pre-existing vegetation	Limit the extent of the new access road that must be built along the ROW. Use existing road wherever possible (refer also to the transportation mitigation section of the ESIA and ESMP)	NEGK (PIU - oversight) EPC - implementation	Prior to start of construction	Final plan of access road construction showing new road construction required, and pre-existing access roads, illustrating minimal construction of new road
Loss of trees and/or other riparian vegetation	Riparian forests and associated biodiversity	Minimize loss of riparian biodiversity	Prior to crossing forest land, consult with Forest Service under the Ministry of Emergency, to confirm, notify and agree measures to restore vegetation in the ROW if needed (based on final tower siting, access roads, laydown area etc.)	NEGK (PIU - oversight) EPC - implementation	Prior to start of construction	Written approval from Forest Service articulating any conditions or requirements for any crossings of forest land

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Disturbance of sensitive raptor/vulture nesting activity	Bearded Vulture, Himalayan Griffon, Golden Eagle, Saker Falcon, Egyptian Vulture, Cinereous Vulture, Imperial Eagle	Document any 2026 nesting activity of PBF bird species in close proximity to the OHTL	Conduct pre-construction survey for nesting PBF raptors and vultures within 1 km of the OHTL within the central portion of the OHTL containing potential nesting habitat (see Figure 6)	NEGK HSEE Director (procurement and oversight) third party ecologist (implementation)	March-April	Documentation of nests active during 2026 breeding season of PBF raptors and vultures within the survey area
Disturbance of sensitive raptor/vulture nesting activity	Bearded Vulture, Himalayan Griffon, Golden Eagle, Saker Falcon, Egyptian Vulture, Cinereous Vulture, Imperial Eagle	Avoid disturbing nesting activity of PBF bird species nesting in close proximity to the OHTL	Micro-siting of pylons and access roads to avoid any areas within 500 m of an active nest of a PBF bird species, if possible	NEGK (PIU - oversight) EPC - implementation)	April-May	Documentation of any adjustments in micro-siting of Project infrastructure to avoid impacts to nesting PBF birds


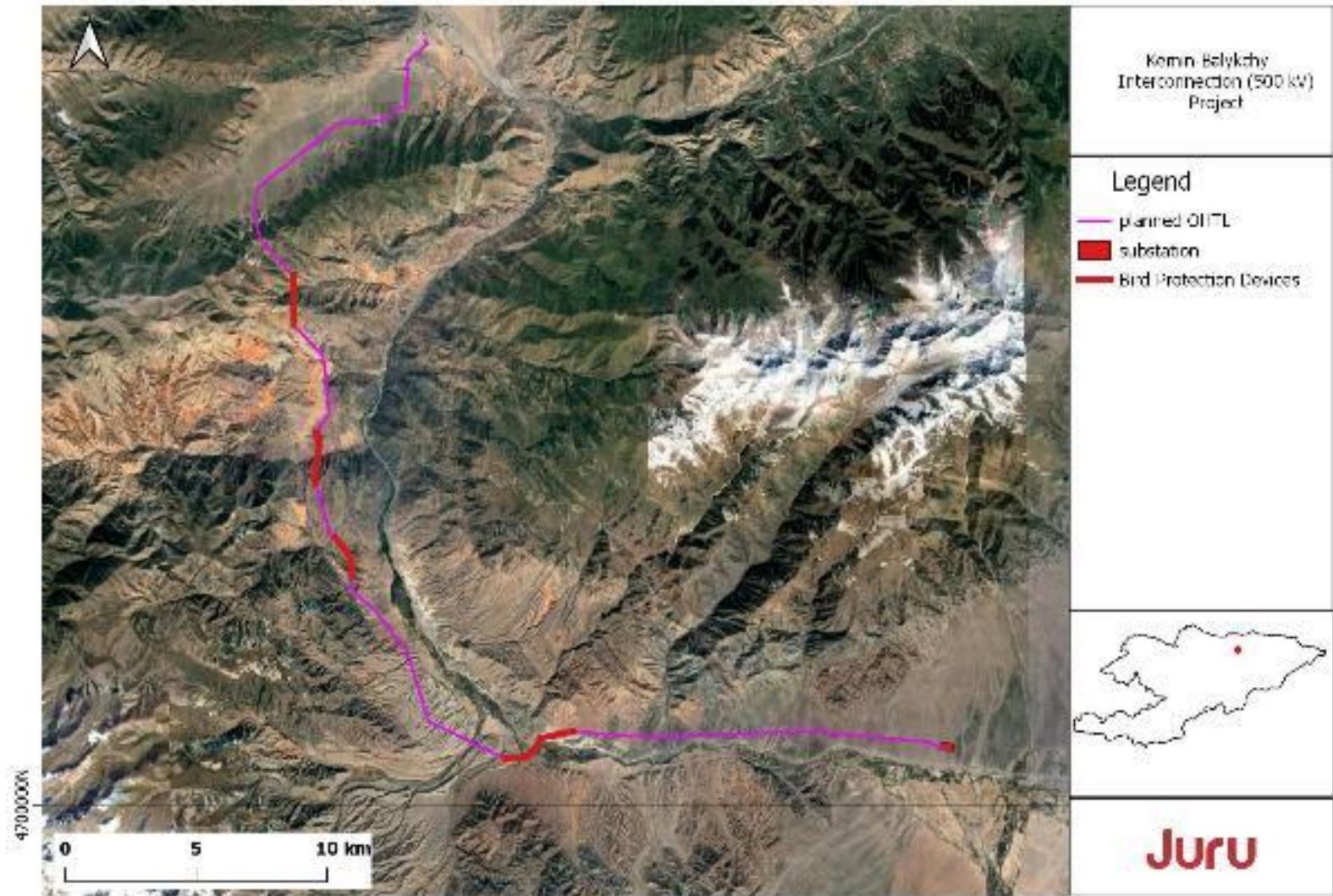
<p>Juru</p>	<p>BIODIVERSITY MANAGEMENT PLAN</p>	<p></p>
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Figure 4: Proposed sections for installation of Bird Flight Diverters (BFDs)




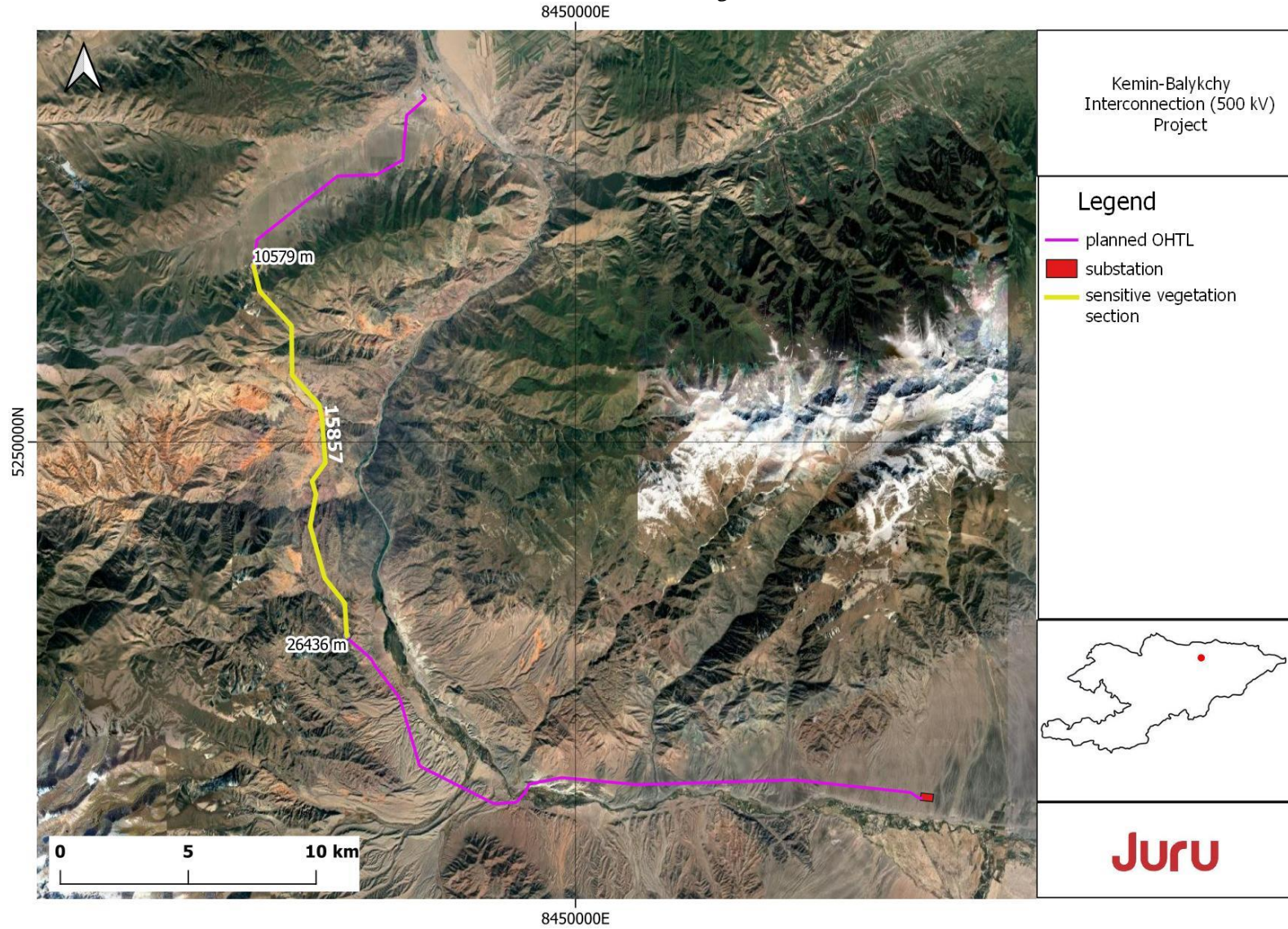
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Figure 5: Sensitive vegetation portion of OHTL (yellow segment), in which pre-construction rare plant survey is to be performed in all areas where soil disturbance will occur during construction




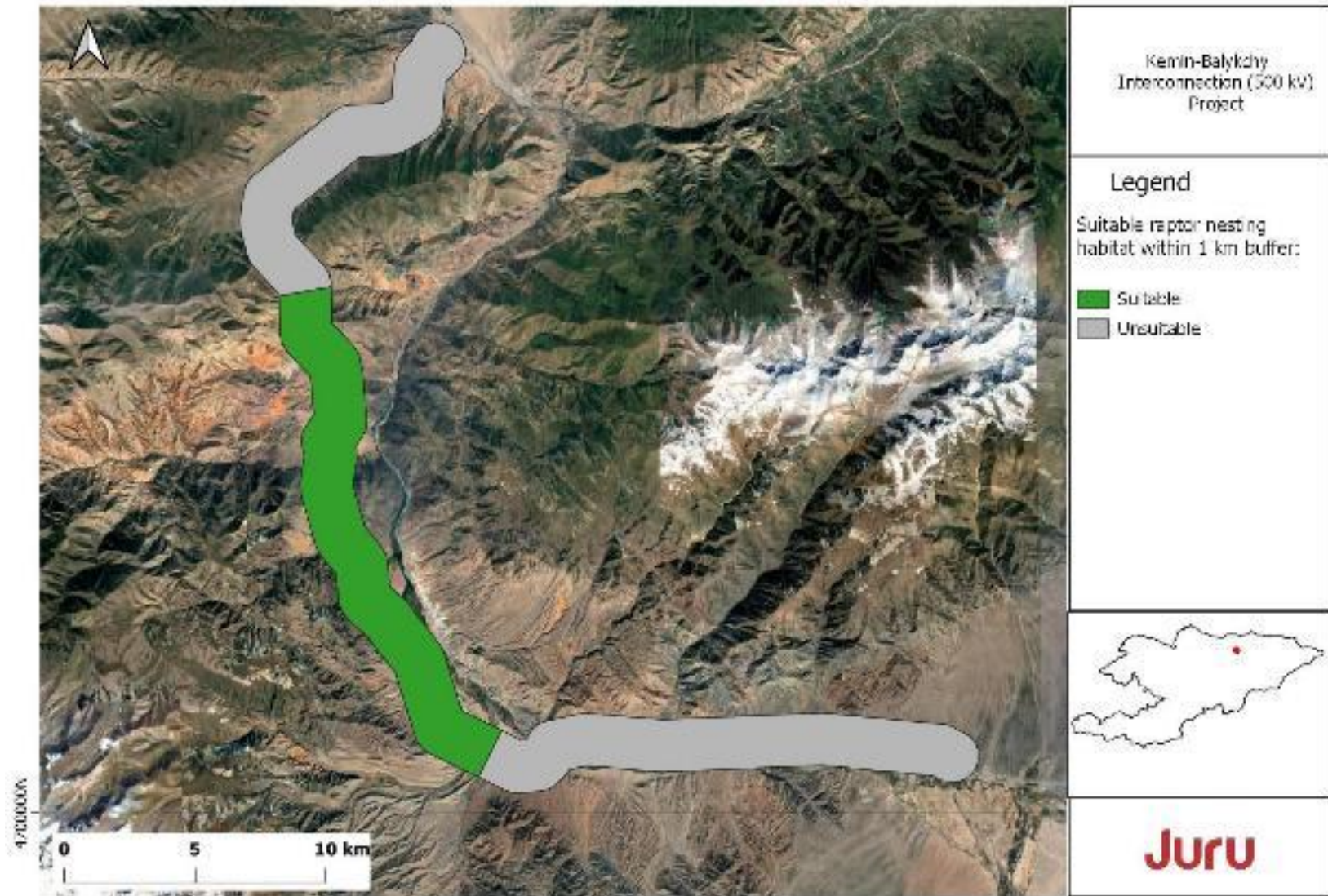

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Figure 6: Portion of OHTL containing potential suitable nesting substrates for PBF raptor and vulture species (green area)




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6.2 Construction

Table 9 describes biodiversity management measures that should be implemented during Project construction


Table 9: Biodiversity management measures to be implemented during Project construction

Impact	Receptors	Requirement/Objective	Action/Mitigation Measure(S)	Responsibility	Timing	Key Performance Indicators
Bird electrocution due to hazardous OHTL design	Eagles, vultures, owls, storks	Minimize bird electrocution risk	Construct OHTL using “raptor safe” pylon designs, as specified in the pre-construction table above, and as incorporated as EPC contract requirements	NEGK (PIU - oversight) EPC (construction of OHTL)	Construction	As-built OHTL conforms to the specified minimum requirements for raptor safe design
Bird collision with OHTL due to limited visibility of overhead (static) cables	Cranes, pelicans, swans, ducks, geese, other large-bodied waterbirds, raptors and vultures	Minimize bird collision risk	Install Bird Flight Diverters on overhead, or static lines of the OHTL following GIP, and following the specific requirements stated in the pre-construction table above, and as incorporated as EPC contract requirements	NEGK (PIU – oversight) EPC (implementation during construction)	Construction	OHTL constructed with BFD properly installed at roughly 10 m intervals on both overhead (static) cables within the four specified, high-risk portions of the OHTL


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Impact	Receptors	Requirement/Objective	Action/Mitigation Measure(S)	Responsibility	Timing	Key Performance Indicators
Loss of sensitive plants due to soil disturbance	<i>Malus sieversii</i> , <i>Amygdalus bucharica</i> , <i>Tulipa zenaidae</i> , <i>T. ostrowskiana</i> , <i>T. greigii</i> , <i>Chesneya villosa</i> ,	Rescue/relocate any sensitive (PBF) plants that have been found within the Project's soil disturbance footprint	Implement sensitive (PBF) plant rescue/relocation, using metal detector to find the locations of any sensitive geophytes (including all plant species listed at left except for <i>Malus sieversii</i>) discovered and marked with metal nails during the pre-construction surveys, and then follow botanical good practice for transplanting such individuals to nearby, areas, potentially including temporary	NEGK (procuring and managing the ecologist) Third party ecologist (performing plant rescue/rehabilitation)	Rescue/rehabilitation performed subsequent to blooming (ca. May 15) and prior to commencement of construction works ⁷ , ideally after the plant has returned to a dormant state	Documentation of all sensitive plant rescue/relocation activity, in relation to construction activity at each applicable location.


⁷ Note that the requirement to perform plant rescue/relocation prior to start of construction works is specific to the locations of the plants. In other words, it is ok for construction works to have started in other areas, as long as rescue/relocation of all plants in a specific location (e.g. location of a certain pylon) is performed prior to the disturbance of *that specific location* for construction activity. Note that the distribution of sensitive (PBF) plants requiring rescue/relocation is confined to a limited portion in the center of the OHTL, which is dominated by alpine steppe habitat (see Figure 5). Therefore, commencement of construction either in the northern or the southern portion of the OHTL prior to the sensitive plant breeding season (mid-April through early May) is compatible with the BMP.

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Impact	Receptors	Requirement/Objective	Action/Mitigation Measure(S)	Responsibility	Timing	Key Performance Indicators
			disturbance areas to be rehabilitated post-construction. Mark the locations of relocated plants with metal nails to allow for subsequent survivorship/rescue success monitoring			
Ecological damage to sensitive riverine and riparian habitats and biodiversity	Fish and other aquatic biodiversity in rivers, riparian forests and associated biodiversity	Avoid impacts to sensitive riverine and riparian biodiversity receptors	Micro-siting of pylons and access roads to avoid any areas within 25 m of the Chui, Konorchok, or Kok-Moynok Rivers, or riparian forest groves along the rivers.	NEGK (PIU - oversight) EPC - implementation	Construction	Documentation of as-built OHTL in conformance with riparian setback requirements
Ecological damage to sensitive vegetation and associated biodiversity	Sensitive plants and associated biodiversity, other terrestrial plants and wildlife	Minimize loss of pre-existing vegetation	Limit the extent of new access road that must be built along the ROW. Use existing road wherever possible (refer also to the transportation mitigation section of the ESIA and ESMP)	NEGK (PIU - oversight) EPC - implementation	Construction	Documentation of as-built new and pre-existing access roads, illustrating minimal construction of new road

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Impact	Receptors	Requirement/Objective	Action/Mitigation Measure(S)	Responsibility	Timing	Key Performance Indicators
Disturbance of sensitive raptor/vulture nesting activity	Bearded Vulture, Himalayan Griffon, Golden Eagle, Saker Falcon, Egyptian Vulture, Cinereous Vulture, Imperial Eagle	Avoid disturbing any nests of PBF bird species active in 2026 in close proximity to the OHTL	Avoid siting generators or other noisy equipment within 500m of PBF raptor or vulture nests active during the 2026 season	NEGK (PIU – oversight) EPC (implementation)	April – August, 2026	Documentation of adherence to this condition, including map of 2026 active PBF raptor/vulture nests, and map of construction equipment/generator storage areas
Disturbance of sensitive raptor/vulture nesting activity	Bearded Vulture, Himalayan Griffon, Golden Eagle, Saker Falcon, Egyptian Vulture, Cinereous Vulture, Imperial Eagle	Avoid disturbing any nests of PBF bird species active in 2026 in close proximity to the OHTL	Micro-siting of pylons and access roads to avoid any areas within 500 m of an active nest of a PBF bird species, if possible. If it is not possible, then avoid below ground work and tower erection at towers located within 500m of such nests between March and May	NEGK (PIU - oversight) EPC - implementation)	Construction (March-May, 2026)	Documentation of as-built OHTL in relation to 2026 active nests of PBF raptor/vulture species, including timing of construction activities at any towers within 500m of a nest
Ecological damage to sensitive	Fish and other aquatic	Avoid impacts to sensitive riverine and	<ul style="list-style-type: none"> Store/park all equipment that 	NEGK (PIU - oversight)	Construction	Documentation of locations of generators, heavy

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Impact	Receptors	Requirement/Objective	Action/Mitigation Measure(S)	Responsibility	Timing	Key Performance Indicators
riverine and riparian habitats and biodiversity	biodiversity in rivers, riparian forests and associated biodiversity	riparian biodiversity receptors	<p>can potentially generate pollution (generators, hazardous materials storage, heavy machinery) at least 50m from rivers and riparian vegetation.</p> <ul style="list-style-type: none"> • Avoid any deposition of sediment or pollutants into the rivers • Implement good housekeeping measures for materials handling and waste management. 	EPC - implementation		<p>machinery parking, and hazardous materials storage areas during construction, in relation to rivers and riparian vegetation</p> <p>Construction-phase BMP compliance audits</p>

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Impact	Receptors	Requirement/Objective	Action/Mitigation Measure(S)	Responsibility	Timing	Key Performance Indicators
Disturbance or direct impacts to Asian Frogs	Asian Frog (<i>Rana asiatica</i>)	Avoid impacts to Asian Frog	Provide training to construction workers in the identification of the Asian Frog, as well as instructions for avoiding disturbance of Asian frogs during construction, if they are discovered on site	NEGK (PIU - oversight) EPC - implementation	Construction	Documentation of Asian Frog identification training and instruction on impact avoidance provided to workers
Temporary loss of natural vegetation	Native plants and associated biodiversity	Minimise impact and preserve habitat integrity.	<ul style="list-style-type: none"> Develop site clearance and rehabilitation plan at least 2 weeks prior to the start of any works. Minimize soil/vegetation disturbance during construction and, where required, use sustainable soil/vegetation techniques. 	NEGK (PIU - oversight) EPC - implementation	Construction	<p>Site clearance and rehabilitation plan (prior to construction)</p> <p>Documentation of rehabilitation of temporarily disturbed areas</p> <p>Construction-phase BMP compliance audits</p>

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Impact	Receptors	Requirement/Objective	Action/Mitigation Measure(S)	Responsibility	Timing	Key Performance Indicators
			<ul style="list-style-type: none"> Use only the demarcated area for laydown and access (construction and operation). Rehabilitate temporarily disturbed areas as soon as possible after construction activity is finished to minimize the risk of soil erosion 			
Direct or indirect impacts to terrestrial animals	Asian Frog, Marbled Polecat, Snow Leopard, other animals	Minimize adverse impacts to terrestrial wildlife	<ul style="list-style-type: none"> Minimize use of trenches or other steep-walled excavations Backfill open excavations as soon as possible after completing construction Prohibit poaching and interactions with 	NEGK (PIU - oversight) EPC - implementation	Construction	<p>Documentation of wildlife poaching/harassment prohibition, and wildlife protection training provided to workers</p> <p>Construction-phase BMP compliance audits</p>

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Impact	Receptors	Requirement/Objective	Action/Mitigation Measure(S)	Responsibility	Timing	Key Performance Indicators
			<p>fauna and flora in the worker code of conduct.</p> <ul style="list-style-type: none"> Worker/contract or training/awareness, supervision regarding impacts to animals, and protection of species. Establish, post, and enforce vehicular speed limits and other traffic management measures. 			

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6.3 Operation phase

Table 10 describes biodiversity management measures that should be implemented during Project construction

Table 10: Biodiversity management measures to be implemented during the Project's operations phase

Impact	Receptors	Requirement/Objective	Action/Mitigation Measure(S)	Responsibility	Timing	Key Performance Indicators
Bird electrocution and/or collision due to interactions with OHTL structures (electrocution, collision)	Eagles, vultures, owls, storks, cranes, pelicans, swans, ducks, geese, other large-bodied waterbirds	Verify low impacts	Perform monthly bird fatality monitoring underneath entire OHTL for a minimum of one year, starting within one month of electrification of OHTL, aligned with GIIP ⁸ , and following the protocol in Annex B.	NEGK (HSSE Director - oversight) Third party ecologist	Minimum one year duration, starting within one month of OHTL electrification	Annual bird fatality monitoring report prepared by third party ecologist
Bird collision with OHTL due to limited visibility of overhead (static) cables	Cranes, pelicans, swans, ducks, geese, other large-bodied waterbirds, raptors and vultures	Minimize bird collision risk	Check periodically (at minimum once every 5 years) to ensure BFD still intact and properly positioned on overhead wires, replace any lost or damaged BFD	NEGK HSSE Director	Operations, at minimum once every 5 years	Periodic checks and documentation of intact BFD installed on OHTL

⁸ International Finance Corporation (IFC), European Bank for Reconstruction and Development (EBRD) and KfW Group (KfW), 2023. Post-construction bird and bat fatality monitoring for onshore wind energy facilities in emerging market countries: Good practice handbook and decision support tool. IFC (Washington DC), EBRD (London) and KfW (Frankfurt).

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Impact	Receptors	Requirement/Objective	Action/Mitigation Measure(S)	Responsibility	Timing	Key Performance Indicators
Loss of sensitive plants due to soil disturbance	<i>Malus sieversii</i> , <i>Amygdalus bucharica</i> , <i>Tulipa zenzaidae</i> , <i>T. ostrowskiana</i> , <i>T. greigii</i> , <i>Chesneya villosa</i> ,	Verify NNL of PBF plants	Verify success of any sensitive plant rescue relocation conducted during construction, and implement additional sensitive plant restoration, as needed to achieve NNL, if rescue/relocations unsuccessful	NEGK (HSSE Director - oversight) Third party ecologist (monitoring and additional mitigation, as needed)	Monitoring must be performed during blooming period (April 15-May 10), to be conducted each spring subsequent to construction until NNL demonstrated	Documentation of survivorship of rescued/relocated plants and/or alternative sensitive plant restoration methods implemented

6.4 General GIIP


Table 11 sets out General GIIP requirements for the construction and O&M phase. These measures should be implemented in conjunction with requirements set out in the linked management plans as defined in 1.4 above.

Table 11: GIIP requirements – biodiversity management (construction and operation)


Topic	Requirement
Siting offices	<ul style="list-style-type: none"> Avoid setting up site offices or other temporary sites on within 50m of surface water feature or 25 m of riparian forest; Avoid temporary occupation and/or destruction of neighbouring areas. When using areas that are not included in the project concept, there must be prior approval from the owner or another type of permit; Pre-define all laydown areas, minimizing impacts to pre-existing natural vegetation, as per Table 6 and Table 9. Pre-define all disposal sites for inert materials (soils) outside of areas with natural vegetation.

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Topic	Requirement
Site / vegetation clearance	<ul style="list-style-type: none"> • The removal of the trees and bushes should be avoided where possible • If removal of trees is required obtain all permits for tree removal in advance of works; • As part of routine pre-construction meetings, work crews will be briefed on any known and potential environmental constraints occurring in that work location and any other likely significant flora and fauna species and populations they may encounter; • Prior to clearing, the extent of clearing areas will be clearly marked out with appropriate flagging material as determined by the site manager; • Clearing is to be carried out in a sequential manner and in a way that directs escaping wildlife away from clearing and into adjacent native vegetation or natural areas of their own volition; • If non-mobile fauna are found prior to or during clearing activities, they shall be relocated from the clearing area to a safe and suitable location containing the microhabitat features, preferably within 200 m of the capture location; • Prior to backfilling of any trenches/excavations site personnel will check the open trench for trapped fauna and, where required, fauna may be moved to a safe location away from the trench/excavation; • Dust suppression measures including road watering and reduced vehicle speeds will be implemented to minimise dust deposition on foliage; • Fencing off from stock may be required, depending on adjacent land use, to prevent degradation of habitat of listed fauna species.
Erosion control and control of sediment run off	<ul style="list-style-type: none"> • Divert uncontaminated storm water run-off around disturbed areas or areas where contaminants or wastes are stored or handled; • Drainage lines and areas of concentrated water flow near site offices and other permanent or temporary facilities shall be inspected regularly for erosion to determine whether remedial action is required; • Erosion and sediment control measures, such as contour banks, will be placed at frequent intervals along flow paths, where appropriate, and multiple discharge locations to ensure discharges have low velocities and volumes, rather than channelling discharges to a central point, which can exacerbate erosion;

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Topic	Requirement
	<ul style="list-style-type: none"> Point source discharges of runoff will be directed into stable waterways and/or drainage lines with engineering controls, such as scour protection and flow velocity limits where required; Vegetation should be progressively cleared to minimise the area of soil exposed; and Slopes shall be revegetated as soon as possible after disturbance. Provide means of escape from excavations / drains for fauna (reptiles, amphibians)
Management of topsoil and stockpiles	<ul style="list-style-type: none"> Stockpiles and/or exposed soil areas, such as unsealed access tracks, which are exposed for prolonged periods or have been identified as problem soils (erosive/dispersible) will be stabilised as required; Roads and tracks will be aligned across slopes, but where this is not possible, contour banks used at intervals appropriate to the slope and soil type to control the flow of surface water; The topsoil will be quantified prior to stripping; Soil stockpiles, both topsoil and subsoil will be recorded; Stockpiles will be as low as possible with a maximum height of 3 to 4 m, a maximum batter slope of 1 in 1.5 and shaped to minimise soil erosion (soil dependent); In cases where the subsoil must be disturbed, it is essential that subsoil and topsoil be stockpiled separately; A designated subsoil location will be determined prior to construction works but generally it will be stored within the area acquired for the project; Topsoil will be stockpiled close to where it is stripped but away from the diversion or natural drainage flow paths; Stockpiles will be located where they will not be disturbed by future activities; and Weeds on the stockpiles will be monitored and controlled to prevent establishment and spread.
Site rehabilitation	<ul style="list-style-type: none"> Areas where natural regeneration has not been successful and native vegetation is the final land use objective (i.e. where land form is not stable after 12 months) should also be seeded with native plant species; Direct seeding will be undertaken in areas where immediate stabilisation is required;

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Topic	Requirement
	<ul style="list-style-type: none"> Other disturbed areas following completion of works or as soon as is practicable, but within 2 months following the completion of the works.
Control of Invasive species and weed management	<p>The following measures will be implemented to control the introduction of invasive species and weeds:</p> <ol style="list-style-type: none"> Map any areas of invasive species noted during the clearance works. Vehicles and machinery remain on designated roads and access tracks, and if they come into contact with a weed infested area, they will require a wash-down prior to leaving the area; Access tracks and disturbance areas will be regularly inspected for weeds and control measures employed where declared weeds are identified. Weed training and identification by all employees, reporting and control will be addressed in the site induction; Rehabilitation of disturbed areas may benefit from control of other exotic grasses; and Monitoring of weed infestations within disturbed areas will occur at least monthly during construction.
Pest management	<p>No specific pests have been identified; the following general requirements should be implemented at site:</p> <ol style="list-style-type: none"> identify pest species and infestation areas prevent and/or minimize the introduction and/or spread of pests

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6.5 NNL Compensation for PBF's

Because of low or non-existent expected residual impacts to all PBFs, assuming implementation of the mitigation measures specified in this plan, no biodiversity offsets or compensation measures are expected to be necessary in order for the Project to achieve NNL for all PBFs. However, there are two potential impacts for which the achievement of NNL through implementation of this BMP is not certain, and the need for additional mitigation as part of an adaptive management strategy, potentially including offsets, could potentially be triggered during the operations phase of the Project, depending on the results of the operations phase monitoring, as described below:

- *Loss of Sensitive (PBF) Plants:* Six species of sensitive plants have been identified as PBF for the Project. It is not certain whether or not any of them will be impacted by Project construction, as the areas in which soil disturbance is to occur have not yet been finalized.
 - The BMP specifies that pre-construction surveys for these plants will be carried out during the blooming period in all areas in which soil disturbance is to occur. The primary objectives of this pre-construction survey are to a) avoid impacting these plants to the extent possible, and b) implement rescue/relocation for any individuals located in areas where soil disturbance cannot be fully avoided.
 - If rescue/rehabilitation of plants is necessary during Project construction, then operations phase monitoring will be conducted to document success of the relocation efforts.
 - If any such relocations are determined not to have been successful, based on operations phase monitoring results, then additional restoration, or other mitigation of impacts to these plants will be necessary in order to achieve NNL.
 - The specific nature of any such additional mitigation will be determined in consultation with qualified experts in consideration of the specific nature of the residual impact, agreed between NEGK and EBRD, and implemented by qualified restoration consultants, should it be necessary.
- *Excessive electrocution and/or collision fatality impacts to birds:* Seventeen bird species plus one multitaxon category of birds have been identified as PBF for the Project. While the analyses of the ESIA have identified this set of species on the basis of available information, it is possible that during operations, the OHTL may generate impacts to additional species (effectively adding such species as new PBF), or may generate problematic levels of impact to the PBF species, beyond the low levels of residual impact predicted in the ESIA on the basis of available information, and taking into account the mitigation measures to be implemented, per this Plan. The primary objective of the operations phase bird fatality monitoring specified in this Plan, is to verify the predicted low levels of residual impact to birds. However, if the results of the monitoring suggest that operations-phase bird fatality impacts to any PBF, or other species of

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bird, are in excess of the low levels predicted in the ESIA, then additional steps will need to be taken in order to ensure achievement of NNL⁹, as follows:

- Conduct more rigorous and systematic fatality monitoring, including bias-correction experiments, in order to estimate total Project-cause fatality rates from raw carcass-searching data.
- Determine science-based NNL thresholds for the affected PBF species using Potential Biological Removal (PBR) analysis, or a suitable alternative method¹⁰.
- Compare total Project-caused fatality rates to the science-based NNL thresholds for each applicable species, to see if the threshold has been exceeded for any species, in which case the Project has likely caused net loss of that species
- If the NNL threshold has been exceeded for any species, develop, implement, and monitor the success of additional mitigation measures, in consultation with qualified experts, in consideration of the specific nature of the residual impact.

⁹ Note that with regard to operations-phase fatality impacts to birds, achieving NNL is not equivalent to the elimination of all fatality impacts. Instead, in this context, NNL is considered to be achieved if fatality levels are low enough that they are not likely to impact the sustainability or viability of the population. For a more detailed explanation, please see International Finance Corporation (IFC), European Bank for Reconstruction and Development (EBRD) and KfW Group (KfW), 2023. Post-construction bird and bat fatality monitoring for onshore wind energy facilities in emerging market countries: Good practice handbook and decision support tool. IFC (Washington DC), EBRD (London) and KfW (Frankfurt).

¹⁰ International Finance Corporation (IFC), European Bank for Reconstruction and Development (EBRD) and KfW Group (KfW), 2023. Post-construction bird and bat fatality monitoring for onshore wind energy facilities in emerging market countries: Good practice handbook and decision support tool. IFC (Washington DC), EBRD (London) and KfW (Frankfurt).

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7 MONITORING, REPORTING AND DOCUMENT CONTROL

7.1 Monitoring


NEGK will be responsible for monitoring and documentation of the completion of all mitigation and monitoring elements described in Table 8, Table 9 and Table 10. These tables describe the specific parameters of the requirements, timing, roles and responsibilities, and KPI for each item. A summary of overarching monitoring processes is below:

- a) Preconstruction (see Table 8)
 - a. NEGK to document incorporation of OHTL design elements required for mitigating bird electrocution risk (raptor safe pylon designs) and bird collision risk (Bird Flight Diverters) in the form of specific requirements included within the TOR used to procure the EPC, and the terms and conditions of the EPC contract
 - b. NEGK to document completion of required pre-construction surveys for sensitive plants and for active nests of PBF birds, both performed by qualified third party ecology contractors
 - c. NEGK to document coordination with Forest Service for any ROW crossings of forest land.
 - d. NEGK to provide final layout of pylon locations, access roads, and construction laydown areas, aligned with setbacks and other impact minimization measures described in Table 6
- b) Construction (see Table 9).
 - a. NEGK PIU to perform periodic compliance audits of EPC during construction, to verify adherence to all of the requirements described in Table 9.
 - b. NEGK to provide report describing any and all sensitive plant rescue/relocation efforts implemented by qualified 3rd party ecologist during construction, following the specific parameters for such described in Table 9.
- c) Operations (See Table 10)
 - a. NEGK to provide bird fatality monitoring reports prepared by qualified third party ecologist, describing bird fatality monitoring methods, effort, and results, following the requirements described in Table 10, and further elaborated in Annex B.
 - b. NEGK to provide sensitive plant relocation success monitoring reports, as well as reports describing additional sensitive plant restoration efforts, if needed, conducted during operations phase, prepared by qualified third party ecological consultant, following the

8 REPORTING

8.1 NEGK

NEGK will report findings of this information to the Lenders and other shareholders on an Annual basis to show that it has achieved established objectives and targets and it meeting its Key Performance Indicators (KPIs) as described in Table 8, Table 9 and Table 10, and in the Monitoring section above.

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NEGK will retain all documentation relating to the Project.

8.2 Near miss and incident reporting

During construction the EPC Contractor must establish a site procedure for incident investigation that aligns with the requirements set out in the CESMP. Under the site procedure, incidents must include near misses, non-compliances, non-conformances in the areas of environment, health & safety, security and labour.

NEGK must establish a works procedure for incident investigation that aligns with the requirements set out in the OESMP covering works on the OHTL and at the substations (Kemin and Balykchy). Reported incidents must include near misses, non-compliances, non-conformances in the areas of environment, health & safety, security and labour.


The EPC Contractor and NEGK will record all actions from this reporting and investigation in a Corrective Action Plan (CAP) s for follow up. The CAP should be used to monitor close out of all actions and progress should be monitored in the weekly construction progress meeting.

8.3 Document control

The EPC Contractor will implement a site procedure for document control and retain all records relating to this topic including, monitoring, auditing and training records.

NEGK will implement an operational procedure for document control and retain all records relating to this topic including, monitoring, auditing and training records.

The Owner will retain all documentation in accordance with the Owner OESMP.

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9 BUDGET

Table 12: Indicative budget for costs not included in the EPC contractor budget (scope of works)

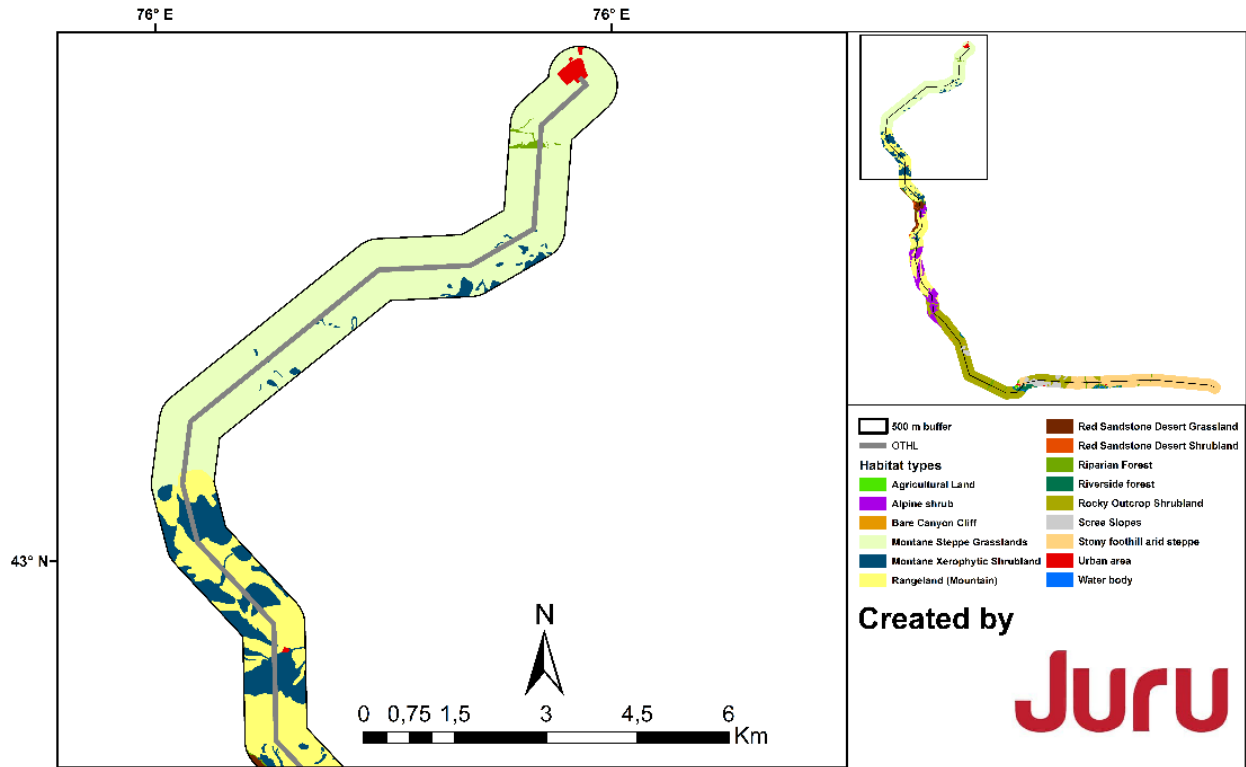
Biodiversity Management Plan	Cost (USD)	Unit	Total	
Bird Flight Diverter (type to be defined at ~10m spacing)	10-15	1745	18,000 – 26,000	One time
Bird Flight Diverter maintenance	2000	1	10,000	Once every five years for inspection of installed BFD and replacement of damaged or lost BFD
Pre-construction sensitive plant surveys in soil disturbance footprint within sensitive plant zone of OHTL	2500	1	2500	One time
Pre-construction PBF raptor/vulture nesting surveys within 1 km of OHTL within potential raptor/vulture nesting zone of OHTL	2500	1	2500	One time
Construction-phase sensitive plant rescue/relocation	5000	1	5000	One time
Operations phase bird fatality monitoring, monthly surveys of entire OHTL for one year	7500	1	7500	One time, with possibility of extending beyond one year if significant residual impacts detected
Operations phase sensitive plant relocation success monitoring and additional restoration, if needed	2500	5	12,500	Annual monitoring during blooming season (mid-April-early May) each year for 5 years, assumes that NNL for sensitive plants achieved within 5 years. Additional budget required if additional sensitive plant restoration is required due to failure of rescue/relocation program

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ANNEXES

ANNEX A: HABITAT MAP - GENERAL

Figure 7: Habitat types within a 500 m buffer around the OHTL ROW (1-17 km of the OHTL line)




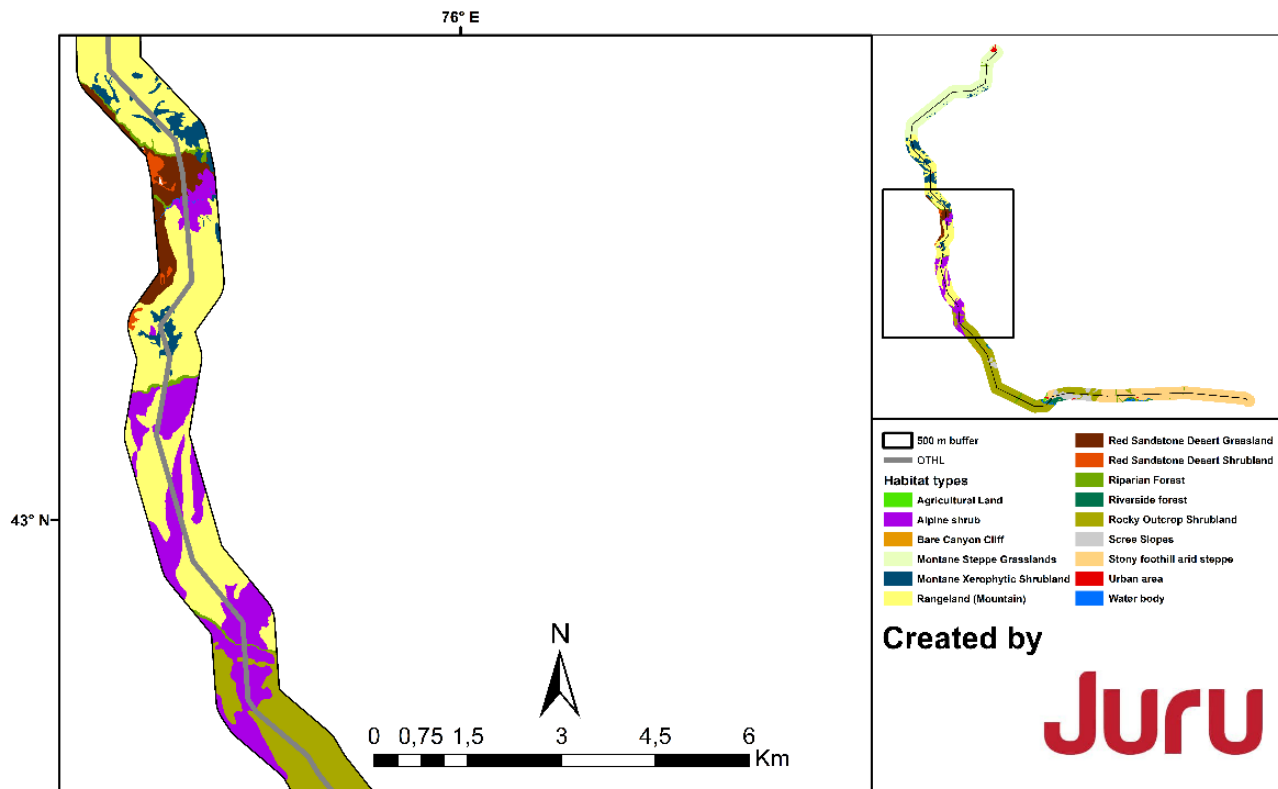
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Figure 8: Habitat types within a 500 m buffer around the OHTL ROW (17-30 km of OHTL line)




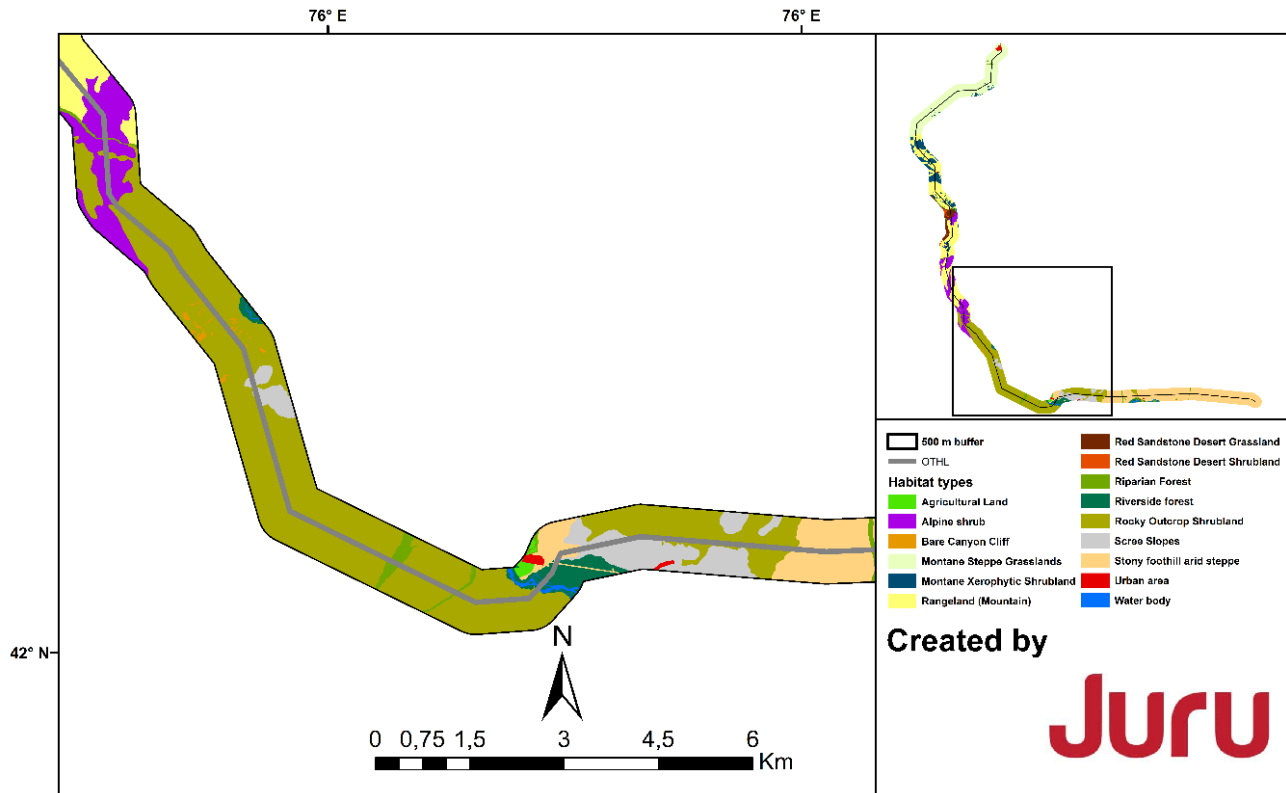
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Figure 9: Habitat types within a 500 m buffer around the OHTL ROW (30-48 km of OHTL line)




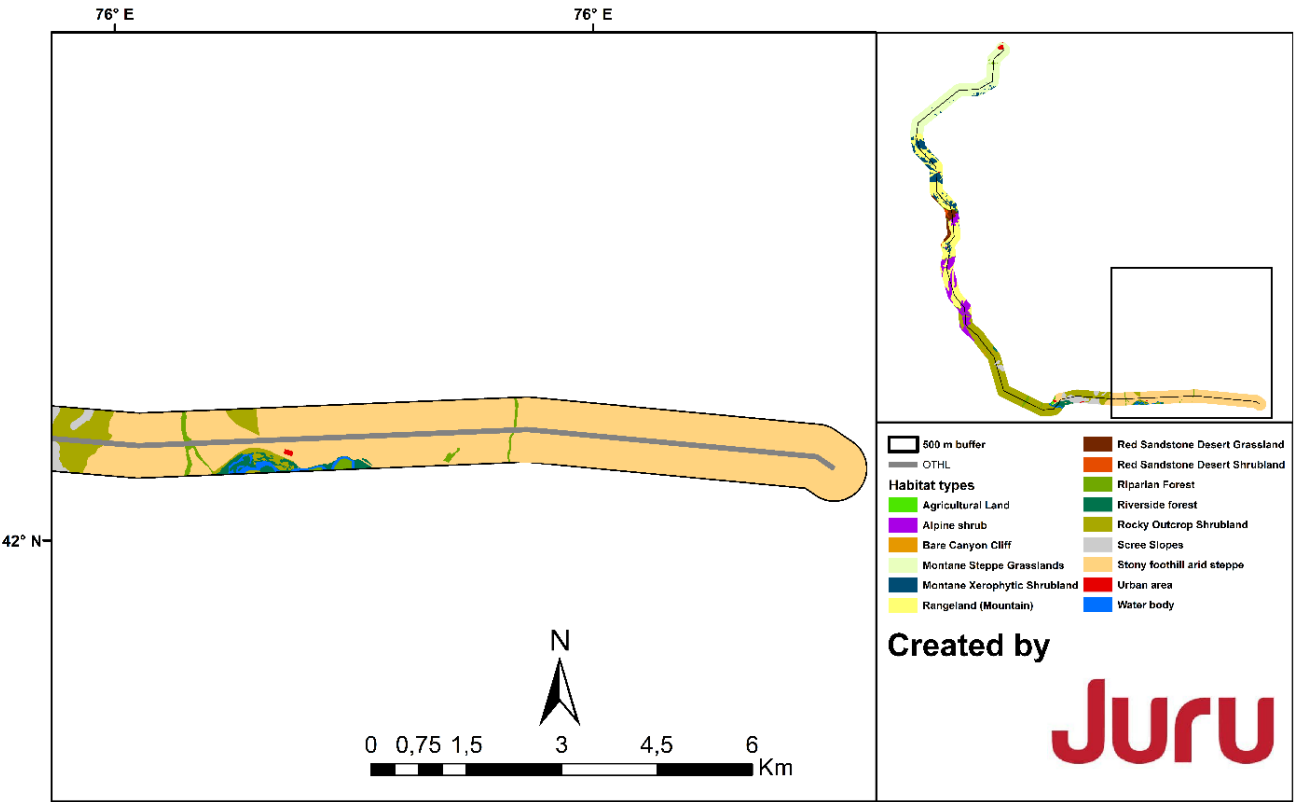

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Figure 10: Habitat types within a 500 m buffer around the OHTL ROW (48-60 km of OHTL line)



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ANNEX B: BIRD AND BAT MONITORING PROTOCOL (TERMS OF REFERENCE)

Overview: NEGK seeks a Consultant to perform operations-phase bird and bat fatality monitoring under the Kemin-Balykchy overhead transmission line (OHTL), an approximately 53 km stretch of 500 kV OHTL being constructed between the existing Kemin substation (SS) in the Chui region and a new substation named “Balykchy, SS”, 6.4 kilometres outside Balykchy city in the Issyk-Kul region of the Republic of Kyrgyzstan.

Objective: The primary objective of the requested consultancy is to characterize the species composition, locations, and general intensity of bird fatalities resulting from collisions and/or electrocution of birds with the OHTL, with methodology based on international good practice¹¹, but following an indicative, rather than comprehensive approach.

Assumptions: The Consultant’s work will be engaged under the following assumptions:

- 1) NEGK will grant access to the Consultant to the roads and lands under the OHTL where the Consultant will need to perform the work.
- 2) All of the Consultant’s personnel that perform fieldwork for the Project will possess all necessary permits to perform the specified work; will undergo a site-specific safety orientation/training session prior to performing fieldwork at the site and will abide by all of NEGK’s safety and basic operational policies and procedures for personnel performing work at the Project site.

Scope of Work:

Task 1: Initial Project Setup

Two weeks prior to the commencement of the monitoring period, the Consultant will participate in a site reconnaissance and visit, in coordination with NEGK, for the purpose of identifying specific search areas and access points to be used during the monitoring, noting that some portions of the OHTL may not be searchable, due to steep gorges or other inaccessible terrain directly below some portions of the OHTL.

Prior to the initiation of surveys, the Consultant will ensure that their survey personnel are equipped with all necessary equipment and supplies for performing the work, including, at minimum, the following:

- Bite-proof gloves for specimen handling
- Personal protective equipment (hat, boots, long-sleeve clothing)
- Field data forms (prepared by Consultant)

¹¹ Specifically, the requirement is for the protocol to be aligned with the generalized first year design presented in IFC, EBRD, and KfW’s (2023) “Post-construction bird and bat fatality monitoring for onshore wind energy facilities in emerging market countries: Good practice handbook and decision support tool”

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- Camera and GPS unit for photographing and georeferencing carcasses found during the searches
- Plastic bags, labels, waterproof writing implements for specimen collection and labelling
- Ruler and callipers for measuring specimens
- Written field protocol (prepared by Consultant)
- Safety supplies
- Binoculars (for observing and documenting bird carcasses suspended on OHTL structures)
- Vehicle(s) sufficient for accessing the required areas

Task 2: Carcass Searching

The Consultant will conduct a full, continuous year of bird carcass searching within accessible areas below the entire OHTL. The protocol/methodology is derived from current international standards for good practice, as presented in IFC-EBRD-KfW (2023)¹², but follows an indicative, rather than comprehensive approach to bird fatality monitoring, as follows:

- Search area. The area to be searched will include all accessible portions of a 60m-wide swathe of the ground that is centered directly underneath the OHTL, corresponding to the 60-m wide Right of Way (ROW) for the Project, along the entire, roughly 53 km length of the OHTL segment. Within this swathe, areas of the ground that are inaccessible for searching due to the presence of steep gorges, cliff walls, or other inaccessible substrates should be excluded from searching. In addition, portions of this swathe that cross directly over rivers and riparian forest habitat should also be excluded. In addition to the ground, the searchers should also be equipped with binoculars to scan the OHTL pylons for the carcasses of electrocuted birds that may not have fallen to the ground and remain suspended from the OHTL structures.
- Search frequency/interval. Searching will be conducted once per month along the entire OHTL segment, for one, continuous year. This monitoring effort may be extended beyond one year, should such extension be deemed necessary, but any such extension will require an amendment to the Consultant's monitoring contract.
- Search procedure and documentation. All searching will be done by crews of two searchers, who will each walk in parallel to each along a line that parallels the OHTL, displaced 15 m from the center of the ROW to one side, thus the searchers will walk at a separation of 30m from each other, and each will be walking within 15m of the outer edge of the 60m-wide ROW. During regular searches,


¹² International Finance Corporation (IFC), European Bank of Reconstruction and Development (EBRD) and KfW Group, 2023. Post-construction bird and bat fatality monitoring for onshore wind energy facilities in emerging market countries: Good practice handbook and decision support tool. IFC -Washington, DC, USA; EBRD - London, UK; KfW Group – Frankfurt, Germany.

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the search technicians will walk along straight line transects parallel to the OHTL, and parallel to each other. Search technicians should walk at a moderate pace while searching, scanning the ground for bird carcasses out to 15 meters on each side of the technician's path. In this way, each technician will cover a 30-m wide swathe, and together, the two technicians will cover the entire 60m – wide ROW. On each day of carcass searching, each search technician should fill out a carcass search effort data sheet documenting the date and time of each individual search, documenting the locations of the searching, in terms of the individually numbered spans and pylons of the OHTL segment, and also indicating which carcasses were discovered on each search. In addition, the Consultant should use a mobile phone or GPS unit to record/track the searcher's walking path for each search and should submit a kmz or other suitable geospatial file documenting the searcher's walking path for each search, along with the carcass search effort data sheet.

- Specimen collection and documentation procedure. For all bird carcasses found while searching, the search technician should first record the precise location of the carcass using a GPS unit, then prepare a label to include with the carcass, at minimum for photographic documentation, but ideally for storage, if collection and storage of carcasses is legally permitted and a facility for such storage is available. The label should contain a unique carcass ID number, as well as the date, time, and the nearest OHTL pylon/span number of discovery. The search technician should then take a minimum of 4-6 photographs of the specimen¹³, showing the animal from as many different angles, and as completely and clearly as possible, also including a ruler for scale and the carcass ID label in all photographs, in order to facilitate subsequent carcass identification by taxonomic experts. Once geoposition is recorded and photographs are taken, the carcass should either be collected and moved to a dedicated storage freezer, if such is legally permitted and a storage freezer is available. If collection of carcasses is not possible, carcasses should be left in place and marked with flagging tape on the leg to avoid counting it as a new carcass on a subsequent search. The search technician should also fill out a carcass information data sheet containing all of the required information on the carcass. Search technicians should handle all carcasses with bite-proof gloves, in the event that live bird carcasses are discovered, and to prevent injuries from abrasions with sharp claws/beaks of dead birds.
- Specimen identification. All bird specimens discovered during the carcass searches should be identified by qualified taxonomic experts to the finest taxonomic level possible. This may be accomplished through examination of photographs by qualified experts. Therefore, it is not necessary for all carcass searchers to be qualified to identify discovered bird carcasses, though it is generally advantageous if the searchers do have bird identification skills.

¹³ As a part of fieldwork preparation, the Consultant is expected to prepare written guidance for the search technicians to instruct them on proper photographic documentation of discovered carcasses.

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- Definition of collision/electrocution impacted animals. For the purposes of analysis and reporting, all birds found dead during the search effort will be regarded as likely collision or electrocution fatalities resulting from the OHTL. Discovery of any bones or body parts will be counted as a Project-caused fatality. Discovery of a “feather spot” consisting of at least 10 feathers of any type, or at least 5 flight feathers (wings/tail) within a 2 x 2 m area at one time will be regarded as a Project-caused fatality. Discovery of an injured bird within the search area will be handled following a specific protocol that is developed for such prior to the initiation of surveys¹⁴. Discoveries of injured birds will be documented and regarded as Project-caused fatalities.
- Evaluating cause of death. On discovery of a bird carcass or an injured bird, the searcher should examine the bird for externally visible indications of the cause of death/injury. The most important indication of an electrocution fatality is the presence of singeing or burning, for example the presence of singed feathers. The most important indications of collision fatalities or injuries are abrasion wounds or lesions, or the presence of a broken wing. Searchers should receive training in interpreting this type of evidence and evaluating cause of death prior to conducting searches, and documentation of physical evidence that may help evaluate cause of death/injury should be a core piece of information included on the carcass information data sheet.

Task 3 Reporting

Reporting responsibilities include monthly reports, as well as a final, annual report.


Monthly reports, provided within two weeks of completing all surveys for the month, should provide the following information;

- Full documentation of carcass search effort, in summary form, and also including original carcass search effort forms appended, as well as geospatial files showing actual search tracks walked by searchers during all searches during the month.
- Full documentation of each bird carcass or injured bird discovered, all documented with carcass information forms, and accompanied by at least 4-6 photographs

The final, annual report should be provided within one month of completing all surveys for the entire, year-long monitoring period, and should provide the following information;

- Full documentation of carcass search effort, in summary form, showing dates and locations of all surveys conducted over the course of the year.

¹⁴ The protocol for responding to discoveries of injured animals during the searches should be developed by the Consultant prior to the initiation of surveys, and should be aligned with applicable laws and policies relating to biodiversity, animal welfare, and health and safety. This protocol should also incorporate research into any available veterinary, or animal rehabilitation resources that may be available to treat injured animals, in accord with the protocol.

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- A summary table showing comprehensive data for each bird carcass or injured bird discovered over the entire year of searching, at minimum including the following:
 - o Species (or finest taxonomic level of identification possible)
 - o Age/sex of individual (if possible, to identify)
 - o Carcass ID (label) number
 - o Date of discovery
 - o Location of discovery (coordinates, and distance/direction to nearest OHTL span/pylon)
 - o Indications of cause of death/injury observed
 - o Reference to photographs taken at the time/place of discovery
- A photographic annex showing photographs of each bird carcass or injured bird discovered over the year of searching, sufficient to identify the species and support the determination of cause of death/injury (i.e. multiple photographs of some specimens may be necessary to confirm or substantiate the identification and assessment of cause of death/injury of the individual)