Environmental Impact Assessment

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Uzbekistan: Samarkand 1 Solar PV and BESS Project

Critical Habitat Assessment (CHA)

PART 3

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7 CHIROPTERA

A number of bat species were identified during CHA Screening that pertain to the CH criteria for threatened species, and potentially migratory/congregating species as well as range-restricted:

- IFC PS6 Criterion 1: Critically Endangered and Endangered Species
- IFC PS6 Criterion 2: Endemic and Restricted-range Species
- IFC PS6 Criterion 3: Migratory and Congregatory Species

7.1 Literature Review

The desktop screening exercise described in Section 2.1 identified eleven bat species that could potentially trigger criticality.

As part of baseline surveys, experts in the region compiled a list of species likely to inhabit mostly adjacent areas near the project site. This was based on their own observations in the field and detailed literature reviews. Studies on Jizzakh region are limited, and in the Samarkand region are more related to the city itself or mountainous areas. The list therefore includes those species that may not form colonies near power lines but may be observed during migrations / movements.

Table 6-1 List and status of bats species potentially can be recorded in the project area

ID	SPECIES	IUCN RED LIST	UZRDB (2019)	CMS	STATUS	SOURCE
Jizzakh region						
1	Greater Horseshoe Bat (*Rhinolophus ferrumequinum*)	LC	-	II	widespread species in suitable habitats	Meklenburtsev, 1935; 1935; Bogdabov, 1950; Bogdabov, 1953; Bogdabov, 1956;
2	Lesser Horseshoe Bat (*Rhinolophus hipposideros*)	LC	2(VU:D)	II	sporadic records in the country	included in the list based on own observations
3	Lesser Mouse-eared Bat (*Myotis blythii*)	LC	-	II	widespread species in suitable habitats	Meklenburtsev, 1935; Bogdabov, 1950; Bogdabov, 1953;
4	Geoffroy's Bat (*Myotis emarginatus*)	LC	-	II	widespread small number species	Meklenburtsev, 1935; Bogdabov, 1950; Bogdabov, 1953
5	David's myotis (*Myotis davidii*), (previously incorrectly reported in the	LC	-	-	widespread species, numerous in some places	Bogdabov, 1950; Bogdabov, 1953

	literature as Myotis mystacinus					
6	Bokhara Whiskered Bat (*Myotis bucharensis*)	DD	1(CR)	-	a rare, poorly studied species. There are several current records in the country	included in the list based on own observations and conclusions
7	Asian Barbastelle (*Barbastella leucomelas*)	LC	-	II	widespread species, but poorly studied	Meklenburtsev, 1935; Bogdabov, 1950; Bogdabov, 1953; Vologeninov, 1978
8	Long-eared Bat (*Plecotus strelkovi*)	LC	-	-	widespread species in suitable habitats	Ognev S.I., 1928; Bobrinsky N.A., 1931; Bogdabov, 1953;
9	Noctule Bat (*Nyctalus noctula*)	LC	-	II	widespread species	Meklenburtsev, 1935; Bogdabov, 1950; Bogdabov, 1953
10	Common pipistrelle bat (*Pipistrellus pipistrellus*)	LC	-	II	widespread species, numerous	Meklenburtsev, 1935; Bogdabov, 1953; Korelov, 1956; Vologeninov, 1978
11	Serotine Bat (*Eptesicus serotinus*)	LC	-	II	widespread species	Satunin K.A., 1909; Bobrinsky N.A.,1925; Meklenburtsev, 1935; Bogdabov, 1950; Bogdabov, 1953
12	Particoloured Bat (*Vespertilio murinus*)	LC	-	II	widespread species	Bogdabov, 1950; Bogdabov, 1953; Vologeninov, 1978
Samarkand region						
1	Greater Horseshoe Bat (*Rhinolophus ferrumequinum*)	LC	-	II	widespread species in suitable habitats	Meklenburtsev, 1935; 1935; Bogdabov, 1950; Bogdabov, 1953; Bogdabov, 1956; Gritsina et al, 2013 (a); Tadjibaeva, Khabilov, 2017
2	Lesser Horseshoe Bat (*Rhinolophus hipposideros*)	LC	2(VU:D)	II	sporadic records in the country	Bogdabov, 1953; Bogdabov, 1956; Gritsina et al, 2013 (b); Tadjibaeva, Khabilov, 2017
3	Buchara Horseshoe Bat (*Rhinolophus bocharicus*)	LC	-	II	AF, IR, TM, KZ, KY, TJ, UZ	Bogdabov, 1956; Tadjibaeva, Khabilov, 2017
4	Blyth's Horseshoe Bat (*Rhinolophus lepidus*)	LC	-	-	poorly studied species. There are several current records in the country	Benda et al, 2016; Tadjibaeva, Khabilov, 2017; Khabilov et al, 2018
5	Lesser Mouse-eared Bat (*Myotis blythii*)	LC	-	II	widespread species in	Meklenburtsev, 1935; Bogdabov, 1950;

					suitable habitats	Bogdabov, 1953; Tadjibaeva, Khabilov, 2017
6	Geoffroy's Bat (*Myotis emarginatus*)	LC	-	II	widespread small number species	Meklenburtsev, 1935; Bogdabov, 1950; Bogdabov, 1953; Tadjibaeva, Khabilov, 2017
7	Myotis davidii (previously incorrectly reported in the literature as Myotis mystacinus Kuhl, 1817	LC	-	-	widespread small number species	Bogdabov, 1950; Bogdabov, 1953; Tadjibaeva, Khabilov, 2017
8	Bokhara Whiskered Bat (*Myotis bucharensis*)	DD	1(CR)	-	a rare, poorly studied species. There are several current records in the country	Bogdabov, 1960; Kazakov et al, 2020; Khabilov, Tadjibaeva, ,2020
9	Asian Barbastelle (*Barbastella leucomelas*)	LC	-	II	widespread species, but poorly studied	Meklenburtsev, 1935; Bogdabov, 1950; Bogdabov, 1953; Vologeninov, 1978; Tadjibaeva, Khabilov, 2017
10	Noctule Bat (*Nyctalus noctula*)	LC	-	II	widespread species	Meklenburtsev, 1935; Bogdabov, 1953; Korelov, 1956; Vologeninov, 1978
11	Common pipistrelle bat (*Pipistrellus pipistrellus*)	LC	-	II	widespread species, numerous	Meklenburtsev, 1935; Bogdabov, 1953; Korelov, 1956; Vologeninov, 1978; Gritsina et al, 2013; Tadjibaeva, Khabilov, 2017
12	Long-eared Bat (*Plecotus strelkovi*)	LC	-	-	widespread species in suitable habitats	Ognev S.I., 1928; Bobrinsky N.A., 1931; Tadjibaeva, Khabilov, 2017; own observations
13	Serotine Bat (*Eptesicus serotinus*)	LC	-	II	widespread species	Satunin K.A., 1909; Bobrinsky N.A., 1925; Meklenburtsev, 1935; Bogdabov, 1950; Bogdabov, 1953;
14	Botta's serotine (*Eptesicus ognevi*)	LC	-	-	numerous in suitable habitats	Kashkarov, Mitropolskaya 2004
15	Savi's Pipistrelle (*Hypsugo savii*)	LC	-	II	a poorly studied species in the country	Khabilov, 1992; Tadjibaeva, Khabilov, 2017
16	Particoloured Bat (*Vespertilio murinus*)	LC	-	II	widespread species	Bogdabov, 1950; Bogdabov, 1953; Vologeninov, 1978; Khabilov, 1992

17	Hemprich's Long-eared Bat (*Otonycteris hemprichi)*	LC	2(VU:R)	-	is a difficult species to study due to the specifics of its biology. Few sightings have been recorded. However, it is likely to be much more widespread	Bogdabov, 1956; Khabilov, 1992

Endemism: *AF-Afghanistan, IR- Iran, KZ – Kazakhstan; TM – Turkmenistan; KG – Kyrgyzstan; TJ – Tajikistan; UZ – Uzbekistan.*

The Bokhara Whiskered Bat, is included in the IUCN Red List with DD status, is endemic to Uzbekistan and classified as Vulnerable in the Uzbekistan Red Data Book. The Lesser Horseshoe Bat and the Hemprich's Long-eared Bat are also included in the Uzbek Red Data Book as Vulnerable.

A combined list of bat species to be assessed, based on initial CHA screening and expert literature reviews is as follows.

Table 7-1 Combined list of all bat species expected to be present in the Project area.

SPECIES	IUCN CLASSIFICATION	UZBEK RDB	ASSESSMENT CRITERIA
Gobi Big Brown Bat (*Eptesicus gobiensis*)	LC	-	Criterion 3
Ognev's Serotine (*Eptesicus ognevi*)	LC	-	Criterion 3
Serotine Bat (*Eptesicus serotinus*)	LC	-	Criterion 3
Lesser Mouse-eared Myotis (*Myotis blythii*)	LC	-	Criterion 3
Geoffroy's Bat (*Myotis emarginatus*)	LC	-	Criterion 3
Nepal Myotis (*Myotis nipalensis*)	LC	-	Criterion 3
Common Pipistrelle (*Pipistrellus pipistrellus*)	LC	-	Criterion 3
Bokhara horseshoe bat (*Rhinolophus bocharicus*)	LC	-	Criterion 3
Particoloured Bat (*Vespertilio murinus*)	LC	-	Criterion 3
Greater Horseshoe Bat (*Rhinolophus ferrumequinum*)	LC		Criterion 3
David's Myotis (*Myotis davidii*)	LC		Criterion 3
Hemprich's Long-eared Bat (*Otonycteris hemprichi*)	LC		Criterion 3
Long-eared Bat (*Plecotus strelkovi*)	LC		Criterion 3
Notule Bat (*Nyctalus noctula*)	LC		Criterion 3
Savi's Pipistrelle (*Hypsugo savii*)	LC		Criterion 3
Hemprich's Long-eared Bat (*Otonycteris hemprichi*)	LC	2(VU:R)	Criterion 1 and 3
Bokhara Whiskered Bat (*Myotis bucharensis*)	DD	1(CR)	Criterion 1, 2 and 3

Lesser Horseshoe Bat (*Rhinolophus hipposideros*)	LC	2(VU:D)	Criterion 1 and 3

7.2 Bat Baseline Survey Method

The survey methodology consisted of three stages: Desktop analysis, Bat roost searches and Acoustic Monitoring

Desktop preparation; analysis of detailed topographic maps of the area (scale: 1:100 000, 1:200 000) and *Google Earth* satellite images to identify the locations (GPS coordinates) of potential bat roosts – mostly buildings. Those locations were then transferred to the *LocusPro* smartphone application for further use in the field.

The bat roost survey was conducted during two periods; 12th to 13th March 2024 (Samarkand and Bukhara regions) and 20th to 21st March 2024 (Samarkand regions). Field work included a survey of the potential roosts, identified during the desktop stage, along the project site including a 500m buffer zone. When a roost was found, it was thoroughly examined, both for the presence of bats and signs of bat activity such as guano and forage remains. All suitable bat habitat was surveyed, mapped and photographed. Each surveyed object was mapped, photographed; its brief description was made, including notes on the suitability of the objects for bats.

The following figure provides transects of the roost search survey.

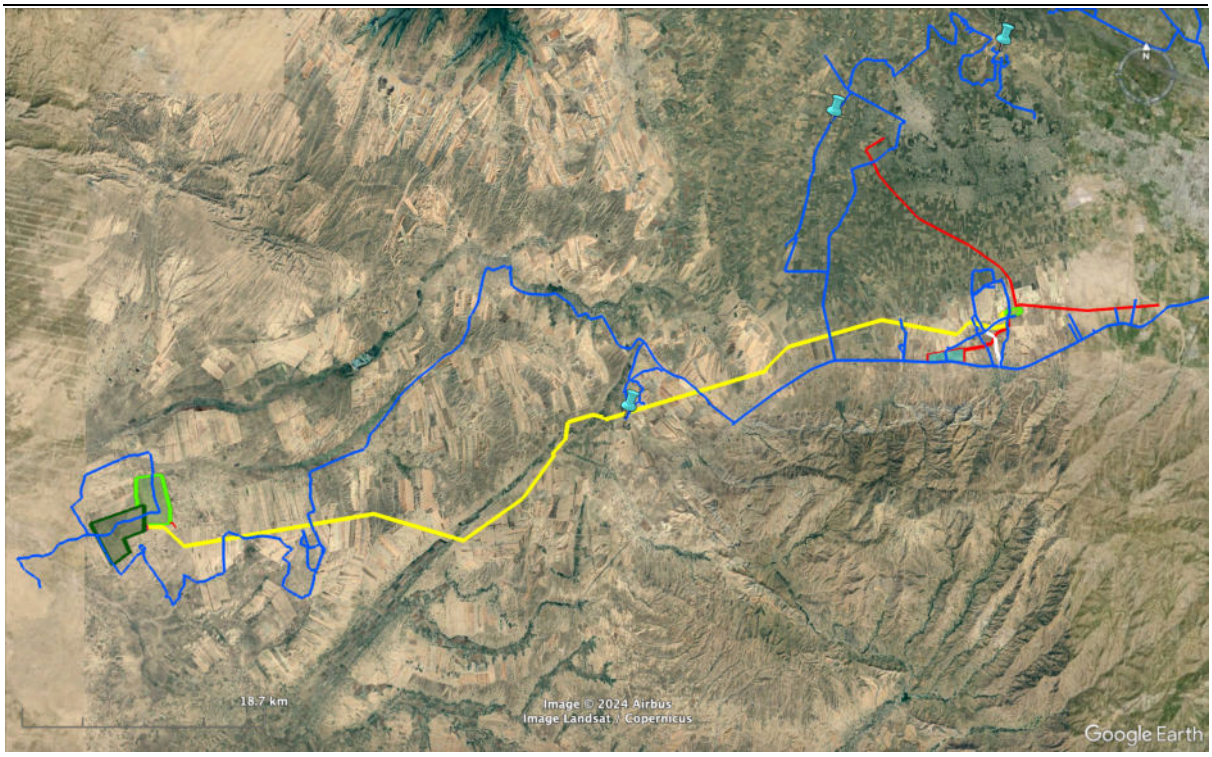

Figure 7-1 Transects of the roost search survey (blue line) and potential roosting sites (pins)

Bat activity was monitored using mobile bat detectors Echo Meter Touch (Wildlife Acoustics, USA) along two transects, one at each of the 100 MW, 400 MW and Nurobod BESS. The transects were surveyed twice, once in April (25th and 27th) in May (13th and 15th).

The transect passed along the route at registration points with a step of about 400 m. A stop was made at each registration point, during which the bat ultrasonic calls were recorded for approximately 10 minutes. After this, the recording was stopped, and started again at the next point. Surveying continued in this manner until the survey transect was finished. The detector recorded data from 19:50 to 23:40.

Due to the migratory patterns of bats in the area, the survey was conducted across two months. It was assumed that bats migrating above the survey sites would be counted in April, and sedentary species feeding above the survey sites would be counted in May.

Table 7-2 The total duration of recordings at the surveyed facilities

Project Facility	Month	Duration, s	Duration, h
100 MW PV Plant	Apr	3674	1.02
	May	4071	1.13
400 MW PV Plant	April	4878	1.36
	May	5841	1.62
Nurabad BESS	April	612	0.17
	May	662	0.18

7.3 Species Assessments

7.3.1 Bokhara Whiskered Bat

The Bokhara Whiskered Bat (*Myotis bucharensis*) is a congregatory species, with a possibly restricted range within Central Asia, including Uzbekistan. It is listed as Data Deficient (DD) on the Global IUCN Red List but Critically Endangered (CR) in the national Uzbekistan Red Data Book.

The CHA Screening exercise found that this species should be further investigated in the CHA against **Criteria 1 and 3**.

7.3.1.1 ECOLOGY & CONSERVATION

The species is found in arid areas and caves.

There is currently no additional information on the ecology of this species.

7.3.1.2 DISTRIBUTION

Known from three locations in Middle Asia (Uzbekistan, Tajikistan). Four specimens of this species were discovered, collected from Samarkand and Tashkent, Uzbekistan between 1959 and 1963 (Benda et al. 2011). It was thought to be extinct until a single male specimen was confirmed from the Zerafshan river basin in Tajikistan (Kazakov et al 2020).

May also occur in Kyrgyzstan, however Benda and Gaisler (2015) did not find the presence of this species from Afghanistan.

There is no available EOO.

There are no estimates of population available.

The following figure shows the species distribution globally and within Uzbekistan.

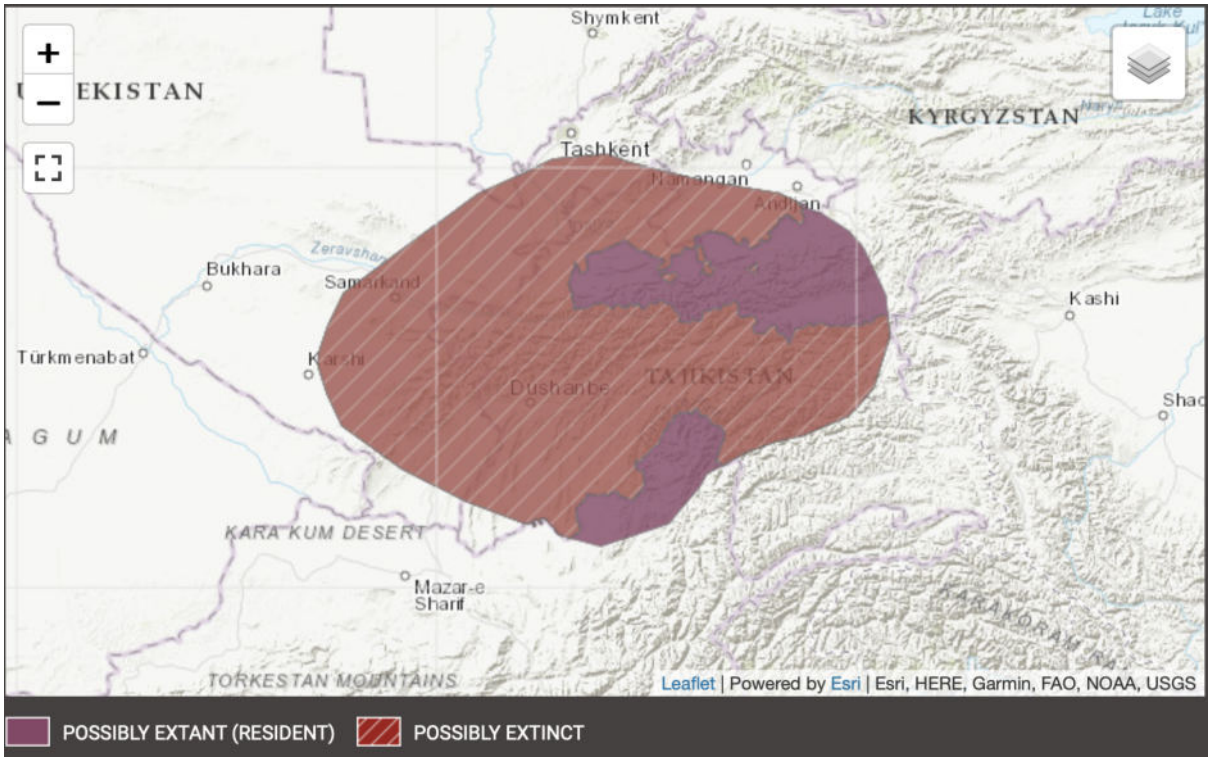

Figure 7-2 Geographic Distribution of Bokhara Whiskered Bat [41]

7.3.1.3 BASELINE SURVEY RESULTS

This species was not recorded within the Project area during Bat Roost Searches conducted in 2024. **Four *Myotis sp.*** were recorded during acoustic surveys, across the 100MW and Nurobod BESS facilities however the calls could not be identified to species level.

7.3.1.4 ANALYSIS

7.3.1.4.1 EAAA

The total EAAA for bats has been applied as all connected suitable habitat that overlaps the project footprint as well as exists within a reasonable buffer, determined by species specific ecology.

The Bokahara Whiskered Bat inhabits arid areas and caves. This species is considered extinct in Uzbekistan. Due to the lack of known records in Uzbekistan, an EAAA cannot be applied for this species.

[41] IUCN (International Union for Conservation of Nature) 2019. *Myotis bucharensis.* The IUCN Red List of Threatened Species. Version 2023-1

7.3.1.4.2 Criticality

Admittedly, the global population of most species of bats in the region are not definitively known; and therefore the assessment against within threatened species criterion and migratory/congregating species criterion is challenging.

The baseline surveys were inconclusive as to the presence of this species at the site. Four calls attributed to *Myotis sp.* were recorded during 2024 passive acoustic surveys. The calls could not be identified to species level. Due to absence of reference calls for *Myotis cf. bucharensis*, lack of recent records and as other more common *Myotis sp*. are known to inhabit the region, it is unlikely all four calls, if any, belong to *M. bucharensis*.

Given the lack of suitable habitat and that the species is considered extinct in Uzbekistan, it is unlikely that this species occurs in the Project AoI. Therefore, this species does not trigger CH, is not considered as a SBV nor a Sensitive Receptor (SR) in the ESIA and will not be assessed further in the project. However, given the status of this species, if were to be confirmed during future monitoring efforts it would be assessed under the framework of adaptive management.

7.3.2 All Other Bats

The CHA Screening exercise found that 14 bat species should be further investigated in the CHA against **Criteria 3.** All species are classified as Least Concern by the IUCN Red List and are not listed as protected in the Uzbekistan Red Data Book (UzRDB). The following table gives a summary of these species.

Table 7-3 Bat species identified for CHA screening under Criteria 3

SPECIES	ECOLOGY & THREATS	DISTRIBUTION & POPULATION
Gobi Big Brown Bat (*Eptesicus gobiensis*)	Inhabits semi-desert steppe and dry areas. Low reproductive rate. 1 offspring. Insectivorous. Threatened by droughts.	Subspecies *E. g. gobiensis likely* found in Uzbekistan. No population estimates or EOO.
Ognev's Serotine (*Eptesicus ognevi*)	Arid and semi-arid habitats – lowland steppe and rocky mountains. Insectivorous Threatened by habitat degradation.	Distributed in Central Asia primarily around the Aral and Caspian Seas. No population estimates or EOO.
Serotine Bat (*Eptesicus serotinus)*	Varied landscapes from urban centres to woodlands. Breed in autumn. 1 pup born in spring. Insectivorous. Threatened by habitat loss.	Widley distributed across Palearctic. No population estimates or EOO is available.

Species	Ecology & Threats	Distribution & Population
Lesser Mouse-eared Myotis (*Myotis blythii*)	Favours temperate zones with grassland and agriculture. Breeding begins in autumn – 2 pups born in late spring. Insectivorous. Threatened by habitat loss.	Broad range from Europe to China. EOO = is 23,471,950 km^2 No population estimates available.
Geoffroy's Bat (*Myotis emarginatus*)	Arid and semi-arid habitats – lowland steppe and rocky mountains. Insectivorous Lives in large colonies. Thought to be sedentary but may migrate to wintering sites. Threatened by habitat degradation.	Broadly distribution across Europe, Central Asia and Middle East. EOO = 15,654,608 km^2 No population estimates.
Nepal Myotis (*Myotis nipalensis*)	Arid or mountainous habitats including forest, shrubland and desert. Single pup once a year. Likely non-migratory. Reproduces once a year. No notable threats.	Widely distributed across Central Asia. The EOO is noted as >20,000 km^2. No population estimates.
Common Pipistrelle (*Pipistrellus pipistrellus)*	Adaptable – found in urban centres, arable land and woodlands. Migratory behaviour inferred. 1-2 offspring. Insectivorous Habitat loss is a major threat.	Widespread western Palearctic species. No population estimates or EOO available.
Bokhara horseshoe bat (*Rhinolophus bocharicus*)	Arid and semi-arid regions. Insectivorous. Habitat destruction is a major threat.	Distributed in Central Asia. No EOO or population estimates data.
Particoloured Bat (*Vespertilio murinus*)	Forages in open areas over various habitat types (forest, semi-desert, urban, steppe, agricultural land) Migratory species (up to 1,780km). 1-2 pups born in June/July No major threats.	Widely distributed in North Palearctic. EOO = 25,697,109 km^2 No population estimates.
Greater Horseshoe Bat (*Rhinolophus ferrumequinum*)	Forages in pastures, deciduous temperate woodland, and shrubland. Uses caves all year. Insectivorous. Give birth to single pups. Mainly threatened by habitat fragmentation and loss of insects through pesticide use.	The species has a wide range in the Palaearctic. EOO = 31424082 km^2. No population estimates available.
David's Myotis (*Myotis davidii*)	Associated with forests where it exclusively roosts in caves. Insectivorous Threatened by anthropogenic disturbance.	Endemic to China. No available EOO or population estimates.

Species	Ecology & Threats	Distribution & Population
Long-eared Bat (*Plecotus strelkovi*)	Inhabits montane and forest-steppe habitats. No other information on the species ecology or threats.	Mountainous regions of Kazakhstan, Kyrgyzstan, Tajikistan, Uzbekistan, China, Afghanistan and Iran. No available EOO or population estimates.
Noctule Bat (*Nyctalus noctula*)	Forages over wetland, woodland and pasture. Roosts in crevices, caves and occasionally artificial structures. Seasonal migrations to wintering sites in Europe.	Wide Palaearctic distribution. EOO = 24101079 km^2 No population estimates
Savi's Pipistrelle (*Hypsugo savii*)	Forages in woodland, pasture and wetlands, and often feeds at lights in rural areas. Roosts in crevices, occasionally in buildings or under bark. Migration and breeding unknown. No major threats.	Wide range in the Palaearctic (and marginally in Indomalaya) EOO = 15,658,670 km^2 No population estimates are available.
Turkestan Pipistrelle (*Pipistrellus aladdin*)	Inhabits semi-desert areas, rocky landscapes, woodlands, farmlands, rural gardens, and urban areas, as well as water bodies like rivers and lakes. One breeding period a year. 1-2 offspring. Insectivorous. No major threats.	Primarily found in Central Asia. No EOO or population estimates available.
Lesser Horseshoe Bat (*Rhinolophus hipposideros*)	A sedentary species, winter and summer roosts are usually found within 5-10km. Roosts are found in natural and artificial underground sites and in attics and buildings in the northern part of it. Foraging activities take place nearly exclusively within woodland areas, while open areas are avoided Threatened by disturbance and loss of underground habitats	Widely distributed in the western and central Palaearctic, from sea level to 2000m. It is found in the Eastern borders of Uzbekistan. EOO = 22,157,273 km2. No population estimates are available.
Hemprich's Long-eared Bat (*Otonycteris hemprichi*)	Its habitats are xeric, sparsely vegetated, and rocky. It roosts in rock fissures or in human constructions. Insectivorous. This is a ground-gleaning species. No major threats.	Occurs in the southern desert and sub-desert belt of Western and Central Palaearctic from Morocco and Niger as far east as north-west India. EOO = 11,617,147 km^2 No population estimates are available.

7.3.2.1 BASELINE SURVEY RESULTS

During bat acoustic surveys several species listed above were recorded, shown in the table below.

Table 7-4 Bat species recorded during acoustic monitoring surveys

	100 MW		NUROBOD BESS		400 MW		NUROBOD SS		500 MW		TOTAL
	APRIL	MAY	APRIL	MAY	APRIL	MAY	APRIL	MAY	APRIL	MAY	
Calls of *Eptesicus sp.(serotinus+ognevi)*	0	33	8	13	8	0	25	28	-	-	115
Calls of *Myotis sp.*	0	2	1	0	-		0	1	-	-	4
Calls of *Pipistrellus pipistrellus*	2	33	0	7	-	-	3	23	0	7	75
Calls of *Tadarida teniotis*	-	-	-	-	0	51	-	-	-	-	51
Calls of Eptesicus kuhlii	-	-	-	-	-	-	2	0	-	-	2
Calls of all species	**2**	**68**	**9**	**20**	**8**	**51**	**30**	**52**	**0**	**7**	
Number of species	**1**	**3**	**2**	**2**	**1**	**1**	**3**	**3**	**0**	**1**	

Calls attributed to the common pipistrelle (*Pipistrellus pipistrellus*) were recorded 75 times across 4 of the 5 facilities surveyed. Calls of *Eptesicus serotinus* and/or *Esptesicus ognevi* were recorded across 4 of the 5 sites surveyed, a total of 115 times. Due to the difficulties differentiating these calls it is unclear whether just one of these species, or both, are present in the area.

Myotis sp. calls were recorded 4 times across several sites. It was not possible to determine which species these calls belong to.

Finally, two species not initially screened in by Literature reviews were the *Tadarida teniotis* and *Eptesicus kuhli* were recorded 51 and 2 times respectively at just a single site each.

7.3.2.2 ANALYSIS

7.3.2.2.1 EAAA

The total EAAA for all bats has been applied as all connected suitable habitat that overlaps the project footprint as well as exists within a reasonable buffer, determined by species specific ecology.

For such a wide-ranging taxa, the EAAA was applied as all suitable foraging and roosting habitat within a 100km buffer of the project footprint. This should provide an adequate accounting of the population of bats likely to regularly utilize the project area.

The resulting EAAA has been mapped in the following figure.

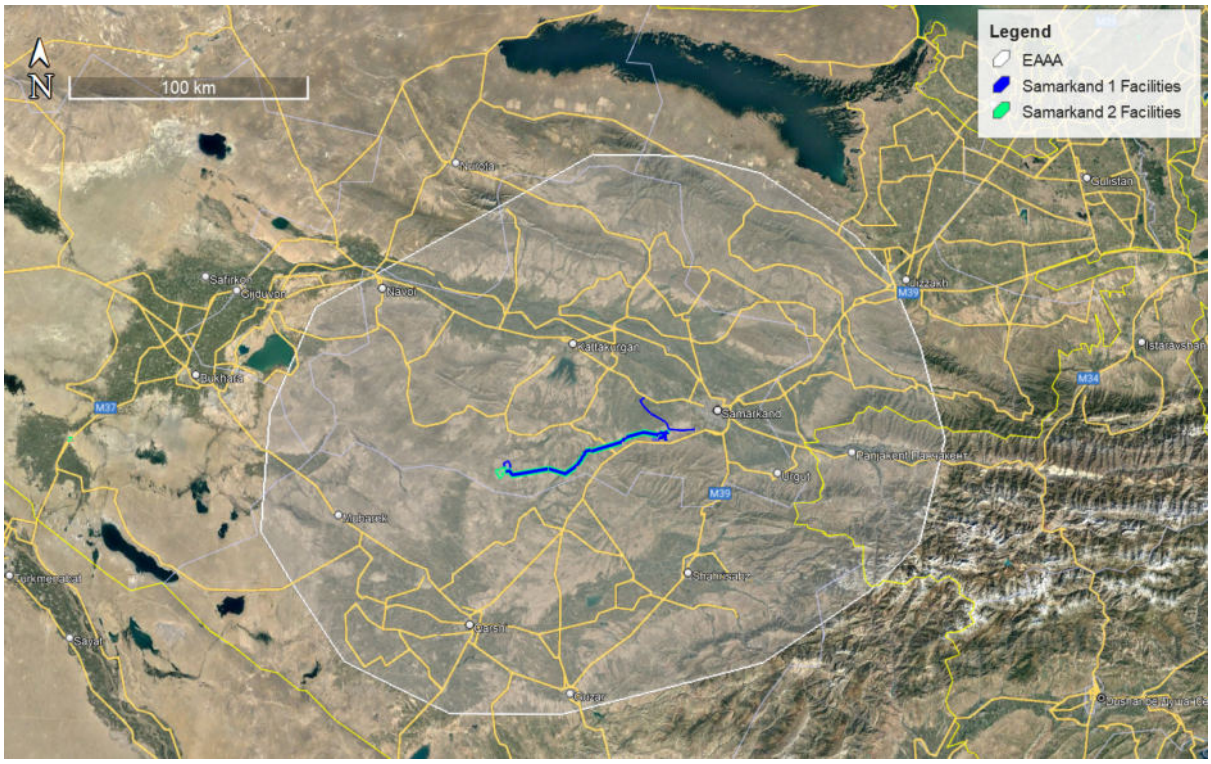

Figure 7-3 Estimated EAAA for all other bat species

7.3.2.2.2 Criticality

These species are assessed under Criterion 3, as they are considered to be congregatory and migratory species. This criterion requires that the project area should support at least 1% of the global population.

The baseline surveys recorded a total of 194 discrete calls from at least 3 of the species being assessed. However, given that surveys were conducted over 2 survey periods across 5 different areas, bat activity and diversity was minimal. The most commonly recorded species were *Pipistrellus pipistrellus* and *Eptesicus serotinus* and/or *Eptesicus ognevi*

In many cases for the species of microbats listed in the tables above, global population estimates are not available and thus cannot be assessed against the numerical threshold of Criterion 3. However, given the small size of the EAAA and relatively large geographic distribution of these common and widespread species, it is unlikely that that EAAA populations of each species would comprise more the 1% of the respective global populations.

Therefore, it is considered unlikely that more than 1% of the global populations of the common and widespread bat species recorded during the baseline surveys regularly occur in the EAAA to meet the migratory and congregatory requirements of Criterion 3. Furthermore given the

status of these species they will also not be considered as SBVs, although they will be assessed as low-value Sensitive Receptors in the respective Samarkand project ESIAs.

8 HERPETOFAUNA

One reptile species was identified during CHA Screening that pertain to the CH criteria for threatened species, and potentially migratory/congregating species as well as range-restricted:

- IFC PS6 Criterion 1: Critically Endangered and Endangered Species
- IFC PS6 Criterion 2: Endemic and Restricted-range Species

8.1 Herptiles Baseline Survey Method

8.1.1 Methodology

Field surveys to assess Herptiles in the Project area were carried out in the Spring and Summer 2023 and 2024. A combination of field surveys and desktop analysis was used to assess Herptile diversity. The survey locations and dates are detailed in the table below.

Table 8-1 Locations and Dates of Herptile Surveys across Project Facilities

PROJECT FACILITY	SURVEY POINT	DATE AND TIME	LENGTH	N (DD FORMAT)	E (DD FORMAT)	BIOTOPE
Nurobod SS, BESS and 100 MW PV Plants	PS-1	28/06/23	1 km	39.549109°	66.685559°	Deposited lands
	PS-2	28/06/23	1 km	39.545677°	66.687853°	Deposited lands
	PS-3	28/06/23	2 km	39.576767°	66.744959°	Deposited lands
	PS-4	28/06/23	1 km	39.574226°	66.737152°	Agricultural fields
	PS-5	28/06/23	1 km	39.553687°	66.686383°	Agricultural fields
	Nurobod BESS	11/03/24				Deposited lands
	Nurobod SS	11/03/24				Deposited lands
400 and 500 MW PV and pooling station	P-1	27/06/23	5 km	39.443530°	65.977999°	Deposited lands
	P-2	27/06/23	3,6 km	39.444009°	65.987181°	Deposited lands
	P-3	27/06/23	2 km	39.426815°	65.966046°	Gravelly-clay plain
	P-4	27/06/23	2,6 km	39.427411°	65.933010°	Gravelly-clay plain
	P-5	27/06/23	4 km	39.419400°	65.944827°	Gravelly-clay plain
Nurabod SS-Pooling Station – 70km OHTL	PLN-1	30/08/23	1.13 km	39.576059° 66.737745°	39.566393° 66.742018°	Sazagan site
	PLN-2	30/08/23	1.06 km	39.568289° 66.651061°	39.569996° 66.639031°	Wheat fields, fallow land, ravine
	PLN-3	30/08/23	1.26 km	39.533276° 66.512261°	39.530160° 66.498623°	A ravine, a scour
	PLN-4	30/08/23	1.04 km	39.512995° 66.426383°	39.510381° 66.414994°	Bagara foothills through which the gas pipeline passes

Project Facility	Survey point	Date and time	Length	N (DD format)	E (DD format)	Biotope
	PLN-5	30/08/23	1.06 km	39.504631° 66.367995°	39.503814° 66.361326°	The natural hilly landscape
	PLN-6	30/08/23	1.07 km	39.439060° 66.180656°	39.435895° 66.169032°	The hills between the bagara
	PLN-7	30/08/23	1.2 km	39.420389° 66.054487°	39.418424° 66.040842°	Small-scale transformation of the territory near the village, steppe area
	PLN-8	30/08/23	1.05 km	39.427239° 65.983609°	39.426674° 65.971470°	Well-preserved steppe site with salinization
11 km LILO	LILO11km_1	11/03/24		39.579708	66.855531	Vinegard
	LILO11km_2	11/03/24		39.579296	66.838477	Fallow lands
	LILO11km_3	11/03/24		39.576897	66.802835	Temporary stream and riverbed

The main research method was mixed stationary and transect surveys, where points and transects were selected along the project site in accordance with different habitat types, and therefore to maximise the Herptile diversity captured. Field studies were carried out according to generally accepted zoological methods for identifying species composition. The following methodological guidelines were used in the survey: L. G. Dinesman, M. L. Kaletskaya (1952), V. M. Makeev, A. T. Bozhansky (1988), D.A. Bondarenko, N.G. Chelintsev (1996).

Thus, the method of quantitative assessment was based on the ecology of the species under consideration, landscape and geographical conditions, season and type of work.

The quantitative assessment of reptiles and amphibians was mainly based on the transect survey. The transect method consists in counting individuals along a fixed long line (transect), on both sides of it, with the duration of the survey determined by the known distance, which is selected depending on the type of reptile and the area, but does not exceed 1 km in one way. In this case, all individuals encountered on the transect are registered, regardless of the distance they are identified at. The perpendicular distance is measured between the transect axis and each individual. The results obtained are used to calculate the density of recorded reptiles. The 1 km transect was chosen because heaviest errors arise when long transects are used for species that, like the Central Asian Tortoise, have high density, daily and seasonal activity cycles fluctuations with high peak values, and are caused by incorrect selection of a minimum survey area for a particular species (Vashetko et al, 2001).

The Central Asian tortoise population density (D) was calculated using the following formula:

$$D=n2LB$$

where n – number of animal individuals recorded on the transect; L – length of the transect; B – formula to calculate an effective width of the survey strip:

$$B=W(0,79F+0,21F4)$$

where W – width of the limited strip on both sides of the transect axis; F:

$$F=2yW$$

The use of perpendicular distances to carry out survey on a strip of limited width excludes underestimation of the population density of the Central Asian tortoise caused by a decrease in their detectability in remote parts of the survey strip, regardless of the degree of its limitation.

The abundance of the reptiles in habitats was estimated using the following population density scale for 1 ha (Kuzyakin, 1962): 0.1 – 0.9 – rare, 1.0 – 9.9 – common, 10.0 and higher – abundant.

The following figures show the locations of sample points and transects in relation to various Project elements.

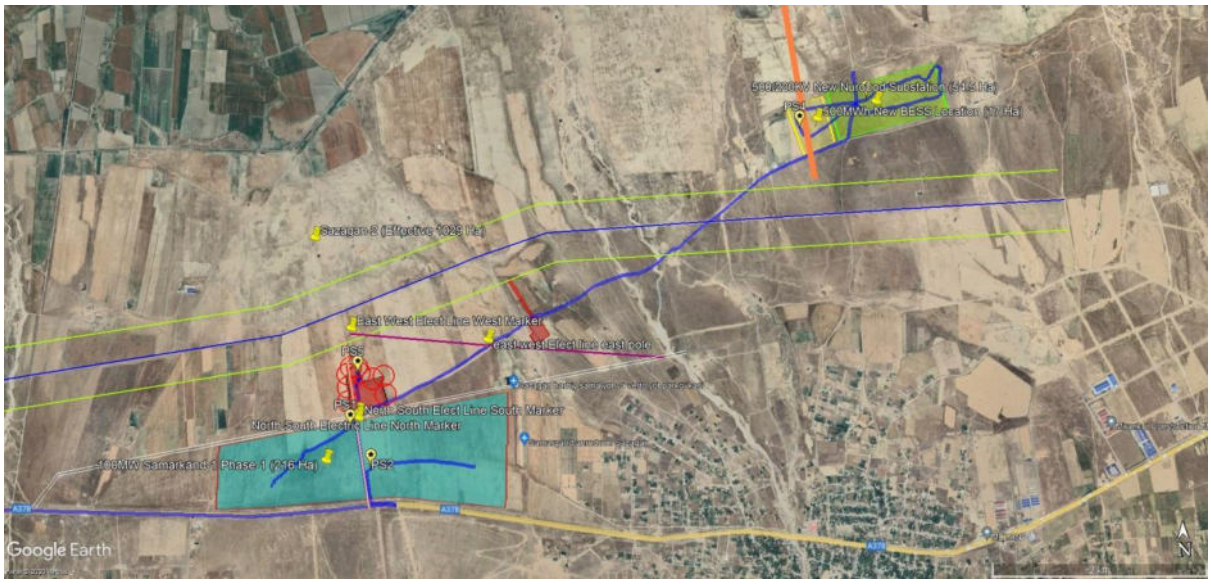

Figure 8-1 Survey points and transects on Nurabad Substation, Nurabad Bess, Solar 100 MW PV (June 2023).

Figure 8-2 Survey points and transects on Nurabad Substation, Nurabad BESS (March 2024).

Figure 8-3 Survey points and transects on Solar 400 MW PV, Solar 500 MW PV and pooling station (June 2023).

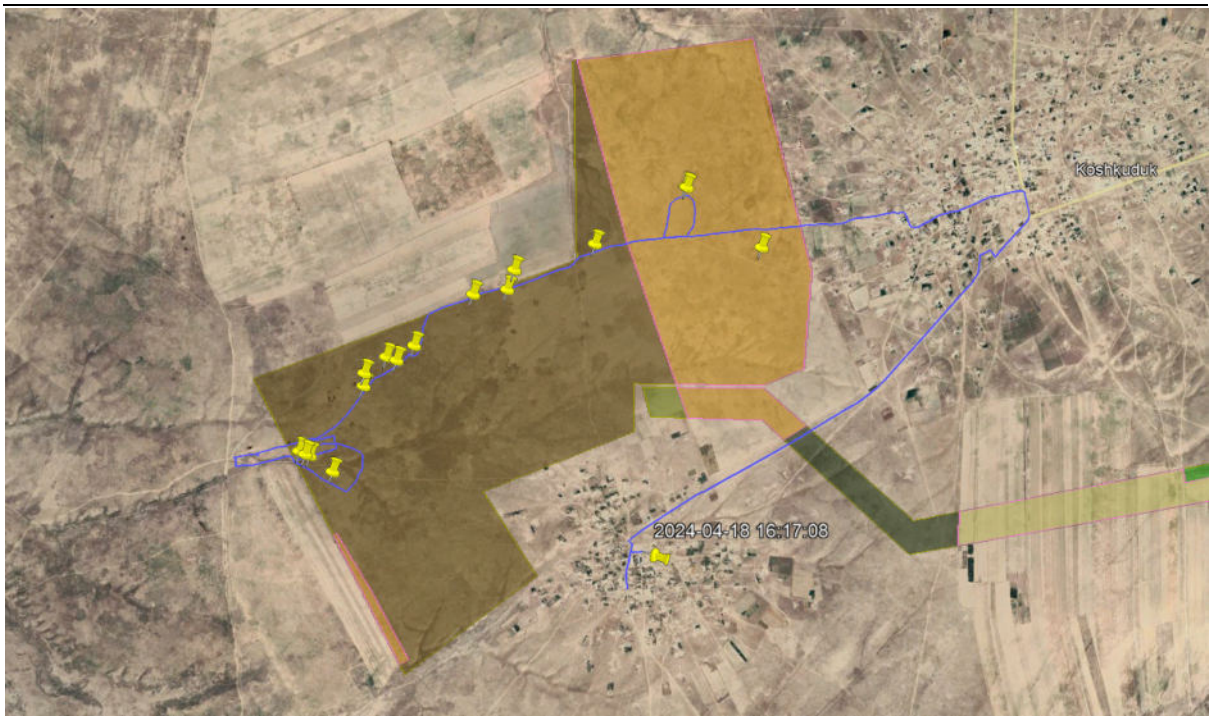

Figure 8-4 Survey points and transects on Solar 400 MW PV, Solar 500 MW PV and pooling station (April 2024).

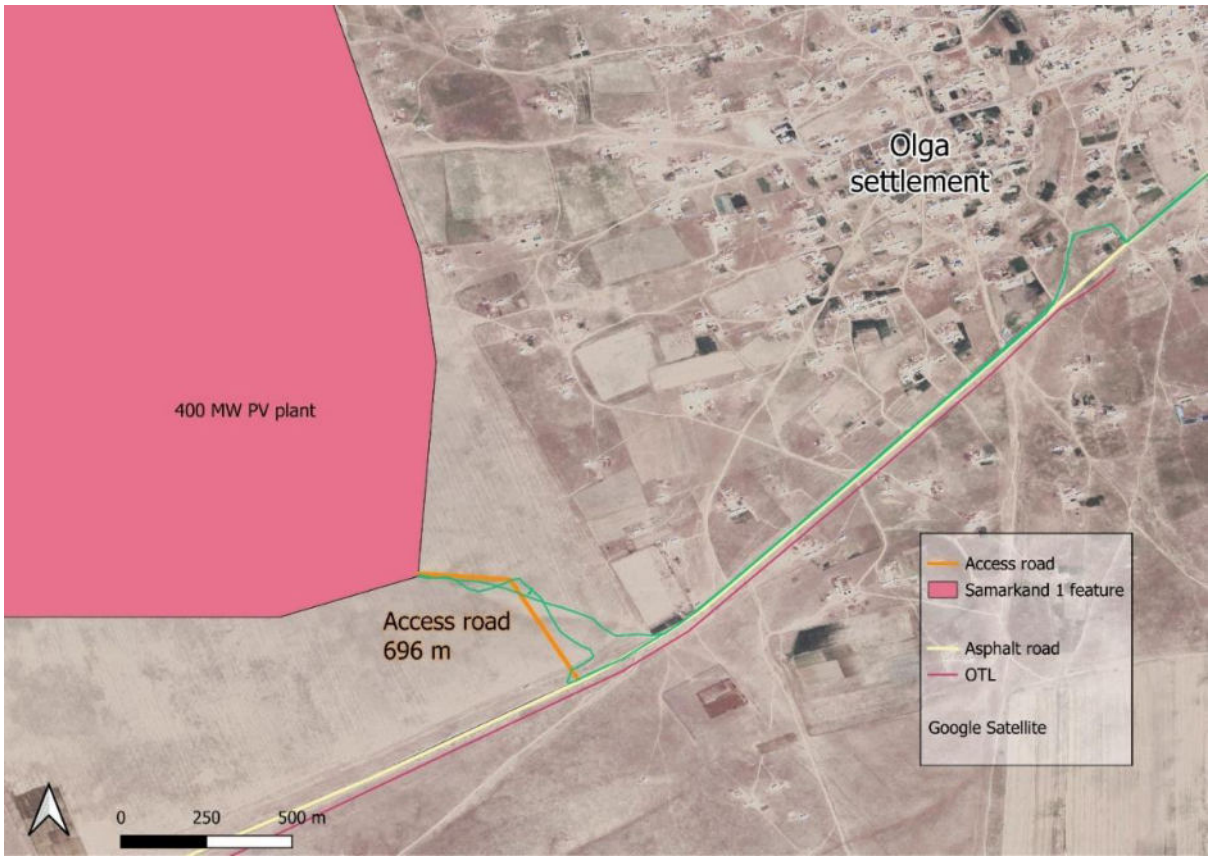

Figure 8-5 Survey map of the access road (March 2024)

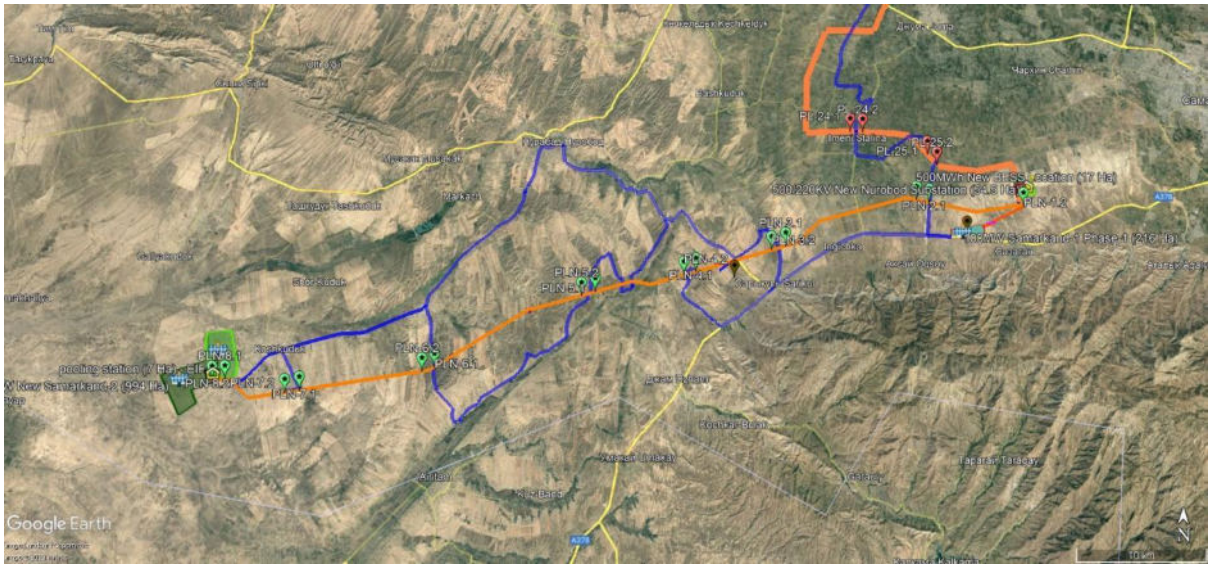

Figure 8-6 Survey map including survey points and transects on Nurabad SS – Pooling station – 70km

Additional surveying was completed between 17th – 19th April and 14th to 15th May 2024 to align with the known active period of the Central Asian Tortoise. A total of nine additional transects were completed across the facilities.

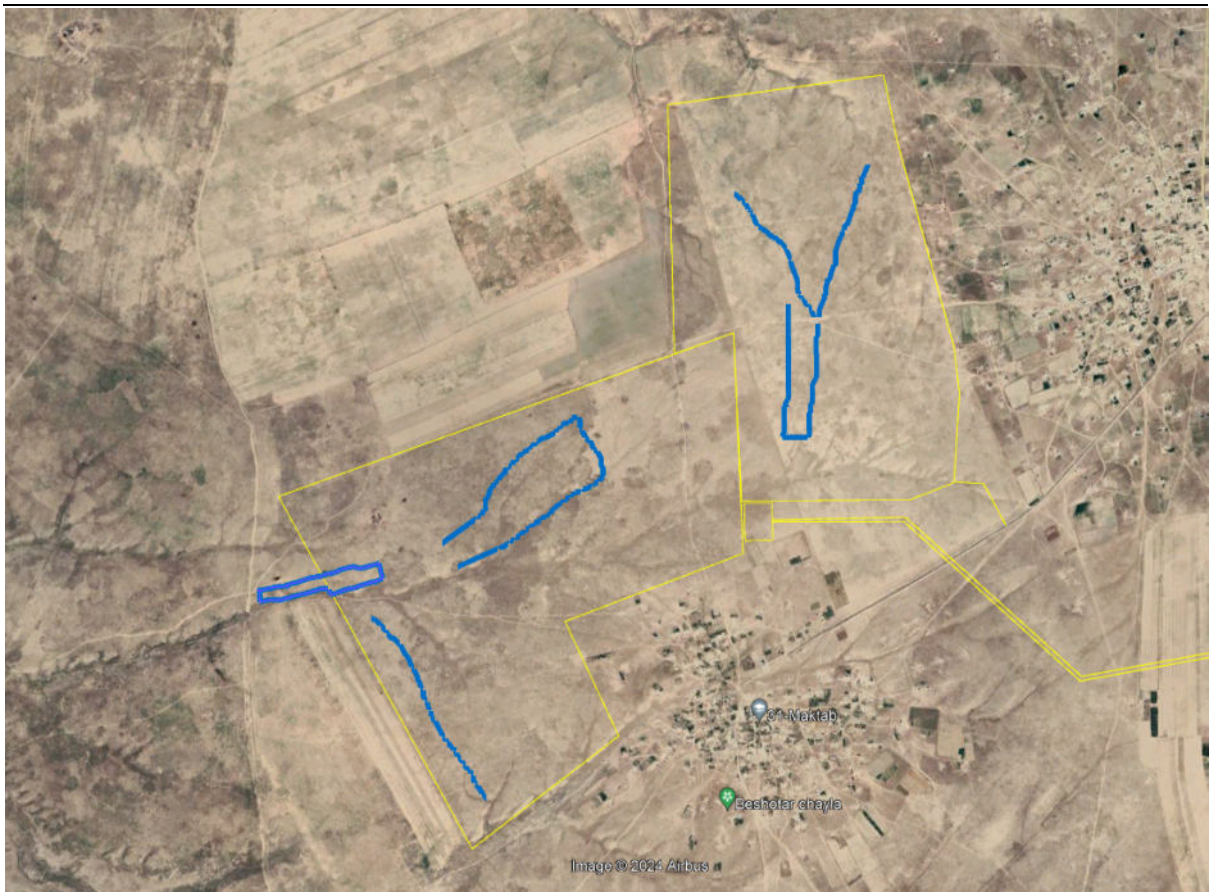

Figure 8-7 April 2024 survey points and transects covering the 400MW and 500 MW PV

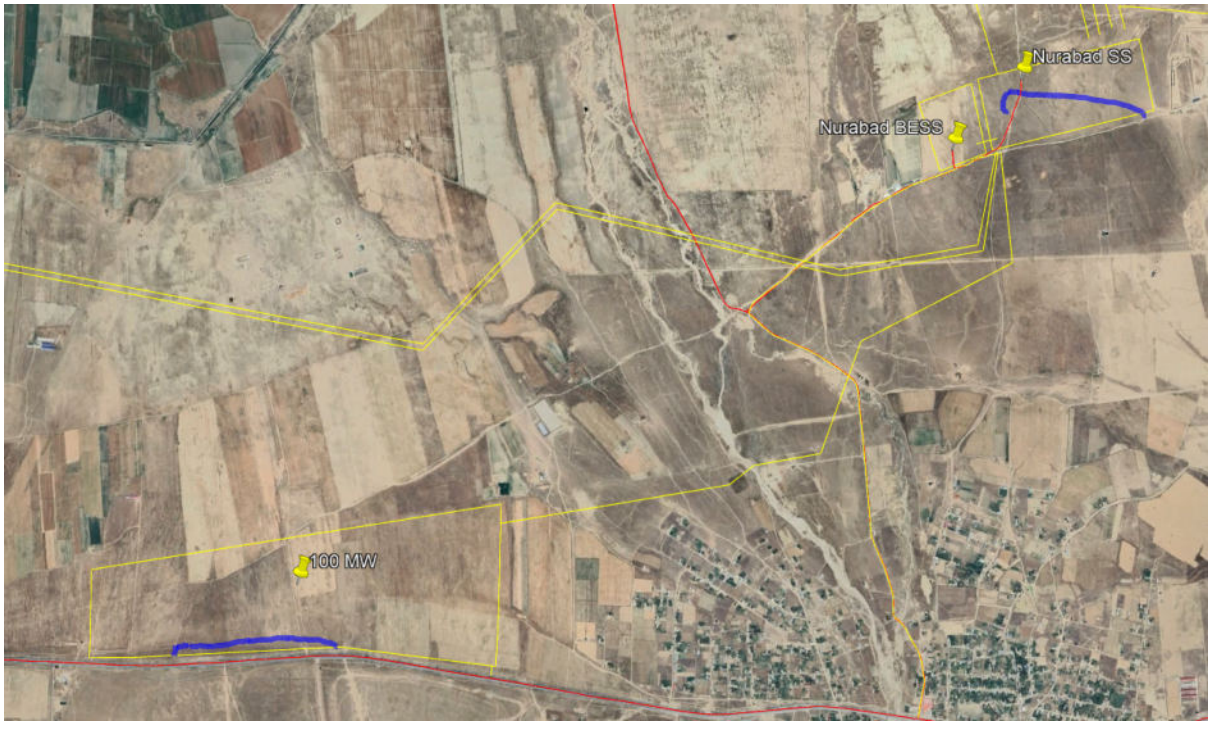

Figure 8-8 Additional transects within the Nurobod SS and Nurobod BESS completed in May 2024

Table 8-2 Survey transects along main facilities and OTHL in April and May 2024

Facility and Transect	Date and time	Start of transect N, E (DD format)	End of transect N, E (DD format)	Length, km	Biotope
500MW_1	18/04/24	1.4	Deposited lands	500MW_1	18/04/24
500MW_2	18/04/24	2.5	Deposited lands	500MW_2	18/04/24
500MW_3	18/04/24	1.5	Deposited lands	500MW_3	18/04/24
500MW_4	18/04/24	2.7	Gravelly-clay plain	500MW_4	18/04/24
500MW_5	18/04/24	4	Gravelly-clay plain	500MW_5	18/04/24
Nurabad_ 2024-05-14 15:22_1.12km	14/05/2024	39.575297 66.742706	39.575114 66.753605	1.12	Fallow land
70km OHTL_1	15/05/24	39.499133 66.346217	39.505922 66.345690	2 km	Dry grassland
70km OHTL_2	15/05/24	39.436137 66.175653	39.435445 66.175692	2 km	Dry grassland
70km OHTL_3	15/05/24	39.427084 65.995941	39.423554 65.993406	3 km	Dry grassland and fallow lands

8.2 Species Assessments

8.2.1 Central Asian Tortoise

The Central Asian Tortoise (*Testudo horsfieldii)* is a Herptile native to Uzbekistan, listed as Vulnerable (VU) species on the IUCN Global Red List, and Vulnerable (VU) in the Uzbekistan National Red Data Book.

The CHA Screening exercise found that this species should be further investigated in the CHA against **Criteria 1.**

8.2.1.1 Ecology & Conservation

They mostly inhabit arid, dessert regions and sandy steppe landscapes (Ernst & Barbour, 1989; Iverson, 1992).

The ecology of this species in the wild is not well studied, however recent studies have focusing on populations in the Djeiron Ecocenter near Bukhara in Uzbekistan give a good indication of the ecology of these species specific to this region (Lagarde et al 2011).

The species bury themselves in sandy soil for hibernation during much of the year. They are active above ground for just 2- 3 months during Spring when favourable weather conditions

permit. Females may remain buried and hibernating from mid-June to March the following year, whilst males, are more likely to emerge from hibernation as soon as climatic conditions are favourable (Naulleau et al. 1987), probably in anticipation of the mating period (Bonnet et al. 2001). Mating immediately follows hibernation and lasts for approximately 3 weeks. The egg-laying period occurred from late April to the end of the active season (Henen et al. 2000), where females lay upto 9 eggs per year across different clutches (Lagarde et al 2011).

They are diurnal. They spend large portions of their short time active feeding. The species is strictly herbivorous, feeding on available annual vegetation (Ataev 1997).

Females have the largest territories (~30Ha) which overlap the territories several males (Lagarde et al 2011).

Its primary threats are habitat destruction and collection for the pet trade (Stubbs 1989; Brushko and Kubykin 1982; Kubykin 1995). Climate change may also pose a threat as this species is sensitive to extreme temperatures and relies on rain fall during active periods for adequate vegetation and food (Lagarde et al 2011).

8.2.1.2 DISTRIBUTION

The Central Asian Tortoise inhabits arid regions from south-eastern Russia, south to northern regions of Iran and Afghanistan, northwest regions of Pakistan and Baluchistan, and western China (Ernst and Barbour, 1989; Iverson, 1992). It is one of the most widespread tortoises.

There are currently no quantifiable population estimates. However, population density has declined markedly through-out the species' range (Stubbs 1989), owing to habitat destruction and extensive collecting for the pet trade (Brushko and Kubykin 1982; Kubykin 1995).

There are currently no available maps of the species distribution.

8.2.1.3 BASELINE SURVEY RESULTS

During initial 2023 surveys a total of 36 tortoises were recorded during baseline surveys, with density estimates suggesting a large population across the Project area. The following table shows counts and density estimates for each aspect of the Project facilities.

Table 8-3 Results of Central Asian Tortoise Surveys across the Project area.

PROJECT ELEMENT	DATE OF SAMPLE	OBSERVATIONS	COUNTS	AVERAGE DENSITY (IND/HA)	ESTIMATED TOTAL IN PROJECT AREA
500MW	April 2024	Adult individuals	21	0.63	626
400 MW	April 2024	Adult Individuals	7	0.66	533

Project Element	Date of Sample	Observations	Counts	Average Density (Ind/ha)	Estimated Total in Project Area
Access Road	March 2024	Adult individuals	7	16.76	
70km OHTL	August 2023	1 adult Several burrows and carapax	1		
11km and 19km LILO	March and April 2024	Suitable habitat			

In sampled areas where individuals were not recorded, all were described as having suitable habitat for the species and a high likelihood of its presence.

8.2.1.4 Analysis

8.2.1.4.1 EAAA

The total EAAA for resident reptiles is applied as all connected suitable habitat that overlaps the project footprint as well as exists within a reasonable buffer, determined by species specific ecology.

The Central Asian Tortoise inhabits arid, dessert regions and sandy steppe landscapes. The EAAA was considered as all suitable habitats found within the project AoI (considered as a 20km buffer from the project footprint to account for habitat displacement). This should provide an adequate accounting of the population likely to regularly utilize the project area.

The resulting EAAA has been mapped in the following figure.

Figure 8-9 EAAA and potential habitats for the Central Asian Tortoise in the PV plant site

8.2.1.4.2 Criticality

The global population is unknown; therefore, it is not possible to assess criticality using global population estimates. Literature review identified a report on the illegal trade of the Central Asian Tortoise which states that based on population surveys conducted between 1991 and 1999 in the Kyzil-Kum desert in central Uzbekistan, the population of *T. horsfieldii* in Uzbekistan alone was estimated at about 15-20 million mature individuals (Mitropolski & Kashkarov, 2000; Bozhansky & Polinova, 2000). Considering that this species is widespread across 12 countries; Afghanistan; Armenia; Azerbaijan; China; Iran, Kazakhstan; Kyrgyzstan; Pakistan; Russian Federation; Tajikistan; Turkmenistan and Uzbekistan, it is likely that the global population estimates is much higher than 15-20 million individuals.

Under **Criteria 1**, the threshold for VU species is EAAAs that support a globally important concentration of the global population such that the loss of the EAAA population would result in uplisting to CR/EN status and meet the quantitative thresholds of Criterion 1.

As there were 36 individuals recorded during the baseline surveys indicating the presence of 1159 individuals at the minimum, it is considered unlikely that the EAAA population comprises of a globally important concentration the loss of which would trigger uplisting to CR/EN status.

As such, the Central Asian Tortoise does not trigger CH status, but is considered a Significant Biodiversity Value due to its Vulnerable (VU) designated conservation status on both IUCN and in the National Uzbekistan Red Data Book.

The ESIA will address impacts on this species as a Sensitive Receptor, via the biodiversity impact assessment, mitigation program and residual significance analysis.

9 BOTANY

There is a gap in the IUCN database when it comes to flora species distributions. In many cases, spatial distributions are not mapped, and therefore species of conservation concern that may otherwise trigger r CH status, might be missed during initial CHA Screening.

A literature review provided by a regional botanist was conducted, which is a typical requirement for setting the botanical baseline and integrating into the ESIA process. The review includes consideration of the Uzbekistan Red Data Book which lists the nationally threatened & endangered flora species. The regional botanist utilizes experience and professional opinion as well as previous study knowledge to determine if any botanical species of concern (from UzRDB or otherwise) could potentially be present.

The findings of the literature review and subsequent botanical surveys found no species which would require consideration under the CHA. The botanical report did not find any species of concern and also did not highlight any potential species of concern that the specialist considered as possibly occurring within the project's area of influence.

One species of flora was identified and screened in for further investigation in this CHA.

9.1.1 Tulipa micheliana

Tulipa micheliana is a tulip species found in various areas of Uzbekistan. It is listed as Vulnerable (VU) on the Global IUCN Red List. It is not listed in the Uzbekistan Red Data Book.

The CHA Screening exercise found that this species should be further investigated in the CHA against **Criteria 1**.

9.1.1.1 ECOLOGY & CONSERVATION

This species grows in the foothills and lowlands across juniper woodlands, stony mountain steppe, and on the edge of cultivated land.

It is unsure exactly what threats this species faces, however this species has decreased in number and large portions of the population occurs in unprotected areas.

9.1.1.2 DISTRIBUTION

This species is quite widespread occurring in multiple regions of southern Uzbekistan, the western Pamir-Alay of Tajikistan, north-eastern Iran and large parts of the Kopet Dag in Turkmenistan (Everett 2013).

The estimates global population is 10,000 mature individuals, with an estimated EOO of 298,410 km^2.

The following figures show the distribution of *Tulipa micheliana* in Uzbekistan and globally.

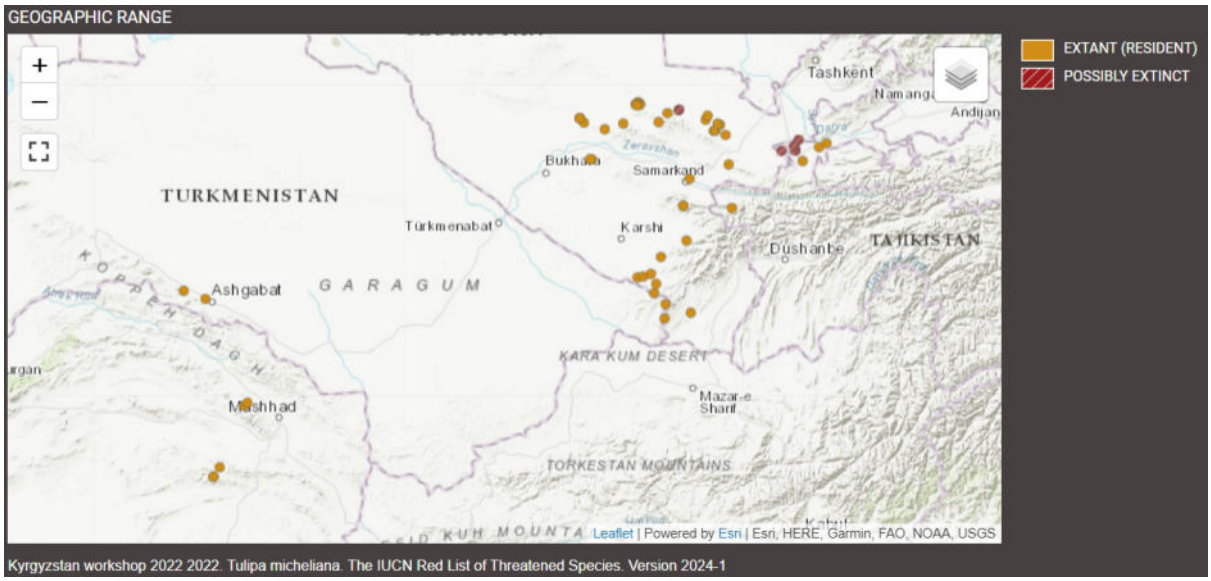

Figure 9-1 Geographic Distribution of Tulipa micheliana[42]

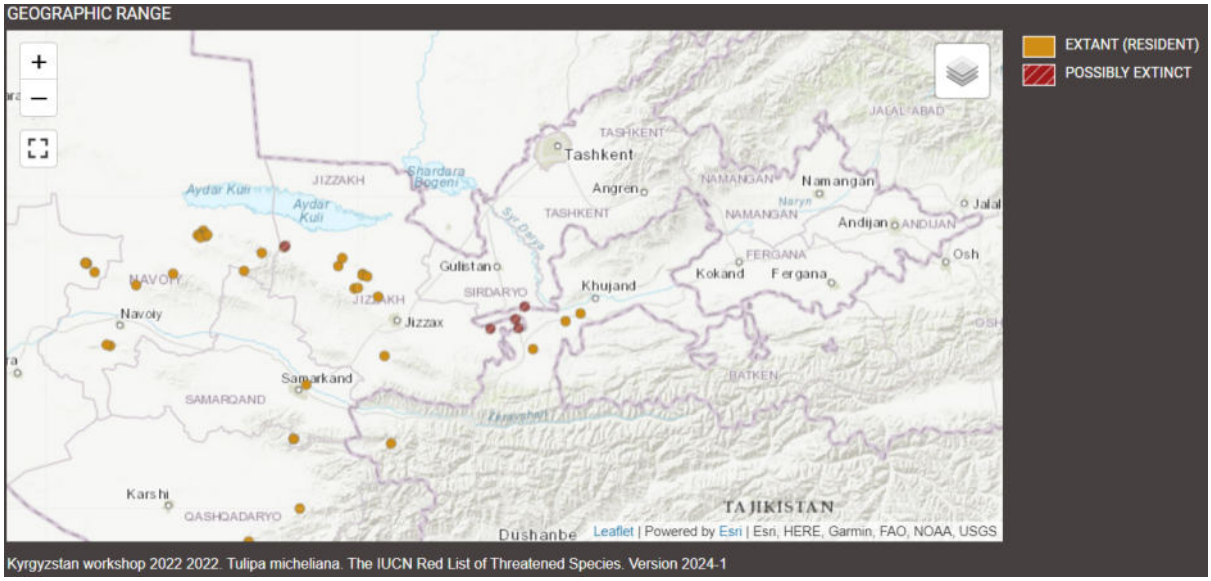

Figure 9-2 Geographic Distribution of Tulipa micheliana within Uzbekistan

[42] Wilson, B., Sultangaziev, O.E., Boboev, M., Dekhonov, D., Beshko, N. & Turakulov, T. 2022. Tulipa micheliana. The IUCN Red List of Threatened Species 2022: e.T215067974A215336536. https://dx.doi.org/10.2305/IUCN.UK.2022-2.RLTS.T215067974A215336536.en. Accessed on 07 August 2024.

9.1.1.3 BASELINE SURVEY RESULTS

This species was not recorded within the Project area during any of the baseline surveys conducted in 2023 and 2024.

9.1.1.4 ANALYSIS

9.1.1.4.1 EAAA

The total EAAA for flora has been applied as all connected suitable habitat that overlaps the project footprint as well as exists within a reasonable buffer, determined by species specific ecology.

Tulipa micheliana grows in the foothills and lowlands across juniper woodlands, stony mountain steppe, and on the edges of cultivated land. Expert consultations confirmed that the habitat typology and conditions within the project AoI are not suitable for this species. Therefore, due to the unlikelihood of presence in the project AoI, an EAAA cannot be applied as a result of which CH will be not further assessed for this species. However, given the nationally important status of this species, if were to be observed during future monitoring efforts it would be assessed under the framework of adaptive management.

ICTHYOFAUNA

Ichthyologist Interview

The initial CHA Screening exercise identified a total of two ichtyofauna species listed on the IUCN Red List as Vulnerable (UV), whose global distribution included portions of the Chirchik's river. As such, an interview with a specialist was conducted – Akbar Jonruzimov, an ichthyologist with expertise in Chirchik's ichtyofauna.

The following table provides the information obtained from the specialist in relation to these three species.

SPECIES	COMMON NAME	IUCN RED LIST	NARIONAL RDB	CRITERION	OCCURRENCE	PROJECT SITE AND EAAA OCCURRENCE
IUCN Threatened Fish						
Luciobarbus brachycephalus	Aral Barbel	VU	EN	Criterion 1(CR/EN)	Only occurs in a few reservoirs in the Amu Darya and Syr Darya	Could possibly occur
Cyprinus carpio	*Eurasian Carp*	VU	EN	Criterion 1(CR/EN)	Has an extensive extant and introduced population across a large range	Could possibly occur

In relation to the CHA, the two species listed as threatened on the IUCN Red List are scoped out as the specialist confirmed that the terrestrial nature of this project is unlikely to affect the population of these aquatic species.

10 CONCLUSION

No species have triggered Critical Habitat for the project. However, some elements are identified which would be considered as SBVs as per IFC PS 6.

10.1 Final List of SBVs

The complete list of Significant Biodiversity Values for the project is as per the table below.

Table 10-1 Significant Biodiversity Values Categorized from CHA Screening Process

Common Name	Globally Threatened	Criterion
Egyptian Vulture (observed in Autumn 2023 and Spring 2024 VP surveys)	✓ IUCN EN Status triggers SBV and No Net Reduction requirement	Criterion 1 (IFC)
Steppe Eagle (observed in Autumn 2023 and Spring 2024 VP surveys)	✓ IUCN EN Status triggers SBV and No Net Reduction requirement	Criterion 1 (IFC)
Great Bustard (observed)	✓ IUCN EN Status triggers SBV and No Net Reduction requirement	Criterion 1 (IFC)
Eastern Imperial Eagle (observed in Autumn 2023 and Spring 2024 VP surveys)	✓ IUCN VU Status triggers SBV	Criterion 1 (IFC)
Central Asian Tortoise (observed)	✓ IUCN VU Status triggers SBV	Criterion 1 (IFC)

10.2 Requirements for Development

The project has listed a number of Significant Biodiversity Values that will be assessed accordingly in the ESIA. Biodiversity management must be in place to ensure No Net Reduction for SBVs which are listed as EN or CR on the IUCN Red List. Other SBVs will be assessed as Sensitive Receptors (SRs) in the biodiversity impact assessment of the ESIA and managed accordingly to the mitigation hierarchy when determining residual significance.

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ANNEX A – CRITICAL HABITAT SCREENING MATRICES

Thresholds for Criterion 1 (Endangered or Critically Endangered Species) are the following:
(a) Areas that support globally important concentrations of an IUCN Red-listed EN or CR species (≥ 0.5% of the global population AND ≥ 5 reproductive units GN16 of a CR or EN species).
(b) Areas that support globally important concentrations of an IUCN Red-listed Vulnerable (VU) species, the loss of which would result in the change of the IUCN Red List status to EN or CR and meet the thresholds in GN72(a).
(c) As appropriate, areas containing important concentrations of a nationally or regionally listed EN or CR species.

Class	Order	Family	*Genus species - Latin*	Common Name	Notes re: likelihood of presence in project area of influence given known distribution data and habtiat preferences	IUCN Red List	Global Population	Notes re: Risk of Uplisting (IUCN VU to EN)	Regional / National Red List	Regional / National Populaion	Notes re: significant national/ regional core population	Other Comments	Screened In or Out for future CHA	Rationale	*For those screened out as CH: but presence during baseline study is confirmed, will it be considered as a PBF/SBV?*
ACTINOPTERYGII	CYPRINIFORMES	CYPRINIDAE	*Luciobarbus brachycephalus*	Aral Barbel	Likely present given known distribution data	VU	-		EN				Screen in	Stakeholder engagement needed to indicate if these species are present in the waterbodies adjacent to the project site. If confirmed by stakeholders, fish surveys may be required	Yes
ACTINOPTERYGII	CYPRINIFORMES	CYPRINIDAE	*Capoetobrama kuschakewitschi*		Extinct near project area.	EN			VU				Screen out	Unlikley to be in or near the project site	
ACTINOPTERYGII	CYPRINIFORMES	CYPRINIDAE	*Cyprinus carpio*	Eurasian Carp	Likely present given known distribution data	VU	-						Screen in	Stakeholder engagement needed to indicate if these species are present in the waterbodies adjacent to the project site. If confirmed by stakeholders, fish surveys may be required	Yes
ACTINOPTERYGII	CYPRINIFORMES	LEUCISCIDAE	*Aspiolucius esocinus*		Extinct near project area	EN			EN				Screen out	Likely extinct in the project area	
ACTINOPTERYGII	CYPRINIFORMES	LEUCISCIDAE	*Capoetobrama kuschakewitschi*		Extinct near project area	EN			VU				Screen out	Likely extinct in the project area	
AVES	ACCIPITRIFORMES	ACCIPITRIDAE	*Aquila heliaca*	Eastern Imperial Eagle	Dominant habitat type is unsuitable but may occur in mountains to the East. May use wetlands for foraging on passage.	VU	3,500-15,000		VU			IUCN distribution data shows that the area under the polygon query may host passage as well as breeding populations. In the Caucasus, it occurs in steppe, lowland and riverine forests and semi-desert, which are largely absent in the project AoI. However, river wetlands may provide suitable foraging habitat.	Screen in	May be seen on passage and use area for foraging.	Yes
AVES	ACCIPITRIFORMES	ACCIPITRIDAE	*Aquila nipalensis*	Steppe Eagle	Possibly occurs in the project airspace in passage but lack of suitable habitat means interaction with the AOI is unlikely.	EN	78,042-110,193		VU			Passage migrant through Uzbekistan	Screen out	May be recorded in the project airspace during migration. However due to the absense of suitable foraging habitat unlikley to intereact with the project area.	
AVES	ACCIPITRIFORMES	ACCIPITRIDAE	*Clanga clanga*	Greater Spotted Eagle	Lack of suitable habitat unlikely to be in the AoI, possibly in the mountains to the east	EN	3,900-10,000 mature individuals		VU			Passage migrant through Uzbekistan. River wetlands may provide suitable foraging habitat.	Screen in	May occur in the project airspace on passage and suitable foraging habitat is present. Species screened in.	Yes
AVES	ACCIPITRIFORMES	ACCIPITRIDAE	*Haliaeetus leucoryphus*	Pallas's Fish-eagle	Suitable habitat present in the Project AoI. Species presence possible.	EN	1000-2499		EN			Passage migrant through Uzbekistan. River wetlands may provide suitable foraging habitat.	Screen in	May occur in the project airspace on passage and suitable foraging habitat is present. Species screened in.	Yes
AVES	ACCIPITRIFORMES	ACCIPITRIDAE	*Neophron percnopterus*	Egyptian Vulture	Unlikely to be in the AoI due to lack of suitable habitat.	EN	1,000-2,499 mature individuals		VU			This species typically nests on ledges or in caves on cliffs, crags and rocky outcrops. It forages in lowland and montane regions over open, often arid, country, and also scavenges at human settlements. IUCN distribution data indicate that the area hosts breeding populations, however the AoI does not contain suitable breeding habitat.	Screen out	Dominant habitat is unsuitable and no known bottlenecks or stopovers recorded, so likely absent from the area. May be included in the CHA if presence is confirmed during the bird surveys.	
AVES	ANSERIFORMES	ANATIDAE	*Anser erythropus*	Lesser White-fronted Goose	Farmlands present suitable non-breeding habitat. Presence possible.	VU	24,000-40,000		VU			Passage migrant in the Uzbekistan	Screen in	Suitable habitat present. Gregarious outside the breeding season therefore may occur in large concentrations. Screened in.	Yes
AVES	ANSERIFORMES	ANATIDAE	*Aythya ferina*	Common Pochard	Given preference for brackish waters, presence is unlikely.	VU	1.14-1.18 million					Migrant breeder. Breeding and non breeding habitats are similar. Requires well-vegetated eutrophic to neutral swamps, marshes, lakes and slow-flowing rivers with areas of open water, saline, brackish and soda lakes and occasionally even in sheltered coastal bays	Screen out	As IUCN VU, needs to be considered if there is suitable habitat. At the time of screening, no known expanses of suitable brackish habitat was confirmed. May be included in the CHA if presence if confirmed during the bird surveys.	
AVES	ANSERIFORMES	ANATIDAE	*Oxyura leucocephala*	White-headed Duck	Suitable habitat identified in the AoI. Presence is possible.	EN	7,900-13,100		EN				Screen in	Suitable habitat present in AoI. Screened in.	Yes
AVES	CHARADRIIFORMES	CHARADRIIDAE	*Vanellus gregarius*	Sociable Lapwing	Agricultural fields in the area provide suitable wintering grounds. Presence possible.	CR	16,000-17,000					Passage migrant in Uzbekistan	Screen in	Agricultural land presents suitable wintering grounds for this species. Screened in.	Yes
AVES	COLUMBIFORMES	COLUMBIDAE	*Streptopelia turtur*	European Turtle-dove	Suitable habitat wihtin AoI. Presence is posisble.	VU	19,300,000-71,400,000		VU			Migrant breeder of Uzbekistan. Nests in trees shrubs and hedges but forages in agricultural land	Screen in	Suitable foraging habitat present in AoI. Screened in.	Yes
AVES	COLUMBIFORMES	COLUMBIDAE	*Columba eversmanni*	Yellow-eyed Pigeon	Uses trees for breeding - suitable habitat in AoI. Presence is possible	VU	15,000-30,000		VU			Breeding bird of Uzbekistan, builds nests in trees.	Screen in	Suitable nesting trees present in AoI. Screened in.	
AVES	FALCONIFORMES	FALCONIDAE	*Falco cherrug*	Saker Falcon	Suitable foraging habitat present in AoI. Presence during migration is possible.	EN	12,200-29,800		EN			IUCN distribution data indicates that native breeding and passage migrants may be present in the area under the polygon query.	Screen in	The project area is not suitable breeding habitat however, the species may forage in this area. Bird surveys and stakeholder enagement required	Yes
AVES	OTIDIFORMES	OTIDIDAE	*Chlamydotis macqueenii*	Asian Houbara	Lack of suitable habitat in AoI. Presence is unlikely.	VU	50,000-99,999						screen out	Unsuitable habitat in AoI. Screened out.	
AVES	OTIDIFORMES	OTIDIDAE	*Otis tarda*	Great Bustard	Suitable habitat present in AoI - mixed crop lands / open grasslands and arable lands. Known wintering populations occur in Uzbekistan. Presence possible.	VU	44,000-57,000		CR			Per IUCN distribution data, passage and non breeding populations may occur in the AoI	Screen in	Suitable habitat in AoI. Screened in.	Yes
LILIOPSIDA	LILIALES	LILIACEAE	*Tulipa fosteriana*		Distribution overlaps with project AoI however primarily grows on low to mid mountain belts which are largely absent from AoI. Presence unlikely.	VU							Screen out	Presence is unlikely due to absence of preffered habitat in AoI. Screened out but may be included in CHA if identified during botany surveys	
LILIOPSIDA	LILIALES	LILIACEAE	*Tulipa affinis*		Distribution overlaps with project AoI however primarily on steep slopes. Suitable habitat largely absent from AoI. Presence unlikely.	VU							Screen out	Presence is unlikely due to absence of preffered habitat in AoI. Screened out but may be included in CHA if identified during botany surveys	
LILIOPSIDA	LILIALES	LILIACEAE	*Tulipa micheliana*		Distribution overlaps with project AoI however primarily habitat is mountain steppe, woodlands and foothills, generally absent from AoI. Presence unlikely.	VU							Screen out	Presence is unlikely due to absence of preffered habitat in AoI. Screened out but may be included in CHA if identified during botany surveys	
MAMMALIA	CARNIVORA	FELIDAE	*Acinonyx jubatus*	Cheetah	Highly unlikley as this species is extinct in the project area	VU	6517						Screen out	Extinct in project area. Unlikley to be in or near the project site. Screened out.	
MAMMALIA	CARNIVORA	FELIDAE	*Panthera uncia*	Snow Leopard	Project AoI is at the edge of this species range. Largely unsuitable habitat in AoI. Presence is highly unlikely.	VU	2710-3386						Screen out	Unlikely to occur in project AoI due to unsuitable habitat. Screened out.	
MAMMALIA	CARNIVORA	FELIDAE	*Panthera tigris*	Tiger	Extinct in the project location	EN	2608-3905,3140		EX				Screen out	Thought to be extinct in the Project area. Screened out.	
MAMMALIA	CARNIVORA	MUSTELIDAE	*Vormela peregusna*	Marbled Polecat	Lack of suitable habitat in AoI. Presence is unlikely.	VU	-		VU			This species inhabits desert, shrubland and grassland	Screen out	Unlikely to occur in project AoI due to unsuitable habitat. Screened out.	
MAMMALIA	CETARTIODACTYLA	BOVIDAE	*Gazella subgutturosa*	Goitered Gazelle	Lack of suitable habitat in AoI. Presence is unlikely.	VU	42,000-49,000		VU	4000		This species inhabits desert, semi-desert and steppe habitats	Screen out	Unlikely to occur in project AoI due to unsuitable habitat. Screened out.	Yes
REPTILIA	SQUAMATA	GEKKONIDAE	*Alsophylax loricatus*	Szczerbak's Even-fingered Gecko	Lack of suitable habitat in AoI. Presence is unlikely.	VU			EN			It inhabits deserts	Screen out	Unlikely to occur in project AoI due to unsuitable habitat. Screened out.	
REPTILIA	TESTUDINES	TESTUDINIDAE	*Testudo horsfieldii*	Central Asian Tortoise/Russian Tortoise	Suitable habitat in AoI. Presence likely.	VU			VU			It inhabits fixed sand, clay deserts	Screen in	Likely to be located within project AoI	Yes
MAMMALIA	CHIROPTERA	RHINOLOPHIDAE	*Myotis bucharensis*	Bokhara Whiskered Bat	Possibly extinct in the AoI but a crytpic species and little is known about this species. Presence cannot be ruled out.	DD			VU			Little is known about this species	Screen in	Presence possible, precautionarily screened in	

The threshold for Criterion 2 (Endemic or Range-restricted Species) is the following:
a) Areas that regularly hold ≥10% of the global population size AND ≥10 reproductive units of a species.
Also, in order to be considered range-restricted, the EOO must be <50,000 km2. (*As per experience with IFC and EBRD advisors)

Class	Order	Family	*Genus species - Latin*	Common Name	Notes re: likelihood of presence in project area of influence given known	EOO	Global	Other Comments	Screened In or	Rationale
ACTINOPTERYGII	CYPRINIFORMES	NEMACHEILIDAE	*Dzihunia amudarjensis*	Bukhara Stone Loach	This species may be present in the canals near the project AoI		NA	Regionally endemic. As per IUCN, It inhabits more than 1500 km of river and occurs in many more than 10 populations. This is a widely distributed species with no indications of any major population declines. The populations are not fragmented	Screen out	Given the terrestrial nature of the project which does not intersect with nearby waterways, impacts on aquatic species are unlikely. In addition, it is unlikely that high numbers of this species reside in waterways within the AoI. Species screened out.
ACTINOPTERYGII	CYPRINIFORMES	LEUCISCIDAE	*Petroleuciscus squaliusculus*	Syrdarya Dace	This species may be present in drainages and tributaries within or near the project AoI.		NA	This species is an endemic of Central Asia	Screen out	Given the terrestrial nature of the project which does not intersect with nearby waterways, impacts on aquatic species are unlikely. EOO unknown but species spans Kazakhstan; Kyrgyzstan; Tajikistan; Uzbekistan so extent likely larger than 50,000km2 threshold. Species screened out.
ACTINOPTERYGII	CYPRINIFORMES	NEMACHEILIDAE	*Oxynoemacheilus oxianus*	Amu Darya Stone Loach	This species may be present in drainages and tributaries within or near the project AoI.		NA	This species is a regional endemic and very widespread in the Amu Darya drainages including many of its tributaries up to Panj River and mid- and downstream of Amu Darya. Little is known about the species and is currently not facing any known threats.	Screen out	Given the terrestrial nature of the project which does not intersect with nearby waterways, impacts on aquatic species are unlikely. In addition, given its good distribution across known range and stable population, this species is screened out.
ACTINOPTERYGII	CYPRINIFORMES	LEUCISCIDAE	*Alburnoides taeniatus*	Striped Bystryanka	Species distribution overlaps with project AoI. Distribution and population size largely unknown as often confused with similar species in the region.		NA	Possibly regionally endemic to Central Asia, though little is known about its distribution. May be extinct.	Screen out	Given the terrestrial nature of the project which does not intersect with nearby waterways, impacts on aquatic species are unlikely. Species may be extinct. Screened out.
ACTINOPTERYGII	CYPRINIFORMES	CYPRINIDAE	*Capoetobrama kuschakewitschi*		Species is thought to be extinct in rivers near project. Presence is unlikely.	275,206 km^2	NA	It is a regional endemic but widespread in Aral Sea basin where it was known from the lower reaches of three major rivers: the Chu River (Kazakhstan) to the to the region of Frunze, the Syr Darya (up to Kara Darya at Balykchi) and Amu Darya (up to Panj), including Zeravshan Rivers.	Screen out	EOO larger than 50,000km2 threshold. Species screened out.
ACTINOPTERYGII	CYPRINIFORMES	CYPRINIDAE	*Schizothorax fedtschenkoi*		Species is endemic to Zeravshan River drainage in Uzbekistan and Tajikistan. Presence in AoI is possible.	NA	NA	Thought to inhabit over 600km of waterways. Populations stable.	Screen out	Given the terrestrial nature of the project which does not intersect with nearby waterways, impacts on aquatic species are unlikely. In addition, given its good distribution across known range and stable population, this species is screened out.
ACTINOPTERYGII	CYPRINIFORMES	NEMACHEILIDAE	*Dzihunia ilan*		This species may be present in drainages and tributaries within or near the project AoI.	NA	NA	Dzihunia ilan is endemic to the Zeravshan River drainage in Uzbekistan and Tajikistan	Screen out	Given the terrestrial nature of the project which does not intersect with nearby waterways, impacts on aquatic species are unlikely. In addition, given its good distribution across known range and stable population, this species is screened out.
MAMMALIA	CHIROPTERA	RHINOLOPHIDAE	*Myotis bucharensis*	Bokhara Whiskered Bat	Possibly extinct in the AoI however limited information is possible. Suitable habitat is present in AoI.				Screen in	Little information is known about this species. Suitable habitat in AoI. Precautionarily screened in

Thresholds for Criterion 3 (Migratory or Congregating Species) are the following:
a) Areas known to sustain, on a cyclical or otherwise regular basis, ≥ 1 percent of the global population of a migratory or congregatory species at any point of the species' lifecycle.
b) Areas that predictably support ≥10 percent of the global population of a species during periods of environmental stress.

Class	Order	Family	*Genus species - Latin*	Common Name	Notes re: likelihood of presence in project area of influence given known distribution data and habtiat preferences	Global Population	Other Comments	Screened In or Out for future CHA	Rationale
ACTINOPTERYGII	PERCIFORMES	MORONIDAE	*Morone saxitilis*	Striped Bass	The overall ecosystem and habitat types in the Project AOI are considered appropriate for this species so presence is possible.		This species is introduced in the region - the species range in introduced regions is large (encompases most of Europe and Asia).	Screen out	The species is introduced to the region, and it does not appear range restricted in introduced regions. Unlikely to occur in high numbers within the Project AOI.
AVES	ACCIPITRIFORMES	ACCIPITRIDAE	*Aegypius monachus*	Cinereous Vulture	The dominant agriculture and urbanised habitat types are not prefered by this species. No known bottlenecks or stopover sites noted although wetlands may provide foraging habitat. Species presence in AOI is unlikely.	25,200-34,200		Screen Out	Dominant habitat is unsuitable and no known bottlenecks or stopovers recorded, so likely absent from the area. May be included in the CHA if presence if confirmed during the bird surveys.
AVES	ACCIPITRIFORMES	ACCIPITRIDAE	*Aquila heliaca*	Eastern Imperial Eagle	Species may occur as a passage migrant in the AoI	3,500-15,000		Screen in	May be recorded in the project airspace during migration and use project area for foraging. May be included in the CHA if presence is confirmed during the bird surveys.
AVES	ACCIPITRIFORMES	ACCIPITRIDAE	*Aquila nipalensis*	Steppe Eagle	Species is a passage migrant but no suitable habitat in the AOI and therefore unlikely to be present.	78,042-110,193		Screen out	May be recorded in the project airspace during migration. However due to the absense of suitable habitat unlikley to intereact with the project area. May be included in the CHA if presence is confirmed during the bird surveys.
AVES	ACCIPITRIFORMES	ACCIPITRIDAE	*Buteo lagopus*	Rough-legged Buzzard	This species is a non-breeding resident, known to occur in wetlands. Suitable habitat is present in the AOI so presence of species is possible.	590,000		Screen out	Due to large global population size and the absence of IBAs designated for this species, it unlikely to occur in concentrations large enough to cross thresholds for this criterion.
AVES	ACCIPITRIFORMES	ACCIPITRIDAE	*Circaetus gallicus*	Short-toed Snake-eagle	Breeding resident in Uzbekistan however unsuitable habitat within the Project AOI makes species presence unlikely.	50,000-99,999		Screen out	Unsuitable habitat and likely absent from the area.
AVES	ACCIPITRIFORMES	ACCIPITRIDAE	*Circus aeruginosus*	Western Marsh-harrier	The overall ecosystem and habitat types in the Project AOI are considered appropriate for this species so presence is possible.	600,000-1,100,000		Screen out	Due to large global population size and the absence of IBAs designated for this species, it unlikely to occur in concentrations large enough to cross thresholds for this criterion.
AVES	ACCIPITRIFORMES	ACCIPITRIDAE	*Circus macrourus*	Pallid Harrier	The overall ecosystem and habitat types in the Project AOI are considered appropriate for this species so presence is possible.	18,000-30,000		Screen out	Due to large global population size and the absence of IBAs designated for this species, it unlikely to occur in concentrations large enough to cross thresholds for this criterion.
AVES	ACCIPITRIFORMES	ACCIPITRIDAE	*Circus pygargus*	Montagu's Harrier	Tall vegetation and suitable breeding habitat is present in the project AOI so presence is possible.	300,000-550,000		Screen out	Due to large global population size and the absence of IBAs designated for this species, it unlikely to occur in concentrations large enough to cross thresholds for this criterion.
AVES	ACCIPITRIFORMES	ACCIPITRIDAE	*Clanga clanga*	Greater Spotted Eagle	Breeding resident in Uzbekistan, however unsuitable habitat in the project AoI so unlikely to be present.	3,900-10,000		Screen out	Unsuitable habitat and likely absent from the area.
AVES	ACCIPITRIFORMES	ACCIPITRIDAE	*Gyps fulvus*	Griffon Vulture	The dominant agriculture and urbanised habitat types are not prefered by this species. No known bottlenecks or stopover sites noted although wetlands may provide foraging habitat. Species presence in AOI is unlikely.	80,000-900,000		Screen out	Dominant habitat is unsuitable and no known bottlenecks or stopovers recorded, so likely absent from the area. May be included in the CHA if presence is confirmed during the bird surveys.
AVES	ACCIPITRIFORMES	ACCIPITRIDAE	*Haliaeetus albicilla*	White-tailed Sea-eagle	Suitable foraging habitat is present in the Project AOI so species presence is possible.	20,000-60,000		Screen out	Due to large global population size and the absence of IBAs designated for this species, it unlikely to occur in concentrations large enough to cross thresholds for this criterion.
			Haliaeetus leucoryphus	Pallas's Fish-eagle	Rivers and wetlands provide suitable foraging habitat within the Project AOI so presence is possible.	1,000-2,499		Screen in	Suitable habitat identified within project AOI. Species screened in.
AVES	ACCIPITRIFORMES	ACCIPITRIDAE	*Hieraaetus pennatus*	Booted Eagle	Unsuitable habitat in the project AOI so species presence is unlikely.	150,000-195,000		Screen out	Unsuitable habitat and likely absent from the area.
AVES	ACCIPITRIFORMES	ACCIPITRIDAE	*Milvus migrans*	Black Kite	A breeding resident in Uzbekistan and opportunistic forager so presence in the Project AOI is possible.	4,000,000 - 5,700,000		Screen out	Due to large global population size and the absence of IBAs designated for this species, it unlikely to occur in concentrations large enough to cross thresholds for this criterion.
AVES	ACCIPITRIFORMES	ACCIPITRIDAE	*Neophron percnopterus*	Egyptian Vulture	The dominant agriculture and urbanised habitat types are not prefered by this species. No known bottlenecks or stopover sites noted although wetlands may provide foraging habitat. Species presence in AOI is unlikely.	1,000-2,499		Screen out	Dominant habitat is unsuitable and no known bottlenecks or stopovers recorded, so likely absent from the area. May be included in the CHA if presence is confirmed during the bird surveys.
AVES	ANSERIFORMES	ANATIDAE	*Anas crecca*	Common Teal	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	2,800,000		Screen out	Due to large global population size and the absence of IBAs designated for this species, it unlikely to occur in concentrations large enough to cross thresholds for this criterion.
AVES	ANSERIFORMES	ANATIDAE	*Anas platyrhynchos*	Mallard	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	19000000		Screen out	Due to large global population size and the absence of IBAs designated for this species, it unlikely to occur in concentrations large enough to cross thresholds for this criterion.
AVES	ANSERIFORMES	ANATIDAE	*Anser anser*	Greylag Goose	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	1,000,000-1,100,000		Screen out	Due to large global population size and the absence of IBAs designated for this species, it unlikely to occur in concentrations large enough to cross thresholds for this criterion.
AVES	ANSERIFORMES	ANATIDAE	*Anser erythropus*	Lesser White-fronted Goose	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	24,000-40,000		Screen out	Due to large global population size and the absence of IBAs designated for this species, it unlikely to occur in concentrations large enough to cross thresholds for this criterion.
AVES	ANSERIFORMES	ANATIDAE	*Anthropoides virgo*	Demoiselle Crane	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	230,000-261,000		Screen out	Due to large global population size and the absence of IBAs designated for this species, it unlikely to occur in concentrations large enough to cross thresholds for this criterion.
AVES	ANSERIFORMES	ANATIDAE	*Aythya ferina*	Common Pochard	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	1.14-1.18 million		Screen out	Due to large global population size and the absence of IBAs designated for this species, it unlikely to occur in concentrations large enough to cross thresholds for this criterion.
AVES	ANSERIFORMES	ANATIDAE	*Aythya fuligula*	Tufted Duck	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	2,600,000-2,900,000		Screen out	Due to large global population size and the absence of IBAs designated for this species, it unlikely to occur in concentrations large enough to cross thresholds for this criterion.
AVES	ANSERIFORMES	ANATIDAE	*Aythya nyroca*	Feruginous Duck	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	180,000–240,000		Screen out	Due to large global population size and the absence of IBAs designated for this species, it unlikely to occur in concentrations large enough to cross thresholds for this criterion.
AVES	ANSERIFORMES	ANATIDAE	*Botaurus stellaris*	Green-backed Heron	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	260,000-2,300,000		Screen out	Due to large global population size and the absence of IBAs designated for this species, it unlikely to occur in concentrations large enough to cross thresholds for this criterion.
AVES	ANSERIFORMES	ANATIDAE	*Bucephala clangula*	Common Goldeneye	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	2,700,000-4,700,000		Screen out	Due to large global population size and the absence of IBAs designated for this species, it unlikely to occur in concentrations large enough to cross thresholds for this criterion.
AVES	ANSERIFORMES	ANATIDAE	*Marmaronetta angustirostris*	Marbled Teal	The dominat agriculture and urbanised habitat types are not prefered by this species. No known bottlenecks or stopover sites noted. Species presence in AOI is unlikely.	15,000-61,000		screen out	Dominant habitat is unsuitable and no known bottlenecks or stopovers recorded, so likely absent from the area. May be screened in if identified during surveys.

Class	Order	Family	*Genus species - Latin*	Common Name	Notes re: likelihood of presence in project area of influence given known distribution data and habtiat preferences	Global Population	Other Comments	Screened In or Out for future CHA	Rationale
AVES	ANSERIFORMES	ANATIDAE	*Mergellus albellus*	Smew	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	130,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	ANSERIFORMES	ANATIDAE	*Mergus merganser*	Goosander	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	1,700,000-2,400,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	ANSERIFORMES	ANATIDAE	*Netta rufina*	Red-crested Pochard	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	420,000-600,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	ANSERIFORMES	ANATIDAE	*Oxyura leucocephala*	White-headed Duck	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	5,300-8,700		screen out	Given unsuitable habitat and likely absence in the area, this species is unlikely to meet CH iii thresholds
AVES	ANSERIFORMES	ANATIDAE	*Spatula clypeata*	Northern Shoveler	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	6,500,000-7,000,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	ANSERIFORMES	ANATIDAE	*Spatula querquedula*	Garganey	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	2,600,000-2,800,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	ANSERIFORMES	ANATIDAE	*Tadorna ferruginea*	Ruddy Shelduck	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	170,000-220,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	ANSERIFORMES	ANATIDAE	*Tadorna tadorna*	Common Shelduck	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	625,000-750,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	ANSERIFORMES	ANATIDAE	*Tringa totanus*	Common Redshank	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	1,300,000-3,100,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	ANSERIFORMES	ANATIDAE	*Zapornia parva*	Little Crake	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	100,000-499,999		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	BUCEROTIFORMES	UPUPIDAE	*Upupa epops*	Common Hoopoe	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	5,000,000-10,000,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	CAPRIMULGIFORMES	APODIDAE	*Caprimulgus europaeus*	European Nightjar	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	3,000,000-5,999,999		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	CAPRIMULGIFORMES	CAPRIMULGIDAE	*Tachymarptis melba*	Alpine Swift	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	1,000,000-2,499,999		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	CHARADRIIFORMES	CHARADRIIDAE	*Charadrius alexandrinus*	Kentish Plover	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	100,000-499,999		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	CHARADRIIFORMES	CHARADRIIDAE	*Charadrius asiaticus*	Caspian Plover	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	40,000-55,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	CHARADRIIFORMES	CHARADRIIDAE	*Charadrius dubius*	Little Ringed Plover	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	280,000-530,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	CHARADRIIFORMES	CHARADRIIDAE	*Charadrius leschenaultii*	Greater Sandplover	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	100,000-225,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	CHARADRIIFORMES	CHARADRIIDAE	*Vanellus gregarius*	Sociable Lapwing	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	16,000-17,000		Screen out	Given unsuitable habitat and likely absence in the area, this species is unlikely to meet CH thresholds
AVES	CHARADRIIFORMES	CHARADRIIDAE	*Vanellus leucurus*	White-tailed Lapwing	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	20,000-130,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	CHARADRIIFORMES	CHARADRIIDAE	*Vanellus vanellus*	Northern Lapwing	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	5,600,000-10,500,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	CHARADRIIFORMES	GLAREOLIDAE	*Glareola pratincola*	Collared Pratincole	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	160,000-600,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	CHARADRIIFORMES	HAEMATOPODIDAE	*Haematopus ostralegus*	European Oystercatcher	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	500,000-999,999		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	CHARADRIIFORMES	LARIDAE	*Gelochelidon nilotica*	Common Gull-billed Tern	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	150,000-420,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	CHARADRIIFORMES	LARIDAE	*Larus cachinnans*	Caspian Gull	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	NA		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	CHARADRIIFORMES	LARIDAE	*Larus fuscus*	Lesser Black-backed Gull	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	940,000-2,070,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	CHARADRIIFORMES	LARIDAE	*Larus ichthyaetus*	Pallas's Gull	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	125,000-1,100,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	CHARADRIIFORMES	LARIDAE	*Larus ridibundus*	Black-headed Gull	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	4,800,000-8,900,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	CHARADRIIFORMES	LARIDAE	*Sterna hirundo*	Common Tern	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	1,600,000-3,600,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	CHARADRIIFORMES	RECURVIROSTRIDAE	*Himantopus himantopus*	Black-winged Stilt	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	450,000-780,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	CHARADRIIFORMES	SCOLOPACIDAE	*Gallinago gallinago*	Common Snipe	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	15,000,000-29,000,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds

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AVES	CHARADRIIFORMES	SCOLOPACIDAE	*Gallinago media*	Great Snipe	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	310,000-570,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	CHARADRIIFORMES	SCOLOPACIDAE	*Gallinula chloropus*	Common Moorhen	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	2,900,000-6,200,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	CHARADRIIFORMES	SCOLOPACIDAE	*Limosa limosa*	Black-tailed Godwit	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	614,000-809,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	CHARADRIIFORMES	SCOLOPACIDAE	*Numenius arquata*	Eurasian Curlew	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	835,000-1,310,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	CICONIIFORMES	CICONIIDAE	*Ciconia ciconia*	White Stork	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	700,000-704,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	CICONIIFORMES	CICONIIDAE	*Ciconia nigra*	Black Stork	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	24,000-44,000		screen out	Given unsuitable habitat and likely absence in the area, this species is unlikely to meet CH iii thresholds
AVES	COLUMBIFORMES	COLUMBIDAE	*Columba oenas*	Stock Dove	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	1,120,000-2,070,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	COLUMBIFORMES	COLUMBIDAE	*Columba palumbus*	Common Woodpigeon	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	40,900,000-58,000,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	COLUMBIFORMES	COLUMBIDAE	*Spilopelia senegalensis*	Laughing Dove	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	2,400,000-8,200,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	COLUMBIFORMES	COLUMBIDAE	*Streptopelia turtur*	European Turtle-dove	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	6,310,000-11,900,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	CORACIIFORMES	MEROPIDAE	*Merops apiaster*	European Bee-eater	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	5,600,000-10,100,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	CORACIIFORMES	MEROPIDAE	*Merops persicus*	Blue-cheeked Bee-eater	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	10,500-31,100		screen out	Given unsuitable habitat and likely absence in the area, this species is unlikely to meet CH iii thresholds
AVES	CORACIIFORMES	MEROPIDAE	*Nycticorax nycticorax*	Black-crowned Night-heron	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	570,000-3,730,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	FALCONIFORMES	FALCONIDAE	*Falco cherrug*	Saker Falcon	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	12,200-29,800		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	FALCONIFORMES	FALCONIDAE	*Falco naumanni*	Lesser Kestrel	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	80,000-134,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	FALCONIFORMES	FALCONIDAE	*Falco peregrinus*	Peregrine Falcon	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	100,000-499,999		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	FALCONIFORMES	FALCONIDAE	*Falco subbuteo*	Eurasian Hobby	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	900,000-1,500,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	GALLIFORMES	PHASIANIDAE	*Coturnix coturnix*	Common Quail	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	6,630,000-13,400,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	GALLIFORMES	PHASIANIDAE	*Tetraogallus himalayensis*	Himalayan Snowcock	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	NA		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	GRUIFORMES	RALLIDAE	*Fulica atra*	Common Coot	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	7,950,000-9,750,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	GRUIFORMES	RALLIDAE	*Rallus aquaticus*	Western Water Rail	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	314,000-693,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	GRUIFORMES	RALLIDAE	*Zapornia pusilla*	Baillon's Crake	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	500,000-999,999		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	PASSERIFORMES	ACROCEPHALIDAE	*Acrocephalus agricola*	Paddyfield Warbler	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	400,000-792,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	PASSERIFORMES	ACROCEPHALIDAE	*Acrocephalus melanopogon*	Moustached Warbler	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	152,000-249,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	PASSERIFORMES	ACROCEPHALIDAE	*Acrocephalus scirpaceus*	Common Reed-warbler	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	12,000,000-22,999,999		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	PASSERIFORMES	ACROCEPHALIDAE	*Hippolais languida*	Upcher's Warbler	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	180,000-489,999		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	PASSERIFORMES	ACROCEPHALIDAE	*Iduna rama*	Sykes's Warbler	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	NA		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	PASSERIFORMES	ALAUDIDAE	*Calandrella brachydactyla*	Greater Short-toed Lark	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	NA		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	PASSERIFORMES	ALAUDIDAE	*Eremophila alpestris*	Horned Lark	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	140,000,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	PASSERIFORMES	ALAUDIDAE	*Galerida cristata*	Crested Lark	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	175,000,000-249,999,999		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds

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AVES	PASSERIFORMES	ALAUDIDAE	*Melanocorypha bimaculata*	Bimaculated Lark	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	10,000,000-20,999,999		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	PASSERIFORMES	ALAUDIDAE	*Melanocorypha calandra*	Calandra Lark	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	45,500,000-97,300,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	PASSERIFORMES	CALCARIIDAE	*Plectrophenax nivalis*	Snow Bunting	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	40,000,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	PASSERIFORMES	EMBERIZIDAE	*Emberiza bruniceps*	Red-headed Bunting	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	NA		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	PASSERIFORMES	EMBERIZIDAE	*Emberiza buchanani*	Grey-necked Bunting	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	NA		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	PASSERIFORMES	EMBERIZIDAE	*Emberiza calandra*	Corn Bunting	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	183,500,000-313,000,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	PASSERIFORMES	EMBERIZIDAE	*Emberiza cia*	Rock Bunting	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	7,700,000-16,900,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	PASSERIFORMES	EMBERIZIDAE	*Emberiza citrinella*	Yellowhammer	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	42,000,000-66,000,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	PASSERIFORMES	EMBERIZIDAE	*Emberiza leucocephalos*	Pine Bunting	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	NA		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	PASSERIFORMES	EMBERIZIDAE	*Emberiza schoeniclus*	Reed Bunting	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	23,000,000-40,000,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	PASSERIFORMES	FRINGILLIDAE	*Bucanetes mongolicus*	Mongolian Finch	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	NA		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	PASSERIFORMES	FRINGILLIDAE	*Carpodacus erythrinus*	Common Rosefinch	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	62,400,000-113,200,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	PASSERIFORMES	FRINGILLIDAE	*Chloris chloris*	European Greenfinch	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	48,000,000-74,000,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	PASSERIFORMES	FRINGILLIDAE	*Coccothraustes coccothraustes*	Hawfinch	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	10,400,000-20,200,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	PASSERIFORMES	FRINGILLIDAE	*Fringilla coelebs*	Common Chaffinch	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	530,000,000-767,000,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	PASSERIFORMES	FRINGILLIDAE	*Linaria cannabina*	Common Linnet	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	54,000,000-98,000,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	PASSERIFORMES	FRINGILLIDAE	*Linaria flavirostris*	Twite	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	3,280,000-15,100,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	PASSERIFORMES	FRINGILLIDAE	*Mycerobas carnipes*	White-winged Grosbeak	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	NA		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	PASSERIFORMES	FRINGILLIDAE	*Pyrrhula pyrrhula*	Eurasian Bullfinch	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	38,250,000-65,250,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	PASSERIFORMES	FRINGILLIDAE	*Rhodopechys sanguineus*	Eurasian Crimson-winged Finch	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	500000-2199999		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	PASSERIFORMES	FRINGILLIDAE	*Serinus pusillus*	Red-fronted Serin	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	5000000-19999999		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	PASSERIFORMES	FRINGILLIDAE	*Spinus spinus*	Eurasian Siskin	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	49,000,000-77,000,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	PASSERIFORMES	HIRUNDINIDAE	*Cecropis daurica*	Red-rumped Swallow	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	10,000,000-500,000,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	PASSERIFORMES	HIRUNDINIDAE	*Delichon urbicum*	Northern House Martin	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	10,000,000-500,000,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	PASSERIFORMES	HIRUNDINIDAE	*Hirundo rustica*	Barn Swallow	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	290-487 million		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	PASSERIFORMES	HIRUNDINIDAE	*Ptyonoprogne rupestris*	Eurasian Crag Martin	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	1,210,000-2,280,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	PASSERIFORMES	HIRUNDINIDAE	*Riparia riparia*	Collared Sand Martin	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	10,000,000-500,000,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	PASSERIFORMES	LANIIDAE	*Lanius excubitor*	Great Grey Shrike	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	NA		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	PASSERIFORMES	LOCUSTELLIDAE	*Locustella luscinioides*	Savi's Warbler	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	860,000-1,460,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	PASSERIFORMES	MOTACILLIDAE	*Anthus campestris*	Tawny Pipit	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	4,550,000-8,600,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds

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AVES	PASSERIFORMES	MOTACILLIDAE	*Anthus spinoletta*	Water Pipit	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	10000000-29999999		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	PASSERIFORMES	MOTACILLIDAE	*Motacilla citreola*	Citrine Wagtail	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	2,000,000-4,999,999		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	PASSERIFORMES	MOTACILLIDAE	*Motacilla flava*	Western Yellow Wagtail	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	64,000,000-107,000,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	PASSERIFORMES	MUSCICAPIDAE	*Cercotrichas galactotes*	Rufous-tailed Scrub-robin	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	4,600,000-12,500,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	PASSERIFORMES	MUSCICAPIDAE	*Erithacus rubecula*	European Robin	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	130,000,000-201,000,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	PASSERIFORMES	MUSCICAPIDAE	*Irania gutturalis*	White-throated Robin	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	1,800,000-4,100,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	PASSERIFORMES	MUSCICAPIDAE	*Luscinia megarhynchos*	Common Nightingale	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	43,000,000-81,000,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	PASSERIFORMES	MUSCICAPIDAE	*Muscicapa striata*	Spotted Flycatcher	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	54,000,000-83,999,999		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	PASSERIFORMES	MUSCICAPIDAE	*Oenanthe isabellina*	Isabelline Wheatear	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	20,000,000-89,999,999		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	PASSERIFORMES	MUSCICAPIDAE	*Oenanthe pleschanka*	Pied Wheatear	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	475,000-2,150,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	PASSERIFORMES	MUSCICAPIDAE	*Phoenicurus phoenicurus*	Common Redstart	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	32,100,000-49,800,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	PASSERIFORMES	MUSCICAPIDAE	*Saxicola torquatus*	Common Stonechat	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	58,000,000-93,000,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	PASSERIFORMES	ORIOLIDAE	*Oriolus kundoo*	Indian Golden Oriole	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	NA		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	PASSERIFORMES	PASSERIDAE	*Passer hispaniolensis*	Spanish Sparrow	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	61,000,000-131,500,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	PASSERIFORMES	PHYLLOSCOPIDAE	*Phylloscopus griseolus*	Sulphur-bellied Warbler	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	NA		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	PASSERIFORMES	PHYLLOSCOPIDAE	*Phylloscopus trochiloides*	Greenish Warbler	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	NA		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	PASSERIFORMES	PHYLLOSCOPIDAE	*Phylloscopus trochilus*	Willow Warbler	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	400,000,000-649,999,999		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	PASSERIFORMES	PRUNELLIDAE	*Prunella atrogularis*	Black-throated accentor	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	10,000-99,999		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	PASSERIFORMES	PRUNELLIDAE	*Prunella collaris*	Alpine Accentor	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	1,560,000-2,980,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	PASSERIFORMES	PRUNELLIDAE	*Prunella himalayana*	Altai Accentor	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	NA		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	PASSERIFORMES	REGULIDAE	*Regulus regulus*	Goldcrest	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	98,000,000-165,000,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	PASSERIFORMES	SCOTOCERCIDAE	*Cettia cetti*	Cetti's Warbler	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	11,570,000-18,230,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	PASSERIFORMES	REMIZIDAE	*Remiz pendulinus*	Eurasian Penduline-tit	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	1,400,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	PASSERIFORMES	SITTIDAE	*Tichodroma muraria*	Wallcreeper	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	500,000-1,499,999		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	PASSERIFORMES	STURNIDAE	*Sturnus vulgaris*	Common Starling	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	150,000,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	PASSERIFORMES	STURNIDAE	*Pastor roseus*	Rosy starling	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	490,000-1,850,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	PASSERIFORMES	SYLVIIDAE	*Curruca communis*	Common Whitethroat	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	53,200,000-85,500,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	PASSERIFORMES	SYLVIIDAE	*Curruca mystacea*	Menetries's Warbler	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	430,000-1,250,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	PASSERIFORMES	SYLVIIDAE	*Curruca nana*	Asian Desert Warbler	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	NA		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	PASSERIFORMES	SYLVIIDAE	*Curruca nisoria*	Barred Warbler	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	4,040,000-7,760,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds

Class	Order	Family	*Genus species - Latin*	Common Name	Notes re: likelihood of presence in project area of influence given known distribution data and habtiat preferences	Global Population	Other Comments	Screened In or Out for future CHA	Rationale
AVES	PASSERIFORMES	TROGLODYTIDAE	*Troglodytes troglodytes*	Northern Wren	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	10,000,000-500,000,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	PASSERIFORMES	TURDIDAE	*Turdus iliacus*	Redwing	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	98,000,000-151,000,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	PASSERIFORMES	TURDIDAE	*Turdus merula*	Eurasian Blackbird	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	10,000,000-500,000,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	PASSERIFORMES	TURDIDAE	*Turdus pilaris*	Fieldfare	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	71,000,000-143,000,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	PASSERIFORMES	TURDIDAE	*Turdus viscivorus*	Mistle Thrush	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	13,750,000-29,800,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	PELECANIFORMES	ARDEIDAE	*Ardea alba*	Great White Egret	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	NA		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	PELECANIFORMES	ARDEIDAE	*Ardea cinerea*	Grey Heron	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	790,000-3,700,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	PELECANIFORMES	ARDEIDAE	*Ardea purpurea*	Purple Heron	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	270,000-570,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	PELECANIFORMES	ARDEIDAE	*Ardeola ralloides*	Squacco Heron	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	370,000-780,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	PELECANIFORMES	ARDEIDAE	*Ixobrychus minutus*	Common Little Bittern	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	600,000-1,199,999		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	PELECANIFORMES	PELICANIDAE	*Pelecanus crispus*	Dalmatian Pelican	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	11,400-13,400		screen out	Given unsuitable habitat and likely absence in the area, this species is unlikely to meet CH iii thresholds
AVES	PELECANIFORMES	THRESKIORNITHIDAE	*Platalea leucorodia*	Eusasian Spoonbill	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	63,000-65,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	PODICIPEDIFORMES	PODICIPEDIDAE	*Podiceps cristatus*	Great Crested Grebe	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	915,000-1,400,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	PODICIPEDIFORMES	PODICIPEDIDAE	*Tachybaptus ruficollis*	Little Grebe	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	610,000-3,500,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	PTEROCLIFORMES	CORVIDAE	*Corvus frugilegus*	Rook	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	54,300,000-94,700,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	PTEROCLIFORMES	PTEROCLIDAE	*Pterocles alchata*	Pin-tailed Sandgrouse	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	170,000-250,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	PTEROCLIFORMES	PTEROCLIDAE	*Pterocles orientalis*	Black-bellied Sandgrouse	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	138,000-255,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	PTEROCLIFORMES	PTEROCLIDAE	*Syrrhaptes paradoxus*	Pallas's Sandgrouse	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	NA		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	OTIDIFORMES	OTIDIDAE	*Chlamydotis macqueenii*	Asian Houbara	Unlikely to be present in the agricultural fields and urbanised landscape surrounding the project area	50,000-99,999		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
			Otis tarda	Great Bustard	The overall ecosystem and habitat types are considered appropriate for this species. Presence is possible.	44,000-57,000	IUCN distribution data indicates that breeding, resident and passage populations may be present in the area	Screen in	Suitable habitat present in AoI and species is acclimated to agricultural landscapes. Screened in.
AVES	SULIFORMES	PHALACROCORACIDAE	*Phalacrocorax carbo*	Great Cormorant	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	1,400,000-2,100,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	SULIFORMES	PHALACROCORACIDAE	*Microcarbo pygmaeus*	Pygmy Cormorant	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	45,000-139,999		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
AVES	STRIGIFORMES	STRIGIDAE	*Asio otus*	Northern Long-eared Owl	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	2,230,000-3,680,000		screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
INSECTA	LEPIDOPTERA	NYMPHALIDAE	*Vanessa cardui*	Painted Lady	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	1,000,000		Screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
INSECTA	LEPIDOPTERA	NYMPHALIDAE	*Vanessa atalanta*	Red Admiral	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	1,000,000		Screen out	Due to large global population size, this species is unlikely to occur in concentrations large enough to cross CH thresholds
MAMMALIA	CHIROPTERA	VESPERTILIONIDAE	*Eptesicus serotinus*	Serotine Bat	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	NA		Screened In	Congregatory species, may occur in high numbers. Suitable habitat present in AoI. Species screened in.
MAMMALIA	CHIROPTERA	VESPERTILIONIDAE	*Eptesicus gobiensis*	Gobi Big Brown Bat	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	NA		Screened In	Congregatory species, may occur in high numbers. Suitable habitat present in AoI. Species screened in.
MAMMALIA	CHIROPTERA	VESPERTILIONIDAE	*Eptesicus ognevi*	Ognev's Serotine	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	NA		Screened In	Congregatory species, may occur in high numbers. Suitable habitat present in AoI. Species screened in.
MAMMALIA	CHIROPTERA	VESPERTILIONIDAE	*Myotis blythii*	Lesser Mouse-eared Myotis	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	NA		Screened In	Congregatory species, may occur in high numbers. Suitable habitat present in AoI. Species screened in.
MAMMALIA	CHIROPTERA	VESPERTILIONIDAE	*Myotis nipalensis*	Nepal Myotis	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	NA		Screened In	Congregatory species, may occur in high numbers. Suitable habitat present in AoI. Species screened in.

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MAMMALIA	CHIROPTERA	VESPERTILIONIDAE	*Myotis emarginatus*	Geoffroy's Bat	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	NA		Screened In	Congregatory species, may occur in high numbers. Suitable habitat present in AoI. Species screened in.
MAMMALIA	CHIROPTERA	VESPERTILIONIDAE	*Pipistrellus aladdin*	Turkestan Pipistrelle	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	NA		Screened In	Congregatory species, may occur in high numbers. Suitable habitat present in AoI. Species screened in.
MAMMALIA	CHIROPTERA	VESPERTILIONIDAE	*Pipistrellus pipistrellus*	Common Pipistrelle	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	NA		Screened In	Congregatory species, may occur in high numbers. Suitable habitat present in AoI. Species screened in.
MAMMALIA	CHIROPTERA	VESPERTILIONIDAE	*Vespertilio murinus*	Particoloured Bat	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	NA		Screened In	Congregatory species, may occur in high numbers. Suitable habitat present in AoI. Species screened in.
MAMMALIA	CHIROPTERA	RHINOLOPHIDAE	*Rhinolophus bocharicus*	Bokhara horseshoe bat	The overall ecosystem and habitat type are considered appropriate for this species, therefore presence in the AoI is considered likely	NA		Screened In	Congregatory species, may occur in high numbers. Suitable habitat present in AoI. Species screened in.
MAMMALIA	CHIROPTERA	RHINOLOPHIDAE	*Myotis bucharensis*	Bokhara Whiskered Bat	Possibly extinct in the AoI			Screened in	Precautionarily screened in