



Revised final Critical Habitat Assessment for the Scatec wind farm, Egypt

The Project occurs in:

- *An area of Critical Habitat for 12 species of migratory soaring birds and an area for 10 additional Priority Biodiversity Features;*
- *An Internationally Recognised Area, the Gebel el Zeit Key Biodiversity Area, which has been designated, in part, for migratory soaring species; and,*
- *An area of largely Natural Habitat – sandy desert, wadis and rock outcrops.*

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1 Executive summary

This report is the Critical Habitat Assessment (CHA) for the Egypt Green Hydrogen (EGH) / Scatec wind farm (the Project), in alignment with International Finance Corporation (IFC) Performance Standard 6 (PS6), European Bank for Reconstruction and Development (EBRD) Performance Requirement 6 (PR6) and European Investment Bank Environmental and Social Standard 4 (ESS4). The purpose of the CHA is to determine the presence of Critical Habitat-qualifying biodiversity features, Natural Habitat, Priority Biodiversity Features (PBFs) and overlap with Protected Areas or otherwise Internationally Recognised Areas, which will require special attention and specific mitigation planning under IFC PS6, EBRD PR6 and EIB ESS4. The CHA was carried out for two Ecologically Appropriate Areas of Analysis (EAAAs), a Resident Species EAAA and a Migratory Bird EAAA. A total of 328 species were identified as having global ranges that overlapped the EAAAs and 28 were screened in detail against PS6, PR6 thresholds and ESS4 using global datasets, available literature and field data. This CHA determines that:

- 12 species that meet, or likely to meet CH-qualifying thresholds: Black Stork, Common Crane, Eastern Imperial Eagle, Egyptian Vulture, Eurasian (Steppe) Buzzard, European Honey-buzzard, Great White Pelican, Greater Spotted Eagle, Lesser Spotted Eagle, Levant Sparrowhawk, Steppe Eagle and White Stork;
- 10 species are identified as PBFs; Black Kite, Booted Eagle, Lesser Kestrel, Long-legged Buzzard, Pallid Harrier, Red-footed Falcon, Saker Falcon, Sooty Falcon, Short-toed Eagle and Egyptian Spiny-tailed Lizard;
- Both the Project area and the wider EAAA appear to be broadly in Natural Habitat; and,
- The Project occurs within an Internationally Recognised Area, the Gebel el Zeit Key Biodiversity Area (KBA), which is also an Important Bird Area (IBA). Both the KBA and IBA are designated for migratory soaring birds and trigger CH, while most species that are trigger species for the KBA/IBA are considered either CH-qualifying or PBFs.

To meet lender requirements, the Project would need to demonstrate Net Gain (NG) for all CH-qualifying features and No Net Loss (NNL) for Natural Habitat and all PBFs. It must also not implement any activities unless:

- No other viable alternatives exist for the project on non-Critical habitats or there is rigorous justification of overriding public interest;
- The project does not lead to measurable adverse impacts on those biodiversity values for which the critical habitat was designated;
- The project does not lead to a net reduction in any PBF over a reasonable period of time;
- Stakeholders are consulted in accordance with ESS Standards 2 and 7 (EIB only); and,
- A robust, appropriately designed, and long-term biodiversity monitoring and evaluation program is integrated into the client's management program.

Where the Project can meet the requirements of PS6, PR6 and ESS4, the Project's mitigation strategy must be described in a Biodiversity Action Plan (BAP) or similar that quantifies the residual impacts to identified priority species and proposes conservation actions that would support the Project to meet its NG commitments for CH-qualifying species and NNL commitments for Natural Habitat and PBFs, and promotes the conservation aims and management of the Gebel el Zeit KBA.

2 Introduction

Egypt Green Hydrogen / Scatec (the Client) has commissioned The Biodiversity Consultancy (TBC) to undertake a Critical Habitat Assessment (CHA) for the Scatec wind farm (the Project) in alignment with International Finance Corporation (IFC) Performance Standard 6 (PS6) (IFC 2012, 2019), European Bank for Reconstruction and Development (EBRD) Performance Requirement 6 (PR6) (EBRD 2019, 2023) and European Investment Bank (EIB) Environment and Social Standard 4 – Biodiversity and Ecosystems (ESS4)¹ (EIB 2022).

A CHA is a key component of full alignment with IFC PS6, EBRD PR6 and EIB ESS4 and forms an integral part of the Project's overall framework for managing biodiversity risk. This CHA:

- Identifies Critical Habitat as defined by IFC PS6, EBRD PR6 and EIB ESS4;
- Identifies Priority Biodiversity Features (PBFs) as defined by EBRD PR6;
- Identifies Natural and Modified Habitat as defined by IFC PS6;
- Confirms the Project's location in relation to relevant Legally Protected Areas (LPAs) and Internationally Recognised Areas (IRAs);
- Outlines the implications of the findings of the CHA for the Project; and
- Identifies the recommended next steps for the Project.

2.1 Project overview

The Project is proposed to be developed in the Gabel el Zeit region of the Red Sea Governorate, approximately 290 km south-east of Cairo, Egypt. The Project is a 200 MW wind energy facility with approximately 25 turbines and associated infrastructure (e.g. Project roads, a sub-station and high voltage Overhead Transmission Line (OHTL)). At the time of developing this CHA, no Project infrastructure was planned beyond the extent of the Project boundary shown in Figure 3 and Figure 4. A suite of surveys, including migratory bird surveys in spring and autumn of 2022, have been undertaken for the Project's Environmental Social Impact Assessment (ESIA) (EcoConServ & EcoConsult 2023a).

2.2 The Project's ecological context

The Project is in the Red Sea Coastal Desert Ecoregion (Dinerstein *et al.* 2017) and occurs in an area of sand and gravel plains bisected by several shallow wadis. Land cover consists primarily of bare ground with very scattered low-growing vegetation, supporting a low diversity and abundance of terrestrial flora and fauna (see, e.g. Figure 1 from the project site). Most vegetation occurs in the wadis, where the small shrub *Ochradinus baccatus* is frequent (Grontmij & EcoConServ 2010). The Project is sited on a gently sloping sand plain at ~70–130 m above sea level and lies approximately 8 km inland from the Gulf of Suez coast to the east and 15 km from

¹ Note that Egypt is not an EU Candidate or potential Candidate country, and so of the requirements of ESS4 do not apply – particularly those around compliance with EU environmental legislation.

the edge of the escarpment (northern Red Sea Mountains) to the west (Figure 3). The local area contains a number of existing and/or planned wind farms (the operational KfW, JICA and FIEM sites, collectively the 'NREA wind farm complex', to the north and the planned SWE site to the east: Figure 3) and small oil fields and agricultural operations (e.g. poultry farms, date palm plantations, some crops) immediately south of the Project area (Grontmij & EcoConServ 2010).

The Project occurs within the Red Sea/Rift Valley flyway for migratory soaring birds which connects breeding grounds in Europe with wintering areas in Africa (BirdLife International 2015). This flyway is used by over 1.5 million individuals from 37 species of migratory soaring birds, as well as a suite of migratory passerines and other bird groups (BirdLife International 2015).



Figure 1. Image of typical habitat within the Project area (photo taken by A. Khazma, RCREEE).

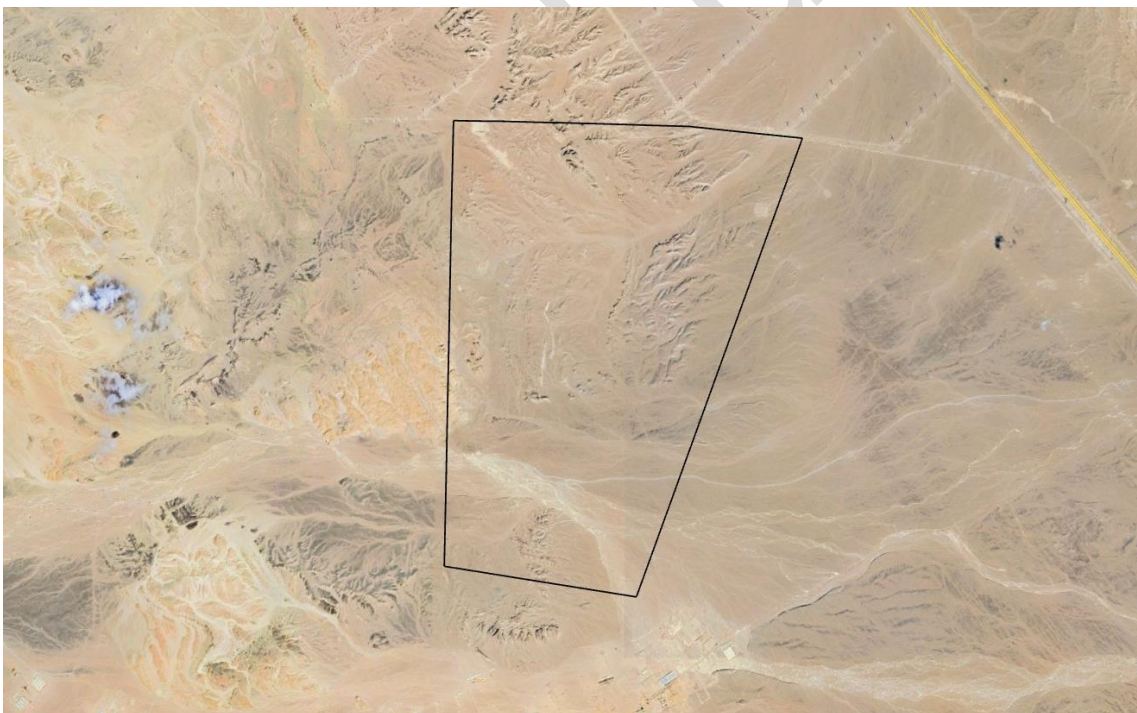


Figure 2. Aerial image of the Project area (Google Earth, imagery date 6 January 2023).

2.3 Constraints and limitations

The assessment is based on the data available to TBC at the time of the initial analysis in November 2024. This includes previous consultants reports for the Project, publicly available information on nearby wind farms and global biodiversity data obtained through the Integrated

Biodiversity Assessment Tool (IBAT)². No stakeholder consultation was undertaken specifically for the CHA.

All Project infrastructure was inside the wind farm boundary (particularly the OHTL) at the time of developing the CHA. Both PS6 and ESS1 of EIB are clear that 'associated infrastructure' is considered in the CHA (e.g. GN5, GN9, etc: IFC 2019; ESS1, paragraph 22: EIB 2022) and the conclusions of this CHA may change if any associated infrastructure extends beyond the Project boundary and results in a revised EAAA (Figure 3).

2.4 Definition categories considered

IFC PS6 identifies three categories of habitat: Natural Habitat (NH), Modified Habitat (MH) and Critical Habitat (CH) which are based on (i) habitat condition (or 'quality' or 'state') and (ii) significance for biodiversity (IFC 2012, 2019). EBRD PR6 also identifies Priority Biodiversity Features (PBFs) as those features which require consideration during project impact assessment and mitigation but of lower sensitivity than features which are CH-qualifying (EBRD 2019, 2023). EIB ESS4 defines a single category, 'Critical Habitat', but which has a broader definition than that used by IFC PS6 and EBRD PR6.

2.4.1 Critical Habitat

Areas of "high biodiversity value" are termed CH by IFC, EBRD and EIB. There are six criteria by which CH is defined (IFC PS6 / EBRD PR6 / EIB ESS4):

- Criterion 1 / Criterion ii / Criterion b: Areas of importance to Critically Endangered, Endangered and/or Vulnerable species;
- Criterion 2 / Criterion iii / Criterion c: Areas of significant importance to endemic and/or restricted-range species;
- Criterion 3 / Criterion iv / Criterion d: Area supporting globally significant concentrations of migratory species and/or congregatory species;
- Criterion 4 / Criterion I / Criterion a: Highly threatened and/or unique ecosystems;
- Criterion 5 / Criterion v / Criterion f: Areas associated with key evolutionary processes or of key scientific value;
- - / Criterion vi / - : Ecological functions that are vital to maintaining the viability of biodiversity features described as critical habitat features (e.g. riparian zones and rivers, dispersal or migration corridors, hydrological regimes, seasonal refuges or food sources, keystone or habitat-forming species). For the purposes of this CHA, this criterion has been combined within the assessment under Criteria 1-3 / ii-iv; and,

² IBAT is an authoritative global biodiversity dataset setup by a partnership between BirdLife International, Conservation International, the International Union for Conservation of Nature (IUCN) and United Nations Environment Program World Conservation Monitoring Centre which enables the access to key biodiversity datasets, such as the IUCN Red List, the World Database of Protected Areas, and the World Database of Key Biodiversity Areas. The project has a license to access IBAT commercial purposes. See <https://www.ibat-alliance.org>.

- - / - / Criterion e: Biodiversity and/or an ecosystem of significant social, economic or cultural importance to local communities and indigenous groups.

Criteria 1-3 (IFC PS6), Criteria ii-iv (EBRD PR6) are species-specific and assessed against quantitative thresholds, further details of which are provided in the relevant guidance notes. and EIB ESS4 does not specify quantitative thresholds for Criteria b-d (EIB ESS4)³, and this CHA has applied the same thresholds as for the relevant PS6 / PR6 criterion. Vulnerable species under ESS4 Criterion b have been assessed using the same quantitative thresholds as for Critically Endangered and Endangered species. Criterion 4 / i / a refers to threatened ecosystems and also applies quantitative thresholds (IFC 2019; EBRD 2023; but not EIB 2022). IFC Criterion 5, PR6 Criteria v, vi, and vii and ESS4 Criteria e and f are assessed qualitatively based on expert opinion.

Egypt has an IUCN-compliant national list of threatened mammals (Basuony *et al.* 2010) and butterflies (Gilbert & Zalat 2007), and there is also a regional red list assessment for breeding birds of prey (Garrido *et al.* 2021): as relevant, these species groups were specifically assessed under IFC PS6 Criterion 1c / EBRD Criterion ii(d).

PS6, PR6 and ESS4 all require a Net Gain for Critical Habitat-qualifying features.

2.4.2 Natural and Modified Habitat

Under IFC PS6, habitat condition is classified as either Natural or Modified based on the extent of human modification of the ecosystem. For example, agricultural areas, plantations and urban areas show “substantial modification” and would be classed as Modified Habitat, whereas woodlands exploited for non-timber forest products or grasslands that retain most of the original species and ecological processes would in most cases be considered Natural Habitat. In practice, Natural and Modified Habitats exist on a continuum from largely untouched, pristine habitats, to intensively managed Modified Habitats (IFC 2019).

PS6-compliant projects must design mitigation strategies that can achieve No Net Loss (NNL) for NH, where feasible, and this requirement for NNL can also extend to populations of threatened species supported by a specific habitat.

EBRD PR6 replaces the concept of Natural/Modified Habitat with PBFs.

2.4.3 Priority Biodiversity Features

In addition to CH values, EBRD also considers a suite of PBFs which are of lower concern, but still important for a project to consider. PBFs are defined as follows (EBRD 2019, 2023).

- (i) Priority ecosystems:

³ Note that a Guidance Note for Standard 3 – Biodiversity and Ecosystems was issued in 2018 for an earlier version of the Standards which does contain quantitative thresholds for some criteria (EIB 2018). This document is not referenced in the current Standards and does not appear on the EIB website, so is not considered further.

- a. EAAA supports habitat types listed in Annex 1 of EU Habitats Directive or Resolution 4 of Bern Convention; or,
 - b. EAAA supports < 5 per cent of the global extent of an ecosystem type with IUCN status of CR or EN.
- (ii) Priority species and their habitats
 - ii.1 Threatened species:
 - a. EAAA supports species and their habitats listed in Annex II of Habitats Directive, Annex I of Birds Directive, or Resolution 6 of Bern Convention;
 - b. EAAA supports < 0.5 per cent of global population OR < 5 reproductive units of a CR or EN species;
 - c. EAAA supports VU species; or
 - d. EAAA supports regularly occurring nationally or regionally listed EN or CR species.
 - ii.2 Range-restricted species
 - a. EAAA contains regularly occurring range-restricted species
 - ii.3 Migratory and congregatory species
 - a. EAAA identified as per Birds Directive or recognised national or international process as important for migratory birds (especially wetlands)
- (iii) Significant biodiversity features identified by a broad set of stakeholders or governments (such as Key Biodiversity Areas or Important Bird Areas);
- (iv) Ecological structure and functions needed to maintain the viability of priority biodiversity features.

EBRD have not defined thresholds for categories iii-iv above, and the assessment relies on expert judgement (EBRD 2023). EBRD PR6 requires no net loss and preferably a net gain of priority biodiversity features over the long term, to achieve measurable conservation outcomes.

2.4.4 Legally Protected Areas and Internationally Recognised Areas

IFC PS6 requires projects in Legally Protected Areas (LPAs)⁴ and Internationally Recognised Areas (IRAs)⁵ to be developed in line with any government-recognized management plans, be legally permitted, and implement additional programs to promote and enhance the conservation aims and effective management of those areas. Similarly, EBRD PR6 requires that the Project will not compromise the integrity, conservation objectives and/or biodiversity importance of Legally Protected and Internationally Recognised Areas. EIB ESS4 requires the Project to be able to demonstrate that the proposed development 'is legally permitted and that the design of the project is consistent with a recognised management plan for the protected or designated conservation area. In the absence of a recognised plan, the project should be

⁴ Those that meet the IUCN definition 'A clearly defined geographical space, recognized, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values' and those areas proposed by governments for such designation.

⁵ Exclusively defined as UNESCO Natural World Heritage Sites, UNESCO Man and the Biosphere Reserves, Key Biodiversity Areas, and wetlands designated under the Convention on Wetlands of International Importance (the Ramsar Convention).

compatible with the achievement of the relevant conservation objectives used to designate the area in question’.

3 Methodology

3.1 Ecologically Appropriate Area of Analysis

In line with IFC PS6 Guidance Note 6 (IFC 2019), a CHA should be carried out for an Ecologically Appropriate Area of Analysis (EAAA), defined considering the distribution of species or ecosystems (within and sometimes extending beyond the project’s area of influence) and the ecological patterns, processes, features, and functions that are necessary for maintaining them. This means EAAAs are usually at a scale larger than a project site or impact area. Such a precautionary approach ensures that the EAAA considers the area in which most potential risks from a Project could occur. For this CHA, two EAAAs were designated, one for flora and resident fauna (the ‘Resident Species EAAA’), and a second for migratory birds (the ‘Migratory Bird EAAA’) (Figure 3).

3.1.1 Resident Species EAAA

The Resident Species EAAA was initially designated as the Project concession area plus a buffer distance of 10 km around the wind farm area. Within this buffer, the dominant habitats within the Project area were used to refine the EAAA. Coastal, marine, and wetland areas were excluded, as were areas of the escarpment above 250 m asl. These areas were excluded because (i) they represent very different habitat types to the sand plain desert habitat within which the Project occurs and (ii) Project impacts (direct or indirect) on these systems are unlikely. The buffer distance applied reflects a highly conservative distance beyond the Project boundary that a highly mobile resident species (e.g. a lark or wheatear) might occur and still reasonably be expected to interact with Project infrastructure⁶. For some species (e.g. flora and less mobile fauna species like reptiles) a 10 km buffer is likely to be highly conservative as potential impacts to species are unlikely to occur more than a few hundreds of metres beyond the Project boundary and other CHAs have used much smaller buffers (e.g. TBC 2018, 2024).

3.1.2 Migratory Bird EAAA

The Migratory Bird EAAA was defined based on the Red Sea / Rift Valley flyway at the Project location. It spans a cross-section through the flyway, from the base of the escarpment to the coast and covering the full east – west width of the coastal plain. The escarpment and the sea represent distinct topographic features which result in high concentrations of birds flying over coastal plain, including the Project area. Therefore, they represent distinct ecological boundaries

⁶ 10 kms is double the maximum recorded territorial movement for Northern Wheatear *Oenanthe oenanthe* (~4.7 km: Arlt & Pärt 2008) and the slightly greater than the maximum home range diameter recorded of ~9.5 km for Red Lark *Calendulauda burra* (Kemp et al. 2024). While neither species breeds in the Resident Species EAAA, related species are expected to have similar attributes.

to define the eastern and western boundaries of the EAAA. As migratory birds travel parallel to the coast along the flyway, the northern and southern extents of the Migratory Bird EAAA are less important, i.e. the width does not affect the analysis because all migratory soaring birds fly through it. Its nominal width was slightly wider than that of the Project (approximately 8 km wide). This approach to designating a Migratory Bird EAAA aligns with the recent guidance note on how to interpret airspace for Critical Habitat determination (IFC & EBRD 2023).

Furthermore, the Project is fully within the Gebel el Zeit KBA⁷ and IBA⁸, which is identified, in part, as a 'bottleneck' site for migratory soaring birds on the Red Sea/Rift Valley flyway (BirdLife International 2024). Although large numbers of migratory soaring birds use the entire length of the Red Sea/Rift Valley flyway along the western Gulf of Suez/Red Sea coast in Egypt, the Gebel el Zeit KBA represents a particularly important bottleneck site within this flyway, as it is located at the narrowest crossing point over the southern Gulf of Suez, through which migratory soaring birds are funnelled (BirdLife International 2024).

Birds of prey, storks and pelicans migrate through and usually land, rest or roost near the coastline and on the surrounding desert plains and hills (BirdLife International 2024). Migratory soaring bird species were reported as resting on the ground during field surveys for the adjacent SWE site, including Steppe Eagle (*Aquila nipalensis*), White Stork (*Ciconia ciconia*), Black Stork (*Ciconia nigra*), Great White Pelican (*Pelecanus onocrotalus*), European Honey Buzzard (*Pernis apivorus*) and Eurasian (Steppe) Buzzard (*Buteo buteo vulpinus*) (EcoConServ *et al.* 2024). Additional species reported on the ground very closer to the Project area include Black Kite (*Milvus migrans*), Egyptian Vulture (*Neophron percnopterus*) and Marsh Harrier (*Circus aeruginosus*) (Camiña Cardenal *et al.* 2024), while Lesser Spotted Eagle (*Clanga pomarine*), Short-toed Eagle (*Circaetus gallicus*) and Booted Eagle (*Hieraaetus pennatus*) have been recorded on the ground in the wider Gebel el Zeit KBA region (Camiña Cardenal *et al.* 2024). Rest stop locations are likely temporally and spatially variable and are not predictable (Camiña Cardenal *et al.* 2024), and it is likely that other migratory soaring bird species recorded migrating through the area will also rest on the ground in the Migratory Species EAAA during different years or when conditions require them to rest (e.g. during storm events). In autumn, many birds arrive tired after crossing the Gulf of Suez, flying at low altitudes and often land in large numbers (BirdLife International 2024). Migrating raptors were observed feeding at a poultry carcass disposal site (used by the neighbouring poultry farms), which is located just outside the eastern boundary of the Project area, including Steppe Eagle, Black Kite, Eurasian (Steppe) Buzzard, Eastern Imperial Eagle (*Aquila heliaca*), Booted Eagle, Short-toed Eagle, Marsh Harrier, Pallid Harrier (*Circus macrourus*) and European Honey-buzzard (Camiña Cardenal *et al.* 2024).

Therefore, the default of this CHA will be to determine the Migratory Bird EAAA as CH for all migratory soaring birds with count data exceeding or likely to exceed PS6/PR6/(ESS4) thresholds. This is due to the Project being located in an international bottleneck site and with

⁷ <https://www.keybiodiversityareas.org/site/factsheet/6217>

⁸ <https://datazone.birdlife.org/site/factsheet/gebel-el-zeit-iba-egypt>

evidence suggesting many migratory soaring bird species rest on the ground or fly at turbine height (EcoConServ & EcoConsult 2023a).

Data for consideration against relevant thresholds for the Migratory Bird EAAA includes count data from surveys undertaken both within and outside the Project area, and some of these counts are also outside of the Migratory Species EAAA. PS6/PR6 thresholds are based on proportions of species' populations that occur within an appropriately identified EAAA (IFC 2019). The use of data from bird surveys undertaken outside a Project area or EAAA can be justified and appropriate if it is likely that birds recorded during those counts would either (i) also pass through the relevant EAAA during the same migratory season (e.g. being immediately north or south), or (ii) likely migrate through the relevant EAAA in a subsequent season due to different environmental conditions (at the local scale, the routes taken during migration can be affected by many environmental factors). Further, raw counts from migratory bird surveys are likely to be underestimates, to some degree, of the true number of birds migrating through an area and so the maximum count of a species from multiple surveys conducted in close proximity is most likely to represent the true number of individuals of a species potentially using an area.

3.2 Analysis

A full list of biodiversity values, excluding migratory species, that overlapped with the Resident Species EAAA was obtained via IBAT, while a full list of migratory species that overlapped with the Migratory Bird EAAA was also obtained from IBAT. An initial review of species was conducted for both lists to screen out those species which would clearly not meet relevant thresholds (e.g. due to the low level of overlap between the EAAA and the species' range, habitat unsuitability, or because they are known to be extinct in the EAAA, etc.). The resulting shortlist of species was then assessed using available information against the applicable CH criteria and thresholds (following IFC 2019; EIB 2022; EBRD 2023), noting that species may be screened against multiple criteria. Information sources reviewed in the assessment included the:

- Previous documents developed for the Project, particularly migratory bird survey information in the draft Environmental & Social Impact Assessment (ESIA) (EcoConServ & EcoConsult 2023a);
- Information in the ESIA and CHA for the Suez Wind Energy (SWE) wind farm Plot 2, adjacent to the Scatec Project to the east, which present bird baseline studies from spring and autumn 2022 and 2023 (EcoConServ *et al.* 2023, 2024);
- Bird migration surveys for the NREA Wind Farm complex (FIEM, JICA and KFW wind farms) (GreenPlus 2021a, 2021b, 2022a, 2022b);
- Unpublished report 'Migration of Soaring Birds at Gebel el Zeit (IBA) in relation to wind energy developments' (Camiña Cardenal *et al.* 2024);
- Strategic and Cumulative Environmental and Social Assessment Active Turbine Management Program (ATMP) for Wind Power Projects in the Gulf of Suez (Lahmeyer International & Ecodia 2018);
- ESIA of the Alfa Wind Project (EcoConServ 2016);
- Italgen Gabal El-Zeit 320 MW bird baseline studies in autumn 2008, spring 2009, autumn 2013, spring 2014 and autumn 2016 (Grontmij 2009; EcoConServ 2014, 2017);

- Survey in autumn 2006 in the Gebel el Zeit Important Bird Area (Hilgerloh *et al.* 2011);
- Species qualifying the listing of Gebel El Zeit as an Important Bird and Biodiversity Area (BirdLife International 2024);
- The Migratory Soaring Birds Tool (BirdLife International 2023), filtered by species mapped as occurring in the project area; and,
- Publicly available data from eBird records within the Gebel el Zeit KBA⁹.

A precautionary approach was taken to assess the importance of migratory bird counts. The percentage of the global population was based on the lowest estimate of the global population published by IUCN (most bird population estimates have substantial confidence intervals). For some species, this figure may significantly underestimate the real global population size. This is the case for Levant Sparrowhawk (*Tachyspiza brevipes*), for which the numbers of individuals observed migrating past the Project area (e.g. 40,699 individuals reported in GreenPlus 2021a) exceeds the lowest estimate of the global population published by IUCN (i.e. 10,000 mature individuals, or approximately 15,000 mature and immature individuals). In such a case, the assessment of the species made there is likely to need modification when an updated estimate of the global population is available.

Species were categorised, based on available evidence for whether they are CH-qualifying, as:

- **Certain** – where the available data demonstrate exceedance of CH threshold(s) (e.g. based on numbers already confirmed by field verification);
- **Likely** – where the available evidence (e.g., range overlap and habitat suitability) suggests that species' presence in the EAAA is likely to exceed CH threshold(s), but where there is no direct field verification of such numbers;
- **Possible** – where:
 - the available evidence (e.g., range overlap and habitat suitability) suggests that species presence in the EAAA is close to CH threshold(s);
 - there is the potential for the EAAA to have a higher proportion of the population than average; or,
 - suitable habitat for a species is present in the EAAA, but the species' range or abundance is poorly understood and no targeted surveys have been undertaken to determine the species' status in the Project area or EAAA; or,
- **Does not qualify** – where the available evidence indicates that CH threshold(s) would not be exceeded.

⁹ https://ebird.org/region/BIRDLIFE_6217/bird-list?rank=hc

4 Findings

4.1 Potential Critical Habitat-qualifying species

4.1.1 Criteria 1-3 / ii-iv / b-d¹⁰

A total of 328 species were identified from IBAT with a global range which overlapped the two EAAAs. An initial review of species was conducted to screen out those species which would clearly not meet relevant thresholds, due to:

- low level of range overlap or not having an IUCN threat status of CR, EN or VU despite having a range overlap >0.5%;
- Migration occurring on a broad front and so likely to have very low proportions of their global populations migrating through the EAAA; or,
- Species known to be extinct in the EAAA.

One additional trigger species for the Gebel el Zeit KBA (White-eyed Gull *Ichthyophaga leucophthalmus*) was not captured in the IBAT query but was included in the short-list.

Following this process, a short-list of 23 species were screened in detail against relevant thresholds (Table 1), of which:

- 11 species are certain to qualify the Migratory Bird EAAA as Critical Habitat: Black Stork, Common Crane, Eastern Imperial Eagle, Egyptian Vulture, Eurasian (Steppe) Buzzard, European Honey-buzzard, Great White Pelican, Lesser Spotted Eagle, Levant Sparrowhawk, Steppe Eagle and White Stork;
- One species likely qualifies the Migratory Bird EAAA as Critical Habitat: Greater Spotted Eagle (*Clanga clanga*), and it is recommended that this species should be initially treated as CH-qualifying by the Project; and,
- Three species possibly qualify the Migratory Bird EAAA as Critical Habitat: Black Kite, Pallid Harrier and Short-toed Eagle, and it is recommended that these species should be treated as PBFs by the Project unless additional information becomes available to suggest they would exceed CH-qualifying numbers in the Migratory Bird EAAA.

¹⁰ Criteria refer to IFC PC6 / EBRD PR6 / ESS4.

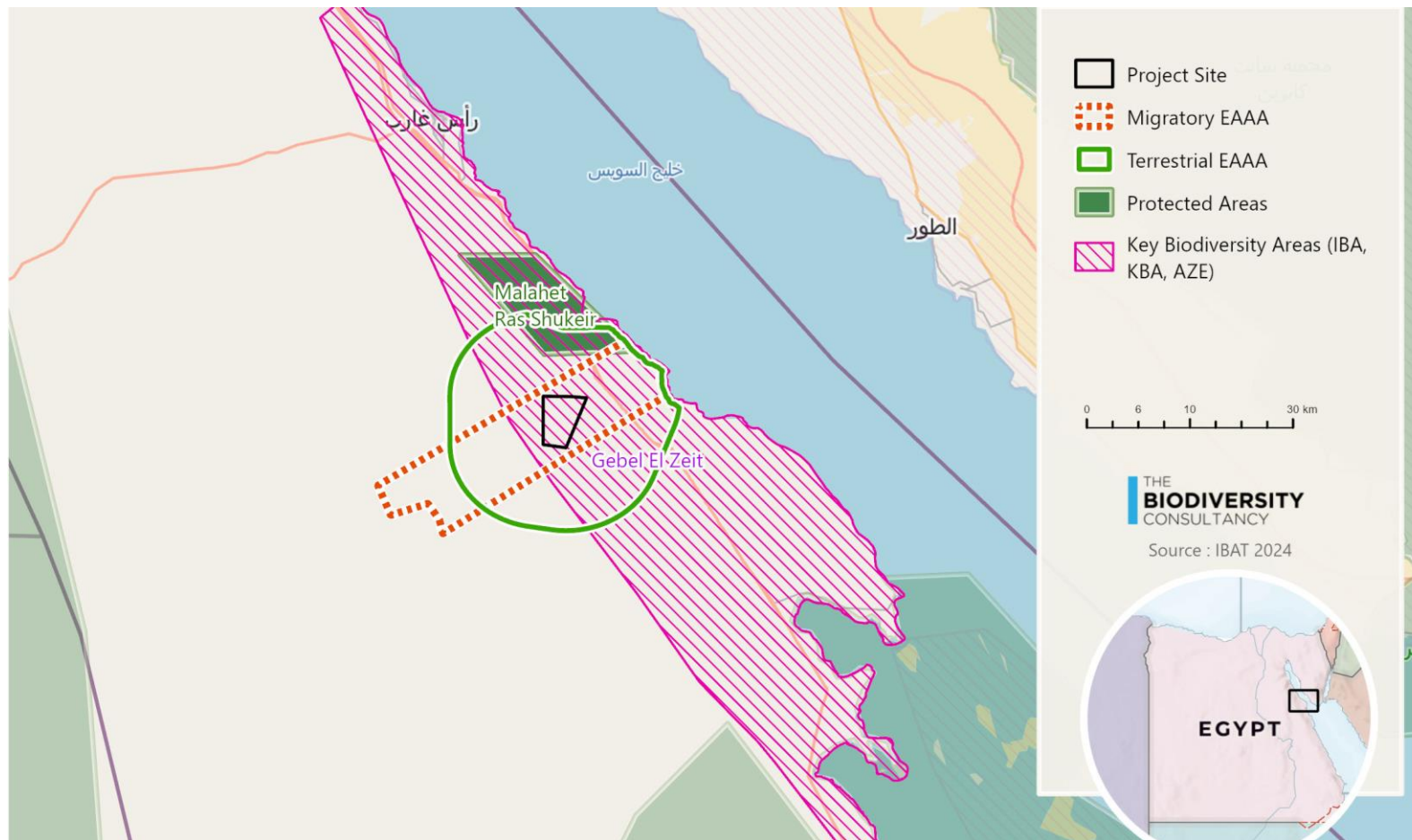


Figure 3. The location of the Project (source: client-provided data), the two Ecologically Appropriate Area of Analyses delineated for this Critical Habitat Assessment and Protected Areas and other Internationally Recognised Areas.

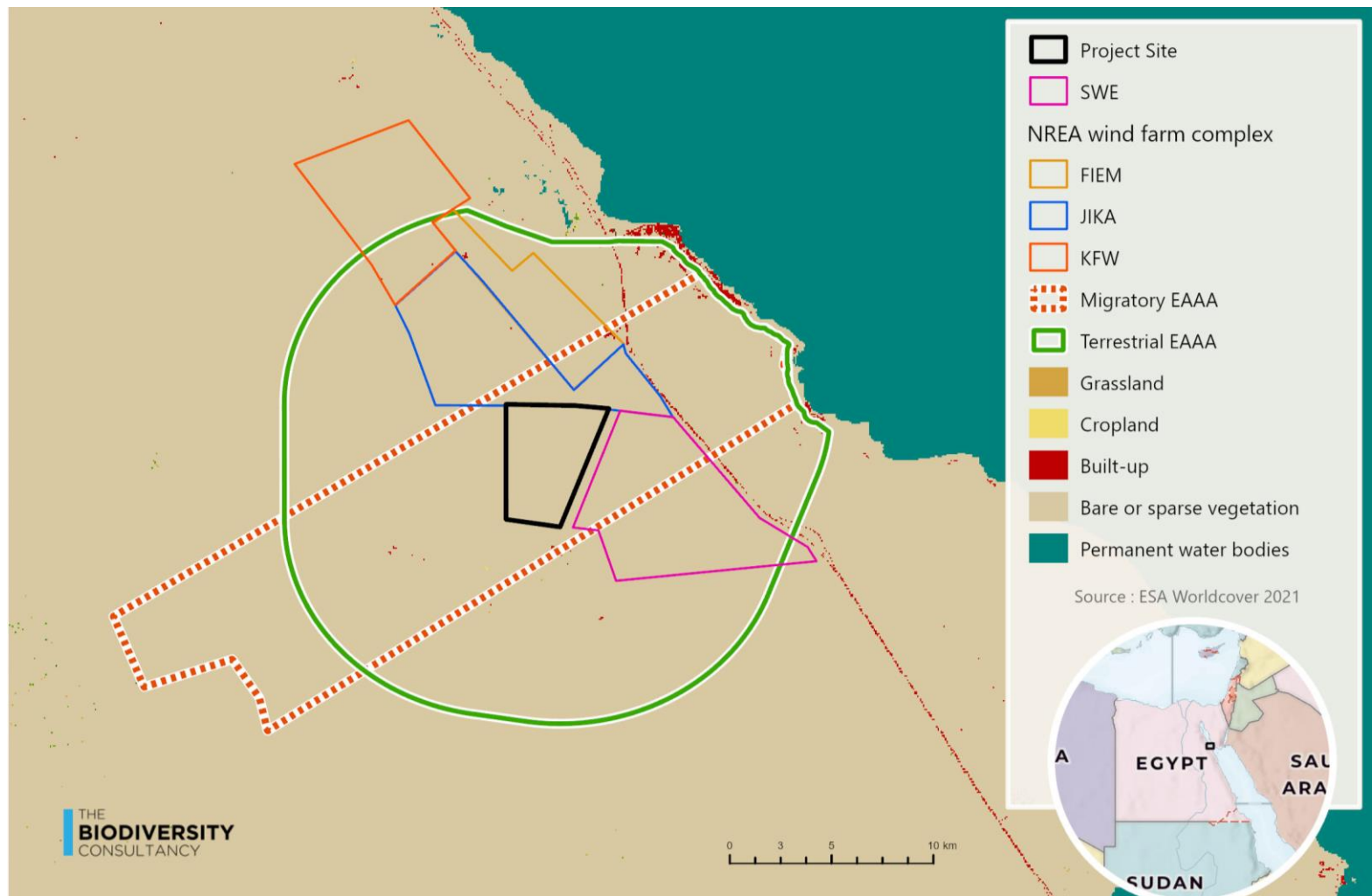


Figure 4. Remote habitat mapping from the European Space Agency WorldCover dataset (source: ESA WorldCover 2021), with the two Ecologically Appropriate Area of Analyses delineated for this Critical Habitat Assessment and other nearby wind projects mentioned in text.

Table 1: Species screening shortlist considered against IFC PS6 Critical Habitat criteria, and assessment conclusions.

Species	IUCN Status	Criteria considered	Minimum global population estimate ¹¹	Commentary	Conclusion
Species confirmed to qualify the relevant EAAA as CH					
Steppe Eagle	EN	PS6: 1a, 3a PR6: iv ESS4: b, d	75,000 (IUCN 2024)	The species has been recorded 268 times within the Migratory Bird EAAA on GBIF (2024) and has a high count of 1,286 individuals in the Gebel el Zeit IBA (https://ebird.org/checklist/S43173079). Surveys in the Project area recorded a maximum of 5,314 individuals (7.1% of minimum global population) in spring 2022 (EcoConServ & EcoConsult 2023a) and, although 15 years ago when the species' population was likely higher, 10,218 birds (13.6% of minimum global population) in spring 2009 (Grontmij 2009). The adjacent SWE site recorded a maximum count of 6,859 individuals in spring 2023 (EcoConServ <i>et al.</i> 2024) and 28,068 birds were recorded in spring 2022 in the NREA complex area immediately north of the Project area (GreenPlus 2022a). The latter count represents a maximum of 37.4% of the global minimum population and all counts exceed the threshold for qualification under Criterion 3a / iv.	The EAAA qualifies as Critical Habitat for this species
Levant Sparrowhawk	LC	PS6: 3a PR6: iv ESS4: d	15,000 (IUCN 2024)	The species has been recorded 54 times within the Migratory Bird EAAA on GBIF (2024) and has a high count of 14,380 individuals in the Gebel el Zeit IBA (https://ebird.org/checklist/S55565586). Surveys in the Project area recorded 18,001 birds in spring 2022 (EcoConServ & EcoConsult 2023a) and 20,374 birds in spring 2009 (Grontmij 2009). In spring 2021, 40,699 birds were recorded in the NREA complex area immediately north of the Scatec Project area (GreenPlus 2021a). All counts exceed 1% of the global minimum population.	The EAAA qualifies as Critical Habitat for this species
White Stork	LC	PS6: 3a PR6: iv ESS4: d	700,000 (Wetlands International 2015)	The species has been recorded 213 times within the Migratory Bird EAAA on GBIF (2024) and has a high count of 30,000 individuals in the Gebel el Zeit IBA (https://ebird.org/checklist/S59200247). In autumn 2021, 505,843 birds were recorded in the NREA complex area immediately north of the Scatec Project area (GreenPlus 2021b) while surveys in the adjacent SWE site recorded a maximum count of 221,558 birds in spring 2023 (EcoConServ <i>et al.</i> 2024). 186,010 individuals were recorded during autumn 2022 in the Project area (EcoConServ & EcoConsult 2023a). These counts represent at 26-72% of the species' minimum global population.	The EAAA qualifies as Critical Habitat for this species

¹¹ Minimum population estimate are as reported in the IUCN Red List. For some species the IUCN Red List reports the estimated number of mature individuals only: where this was the case we adjusted these values by the 1:1.5 ratio of mature individuals to total individuals for related taxa as reported in the relevant Birdlife International species factsheets. We used Peregrine Falcon (*Falco peregrinus*; 93,300 mature individuals and 140,000 total individuals), Taita Falcon (*F. fasciunucha*; 500-1,000 mature individuals and 750-1,500 total individuals), Greater Spotted Eagle (*Clanga clanga*; 3,300-8,800 mature individuals and 5,000-13,200 total individuals) and Steppe Eagle (*Aquila nipalensis*; 62,744 mature individuals and 94,116 total individuals).

Species	IUCN Status	Criteria considered	Minimum global population estimate ¹¹	Commentary	Conclusion
Eurasian (Steppe) Buzzard	LC	PS6: 3a PR6: iv ESS4: d	3,000,000 (IUCN 2024)	The species has been recorded 329 times within the Migratory Bird EAAA on GBIF (2024) and has a high count of 29,787 individuals in the Gebel el Zeit IBA (https://ebird.org/checklist/S44042101). Surveys at the NREA wind complex recorded 87,961 birds in spring 2021 (GreenPlus 2021a), representing 2.9% of the minimum global population. In the Project area, 12,713 individuals were recorded in spring 2022 (EcoConServ & EcoConsult 2023a), representing 0.5% of the minimum global population, and 153,471 individuals were recorded (5.1% of the minimum global population) in spring 2009 (Grontmij 2009). Although 15 years old, this count is likely to be still relevant given the species is not thought to have since undergone a significant decline (IUCN (2024)).	The EAAA qualifies as Critical Habitat for this species
Black Stork	LC	PS6: 3a PR6: iv ESS4: d	24,000 (Wetlands International 2006)	The species has been recorded 111 times within the Migratory Bird EAAA on GBIF (2024) and has a high count of 340 individuals in the Gebel el Zeit IBA (https://ebird.org/checklist/S29221834). In the Project area, 1,578 individuals were recorded in spring 2022 (EcoConServ & EcoConsult 2023a), representing 6.6% of the minimum global population, and (Grontmij 2009) recorded 6,738 birds (26.6% of the minimum global population) in spring 2009. Although 15 years old, this latter value is likely still relevant given the European population is estimated to be increasing (IUCN 2024). Surveys in spring 2021 recorded 4,592 individuals in the NREA wind farm complex (GreenPlus 2021a), representing 19.1% of the species' minimum global population.	The EAAA qualifies as Critical Habitat for this species
Common Crane	LC	PS6: 3a PR6: iv ESS4: d	491,000 (Wetlands International 2015)	The species has been recorded 48 times within the Migratory Bird EAAA on GBIF (2024) and has a high count of 3,138 individuals in the Gebel el Zeit IBA (https://ebird.org/checklist/S43426312). Surveys recorded 17,518 individuals in spring 2022 in the NREA wind farm area by (GreenPlus 2022a). 19,599 individuals were reported during spring 2022 surveys at the Project site (EcoConServ & EcoConsult 2023a) and 6,747 were reported at the adjacent SWE site in spring 2023 (EcoConServ <i>et al.</i> 2024). These counts represent 1.4-3.6% of the minimum global population.	The EAAA qualifies as Critical Habitat for this species
Great White Pelican	LC	PS6: 3a PR6: iv ESS4: d	265,000 (Wetlands International)	The species has been recorded 162 times within the Migratory Bird EAAA on GBIF (2024) and has a high count of 22,000 individuals in the Gebel el Zeit IBA (https://ebird.org/checklist/S56608883). Surveys in autumn 2021 in the NREA wind farm complex recorded 54,231 individuals (GreenPlus 2021b), while 21,114 individuals were recorded in spring 2022 in the adjacent SWE site (EcoConServ <i>et al.</i> 2024). 26,960 individuals were counted in spring 2022 at the Project site (EcoConServ & EcoConsult 2023a). These counts represent 8.0-20.5% of the species' minimum global population.	The EAAA qualifies as Critical Habitat for this species
European Honey-buzzard	LC	PS6: 3a PR6: iv ESS4: d	435,000 (IUCN 2024)	The species has been recorded 144 times within the Migratory Bird EAAA on GBIF (2024) and has a high count of 10,143 individuals in the Gebel el Zeit IBA (https://ebird.org/checklist/S56608883). Surveys in autumn 2021 at the NREA wind farm complex recorded 157,055 individuals (GreenPlus 2021b), while high counts at the adjacent SWE site were of 21,157 individuals in spring 2023 (EcoConServ <i>et al.</i> 2024). 11,640 individuals were recorded in the Project area in spring 2022 (EcoConServ & EcoConsult 2023a). Grontmij (2009) also recorded 87,601 birds (20.1% of the minimum global population) in spring 2009 in	The EAAA qualifies as Critical Habitat for this species

Species	IUCN Status	Criteria considered	Minimum global population estimate ¹¹	Commentary	Conclusion
				the Project area, and this count is likely to still be relevant given the species is not thought to be in significant decline (IUCN (2024)). These counts represent 0.2-36.1% of the minimum global population.	
Eastern Imperial Eagle	VU	PS6: 1b, 3a PR6: iv ESS4: b, d	3,750 (IUCN 2024)	The species has been recorded 62 times within the Migratory Bird EAAA on GBIF (2024) and has a high count of five individuals in the Gebel el Zeit IBA (https://ebird.org/checklist/S44042101). Surveys in autumn 2021 at the NREA wind farm complex recorded 147 individuals (GreenPlus 2022a), representing 3.9% of the minimum global population. 25 individuals were recorded in spring 2022 in the Project area (EcoConServ & EcoConsult 2023a) and 30 individuals were recorded in the adjacent SWE site in surveys during 2022 and 2023 (EcoConServ <i>et al.</i> 2024), representing 0.7% and 0.8% of the species' minimum global population respectively. The species is also a trigger species for the Gebel el Zeit KBA, suggesting that > 1% of the global population passes through the EAAA (BirdLife International 2024).	The EAAA qualifies as Critical Habitat for this species
Egyptian Vulture	EN	PS6: 1a, 3a PR6: iv ESS4: b, d	18,600 (IUCN 2024)	The species has been recorded 99 times within the Migratory Bird EAAA on GBIF (2024) and has a high count of 30 individuals in the Gebel el Zeit IBA (https://ebird.org/checklist/S47145654). Surveys within the NREA wind farm complex recorded 207 individuals in spring 2022 (GreenPlus 2022a), representing 1.1% of the minimum global population, while a maximum of 51 individuals (0.3% of minimum global population) were recorded in 2022 and 2023 at the adjacent SWE site (EcoConServ <i>et al.</i> 2024). A maximum of 38 individuals were recorded in the Project site, in spring 2022 (EcoConServ & EcoConsult 2023a), representing 0.2% of the species' minimum global population. An average of 1,080 birds per season (5.8% minimum global population) migrates past Galala further north on the Gulf of Suez (https://www.trektellen.org/site/yeartotals/3335/2024), with tracking data suggesting most of these birds likely pass through the Gebel el Zeit KBA / Project EAAA as the Egyptian Red Sea coast is on a known migration route for Egyptian Vulture (Buechley <i>et al.</i> 2018; Phipps <i>et al.</i> 2019). Therefore, the EAAA qualifies as CH under Criterion 3a/iv.	The EAAA qualifies as Critical Habitat for this species
Lesser Spotted Eagle	LC	PS6: 3a PR6: iv ESS4: d	60,000 (IUCN 2024)	The species has been recorded 161 times within the Migratory Bird EAAA on GBIF (2024) and has a high count of 140 individuals in the Gebel el Zeit IBA (https://ebird.org/checklist/S29221834). Surveys in spring 2022 recorded 1,680 individuals in the NREA wind farm complex (GreenPlus 2022a), representing 2.8% of the species' minimum global population. Counts at the Project site were a maximum of 117 birds (0.2% of minimum global population size) in spring 2022 (EcoConServ & EcoConsult 2023a), and 1,595 birds were recorded in the area in spring 2009, representing 2.7% of the species' minimum population (Grontmij 2009). The species has likely not undergone a significant decline since 2009 (IUCN 2024), suggesting that such high counts are still relevant. 200 birds were recorded in spring 2023 at the adjacent SWE site (EcoConServ <i>et al.</i> 2024), representing 0.3% of the species' minimum global population.	The EAAA qualifies as Critical Habitat for this species
Species likely qualifying the EAAA as CH					

Species	IUCN Status	Criteria considered	Minimum global population estimate ¹¹	Commentary	Conclusion
Greater Spotted Eagle	VU	PS6: 1b, 3a PR6: iv ESS4: b, d	5,850 (IUCN 2024)	The species has been recorded 36 times within the Migratory Bird EAAA on GBIF (2024), most recently in 2020, and has a highest count of 10 birds in the Gebel el Zeit IBA (https://ebird.org/checklist/S66044260). In the Project area, five individuals (0.1% of minimum global population) were recorded in spring 2022 (EcoConServ & EcoConsult 2023a). A maximum count of 21 individuals (0.4% of minimum global population) was recorded at the adjacent SWE plot in spring and autumn migrations of 2022 and 2023 (EcoConServ <i>et al.</i> 2024). 3,985 individuals were recorded in spring 2022 at the KfW site to the north (GreenPlus 2022b). This count represents 68% of the species' minimum global population and while these were recorded as simply 'Spotted Eagle', 'Lesser Spotted Eagle' and 'Unidentified Eagle' are both recorded separately and so this count is likely to refer to Greater Spotted Eagle only. It is also likely that these individuals passed through the Migratory Bird EAAA before entering the KfW count area, and this count exceeds 1% of the species' minimum global population.	The EAAA likely qualifies as Critical Habitat for this species. Considered a PBF
Species possibly qualifying the relevant EAAA as CH					
Short-toed Eagle	LC	PS6: 3a PR6: iv ESS4: d	75,000 (IUCN 2024)	The species has been recorded 170 times within the Migratory Bird EAAA (GBIF 2024) and has a high count of 177 in in the Gebel el Zeit IBA (https://ebird.org/checklist/S44866562). In the Project area, 123 individuals were recorded in spring 2022 (EcoConServ & EcoConsult 2023a), representing 0.2% of the species' minimum global population. 224 individuals (0.3% of minimum global population) were recorded during spring 2022 at the KfW site to the north (GreenPlus 2022b) while a peak count of 143 individuals were recorded in spring 2023 surveys in the SWE plot adjacent to the Project area (EcoConServ <i>et al.</i> 2024). Although the available count data on this species fall below the required Critical Habitat-qualifying thresholds vantage point surveys covered a limited spatial extent and high counts in the KBA were limited to a single day, suggesting the total number of birds migrating through the Migratory Bird EAAA during an entire migratory season may still possibly exceed 1% of the species' minimum global population.	The EAAA possibly qualifies as Critical Habitat for this species. Considered a PBF.
Pallid Harrier	NT	PS6: 3a PR6: iv ESS4: d	27,000 (IUCN 2024)	The species has not been recorded within the Migratory Bird EAAA on GBIF (2024), however the species is a trigger species for the Gebel el Zeit KBA, suggesting that >1% of the global population passes (or historically passed) through the EAAA (BirdLife International 2024). More recent counts are lower, with a high count of eight individuals from the Gebel el Zeit IBA (https://ebird.org/checklist/S36463138), and 103 individuals (0.4% of minimum global population) in autumn 2021 at the NREA wind farm complex to the immediate north (GreenPlus 2021b). In the Project area, six individuals (0.02% of minimum global population) were recorded in spring 2022 (EcoConServ & EcoConsult 2023a). Hilgerloh <i>et al.</i> (2011) estimated that the total number of birds migrating through the flyway in the Gebel el Zeit area in 2006 was likely to be 706 birds (2.6% of the global minimum population as estimated in 2003). It is therefore possible that >1% of the species' minimum global population migrates through the EAAA.	The EAAA possibly qualifies as Critical Habitat for this species. Considered a PBF.

Species	IUCN Status	Criteria considered	Minimum global population estimate ¹¹	Commentary	Conclusion
Black Kite	LC	PS6: 3a PR6: iv ESS4: d	6,000,000 (IUCN 2024)	The species has been recorded 288 times within the Migratory Bird EAAA on GBIF (2024), and has a high count of 3,721 in the Gebel el Zeit IBA (https://ebird.org/checklist/S44012261). 39,090 individuals (0.7% of the species' minimum global population) were recorded in spring 2022 at the NREA wind farm complex to the north (GreenPlus 2022a), while a maximum of 6,064 were recorded at the adjacent SWE plot during spring and autumn counts in 2022 and 2023 (EcoConServ <i>et al.</i> 2024). In the Project area, 5,640 individuals (0.1% of minimum global population) were recorded in spring 2022 (EcoConServ & EcoConsult 2023a). Although the available count data on this species fall below the Critical Habitat-qualifying thresholds, surveys covered a limited spatial extent and high counts in the KBA were limited to a single day, suggesting the total number of birds migrating through the broader EAAA during an entire migratory season may still possibly exceed 1% of the species' minimum global population.	The EAAA possibly qualifies as Critical Habitat for this species, considered a PBF.
Species that do not qualify the relevant EAAA as CH - birds					
Booted Eagle	LC	PS6: 3a PR6: iv ESS4: d	225,000 (IUCN 2024)	The species has been recorded 163 times within the Migratory Bird EAAA on GBIF (2024) and has a high count of 94 individuals in the Gebel el Zeit IBA (https://ebird.org/checklist/S93375824). Surveys in spring 2022 at the NREA wind farm complex to the north recorded 362 individuals (GreenPlus 2022a) and a high count of 69 was recorded over spring and autumn of 2022 and 2023 at the adjacent SWE site (EcoConServ <i>et al.</i> 2024). In the Project area, 113 individuals were recorded in spring 2022 (EcoConServ & EcoConsult 2023a). These counts represent a maximum of 0.16% of the species' minimum global population and it is unlikely that >1% of the species' minimum global population migrates through the EAAA.	The EAAA does not qualify as Critical Habitat for this species. Considered a PBF.
Long-legged Buzzard (<i>Buteo rufinus</i>)	LC	PS6: 3a PR6: iv ESS4: d	150,000 (IUCN 2024)	The species has been recorded 163 times within the Migratory Bird EAAA on GBIF (2024) and has a high count of 36 individuals from the Gebel el Zeit IBA (https://ebird.org/checklist/S65750261). Surveys at the NREA wind farm complex in spring 2022 recorded 580 individuals (GreenPlus 2022a) while 179 individuals were recorded in spring 2022 at the adjacent SWE site (EcoConServ <i>et al.</i> 2024). In the Project area, 116 individuals were recorded in spring 2022 (EcoConServ & EcoConsult 2023a). These count values represent a maximum of 0.4% of the species' minimum global population and while surveys covered a limited spatial extent, it is unlikely that the total number of birds passing through the Migratory Bird EAAA during an entire migratory season would exceed 1% of the species' minimum global population.	The EAAA does not qualify as Critical Habitat for this species. Considered a PBF.
Saker Falcon (<i>Falco cherrug</i>)	EN	PS6: 1a, 3a PR6: iv ESS4: b, d	18,300 (IUCN 2024)	The species has not been recorded within the Migratory Bird EAAA on GBIF (2024), was not recorded during surveys in spring and autumn 2022 within the Project area (EcoConServ <i>et al.</i> 2024), and has only been recorded once in the Gebel el Zeit IBA on eBird (https://ebird.org/region/EG-BA/bird-list?rank=hc&hs_sortBy=taxon_order&hs_o=asc). While the Migratory Bird EAAA is within the species' migratory (passage) distribution (IUCN 2024), it is unlikely that the species occurs in sufficient numbers to qualify the Migratory Bird EAAA as CH.	The EAAA does not qualify as Critical Habitat for this species. Consider a PBF.

Species	IUCN Status	Criteria considered	Minimum global population estimate ¹¹	Commentary	Conclusion
Sooty Falcon (<i>Falco concolor</i>)	VU	PS6: 1b, 3a PR6: ii, iv ESS4: b, d	4,200 (IUCN 2024)	The species has not been recorded within the Migratory Bird EAAA on GBIF (2024) and has a high count two in the Gebel el Zeit IBA (https://ebird.org/checklist/S56575807). Surveys in autumn 2021 at the NREA wind farm complex recorded 10 individuals (GreenPlus 2021b). This species was not recorded in spring and autumn 2022 within the Project area (EcoConServ & EcoConsult 2023a) and only four individuals were recorded in the adjacent SWE site (EcoConServ <i>et al.</i> 2024). Sooty Falcon may also breed in or near the EAAA (IUCN 2024) and it is very unlikely that the EAAA contains sufficient numbers, the loss of which, would cause the species to be upgraded to EN, and thus the species does not qualify under Criterion 1b/ii. It is also very unlikely that the EAAA supports more than 0.5% or 1% of the species' minimum global population during migration, suggesting the species does not qualify under Criterion b or Criterion 3a/iv/d respectively.	The EAAA does not qualify as Critical Habitat for this species. Considered a PBF
Red-footed Falcon (<i>Falco tinnunculus</i>)	VU	PS6: 1b, 3a PR6: iv ESS4: b, d	431,250 (IUCN 2024)	The species has been recorded four times within the Migratory Bird EAAA on GBIF (2024), and has a high count of two individuals in the Gebel el Zeit IBA (https://ebird.org/checklist/S60383261). Surveys in autumn 2021 at the NREA wind farm complex to the north recorded nine individuals (GreenPlus 2021b). This species was not recorded during spring and autumn 2022 surveys within the Project area (EcoConServ & EcoConsult 2023a) nor in the adjacent SWE site (EcoConServ <i>et al.</i> 2024). It is unlikely that >0.5%/1% of the species' minimum global population migrates through the EAAA.	The EAAA does not qualify as Critical Habitat for this species. Considered a PBF
White-eyed Gull	LC	PS6: 3a PR6: iv ESS4: d	53,700 (IUCN 2024)	The congregatory species has not been recorded within the Resident Species EAAA on GBIF (2024). While the high count of the species in the Gebel el Zeit IBA is 100 birds (https://ebird.org/checklist/S52174814), multiple surveys in the Project area and adjacent sites did not report the species (GreenPlus 2021b, 2021a, 2022a; EcoConServ & EcoConsult 2023a; EcoConServ <i>et al.</i> 2024). While the species is a trigger species for the Gebel el Zeit KBA, its coastal distribution and its absence from surveys suggests it is unlikely to regularly occur within the Project area and would not qualify the EAAA as CH under Criterion 3a/iv.	The EAAA does not qualify as Critical Habitat for this species
Lesser Kestrel	LC	PS6: 3a PR6: iv ESS4: d	120,000 (IUCN 2024)	The species triggers the Gebel el Zeit KBA, implying that >1% of the global population passes (or historically passed) through the Migratory Bird EAAA (BirdLife International 2024), however more recent counts are lower. The species has been recorded 52 times within the Migratory Bird EAAA on GBIF (2024), with a high count of 45 individuals in the Gebel el Zeit IBA (https://ebird.org/checklist/S84991296). Surveys at the NREA wind farm complex in spring 2021 recorded four individuals (GreenPlus 2021a). This species was not recorded during spring and autumn 2022 surveys within the Project area (EcoConServ & EcoConsult 2023a) and only recorded twice at the adjacent SWE site during spring and autumn surveys in 2022 and 2023 (EcoConServ <i>et al.</i> 2024). Despite being a trigger species for the Gebel el Zeit IBA, and notwithstanding that day-time surveys may be less accurate for this species, which also migrates at night (Camiña Cardenal <i>et al.</i> 2024) it is unlikely that >1% of the species' minimum global population migrates through the EAAA.	The EAAA does not qualify as Critical Habitat for this species. Considered a PBF.

Species	IUCN Status	Criteria considered	Minimum global population estimate ¹¹	Commentary	Conclusion
Species that do not qualify the relevant EAAA as CH - other species					
Egyptian Spiny-tailed Lizard	VU	PS6: 1b PR6: ii ESS4: b	Unknown (IUCN 2024)	The Egyptian Spiny-tailed Lizard has a distribution extending across most of the Arabian Peninsula and northeast Egypt. Its population size is unknown, although its occurrence is very patchy and it appears to be uncommon and declining in Egypt (IUCN 2024). The Egyptian Spiny-tailed Lizard has a range of 2,953,120 km ² , of which 0.02% overlaps with the Resident Species EAAA. This species occurs in open, flat, gravelly, stony and rocky areas, and it is infrequently seen in sandy areas (IUCN 2024). It has not been recorded in the Resident Species EAAA on GBIF (2024). However, the species is confirmed to occur in the Project area (Grontmij & EcoConServ 2010; EcoConServ & EcoConsult 2023b), although it is very unlikely that the Resident Species EAAA contains >0.5% of the global population, nor sufficient numbers, the loss of which, would cause the species to be upgraded to EN, and thus the species does not qualify under EIB Criterion b or PS6 Criterion 1b respectively.	The EAAA does not qualify as Critical Habitat for this species. Considered a PBF.

4.1.2 Criterion 4 / i / a: Highly threatened and/or unique ecosystems

No formal assessment was made against Criterion 4 / i / a as there has been no Red List Assessment of Ecosystems within Egypt¹². An informal screening of habitats present suggested none would likely satisfy the criterion for consideration as highly threatened or unique.

The west side of the Gulf of Suez is within the Red Sea coastal desert ecoregion, which covers 58,899 km² and which has the status of Vulnerable¹³ (i.e. not highly threatened, which would imply a status of CR or EN: IFC 2019; EIB 2022) and no additional information on the status of ecosystems within the ecoregion is available. The habitats within the Project area, primarily sand and gravel plains and shallow wadis appear unlikely to qualify under Criterion 4 / i / a based on a qualitative visual analysis using aerial imagery, due to low risk of significant reduction in their area or quality resulting from the Project, their large spatial extent, and the lack of evidence that they contain unique plant or animal assemblages (with the exception of migrating birds, the area hosts a low diversity of plants and animals; EcoConServ *et al.* 2024a). Saltmarsh (sabkha) does not occur in the Project area or Resident Species EAAA, and while it does occur to the north in the Migratory Bird EAAA (Grontmij & EcoConServ 2010), this area will not be impacted by the Project. Sabkhas also appear unlikely to meet IUCN Red List of Threatened Ecosystems criteria.

4.1.3 Criterion 5 / v / f: Areas associated with key evolutionary processes

Review of existing information identified no spatial features associated with key evolutionary processes, and along with the lack of restricted range species occurring within the Resident Species EAAA, suggests the Project area would not qualify as CH under Criterion 5 / v / f.

4.1.4 Criterion e: Biodiversity and/or an ecosystem of significant social, economic or cultural importance

Review of existing information identified no biodiversity or ecosystems of significant social, economic or cultural importance to local communities and indigenous groups within the two EAAs.

4.2 LPAs and IRAs

The Project is located entirely within an Internationally Recognised Area, the Gebel el Zeit KBA, which is also an Important Bird Area (IBA) (Figure 3).

The [Gebel el Zeit KBA](#) covers 1,584 km² of the Gulf of Suez coast from Ras Gharib in the north to the bay of Ghubbet El Gemsa in the south. The Gebel El Zeit KBA represents a globally important migration corridor for soaring migratory birds, particularly birds of prey and storks, which are

¹² <https://assessments.iucnrl.org>, checked 10 November 2024.

¹³ <https://www.worldwildlife.org/publications/terrestrial-ecoregions-of-the-world>, Vulnerable status contained in the shapefile metadata.

funnelled through this stretch of coast, between the Gulf of Suez and the Red Sea Mountains, on their spring and/or autumn migrations. Birds of prey, storks and pelicans migrate through and usually land, rest or roost near the coastline and on the surrounding desert plains and hills. Gebel El Zeit itself serves as a stepping-stone for birds that make the crossing between the western coast of the Gulf of Suez and south Sinai in spring. In autumn the area is especially critical as many birds, after crossing the Gulf of Suez, arrive tired, flying at low altitudes and often land in large numbers. The KBA was last assessed in 2001, when counts from the KBA triggered criteria A1 (for White-eyed Gull, Eastern Imperial Eagle, Pallid Harrier, and Lesser Kestrel) and A4iv (species group – soaring birds/cranes). The KBA has not been formally assessed against the more recent global KBA standard, and while it is possible that one or more of the initial trigger species/groups may not qualify, there is strong evidence that multiple additional species would trigger the designation of the area as a KBA. Species triggering the initial listing are individually evaluated against CH-qualifying thresholds in Table 1.

Project infrastructure is located 5 km south of the proposed [Malahet Ras Shukier Protected Area](#) (IUCN management category not recorded), which covers an area of 107 km² that encompasses permanent hypersaline wetlands and flat sand plain (Figure 3). It is unlikely that the Project will impact (either directly or indirectly) on biodiversity features in the proposed Malahet Ras Shukier Protected Area.

Neither EAAA overlaps any other LPAs or IRAs and there is no overlap between the Project and Alliance for Zero Extinction or UNESCO World Heritage sites, which would constitute no-go areas.

4.3 Priority Biodiversity Features

4.3.1 PBF Criterion i: Priority ecosystems

No potentially threatened habitats, vegetation types or ecosystems were identified as present in the Resident Species EAAA (Section 4.1.2), and so the habitats present in the Resident Species EAAA do not qualify as PBFs under Criterion i.

4.3.2 PBF Criterion ii: Priority species and their habitats

4.3.2.1 *Threatened species*

One species, Saker Falcon, qualifies as a PBF under Criterion ii (b) as it is globally listed as Endangered but does not meet CH-qualifying thresholds (see Table 1). The only other Endangered species, Steppe Eagle and Egyptian Vulture, are CH-qualifying (see Table 1) and so not evaluated as a PBF.

The two EAAAs overlap the range of 10 species which are globally Vulnerable and so require consideration under Criterion ii (c). Of these:

- Habitats within the relevant EAAA are unlikely to support populations of five species: Nubian Ibex (*Capra nubiana*), Dorcas Gazelle (*Gazella dorcas*), Broad-billed Sandpiper

(*Calidris falcinellus*), Curlew Sandpiper (*Calidris ferruginea*) and Grey Plover (*Pluvialis squatarola*); and,

- Two VU species, Greater Spotted Eagle and Eastern Imperial Eagle, are considered likely CH-qualifying (see Table 1).
- Three VU species do not meet the thresholds for Critical Habitat (see details on these species in Table 1), and should be considered as PBFs: Sooty Falcon, Red-footed Falcon and Egyptian Spiny-tailed Lizard.

Egypt has national Red Lists of threatened species for mammals and butterflies (Gilbert & Zalut 2007; Basuony *et al.* 2010) however no species of these two taxa qualified as PBFs under Criterion ii (d).

4.3.2.2 Range-restricted species

No range-restricted species were identified for either EAAA.

4.3.2.3 Migratory and congregatory species

The Project is located within the Gebel el Zeit KBA/IBA. This internationally significant biodiversity feature is important to the conservation of migratory soaring birds (additional discussion in Section 4.2). Therefore, all migratory soaring bird species that are present in the EAAs and not CH-qualifying are likely to be PBFs under this criterion. Some migratory soaring birds are considered, and qualify as either CH-qualifying species or PBFs, under Criterion ii (Threatened species) (above). Additional species that qualify as PBFs under this criterion are: Black Kite, Booted Eagle, Lesser Kestrel, Long-legged Buzzard, Pallid Harrier and Short-toed Eagle (for discussion of these species see Table 1)¹⁴.

4.3.3 PBF Criterion iii: Significant biodiversity features identified by a broad set of stakeholders or governments

The Project is located within the Gebel el Zeit KBA/IBA, which has been identified as a significant biodiversity feature by a broad set of stakeholders, of particular importance to the conservation of migratory soaring birds (additional discussion in Section 4.2). This KBA is therefore also a PBF in its own right.

¹⁴ Crested Honey Buzzard (*Pernis ptilorhynchus*) and Demoiselle Crane (*Anthropoides virgo*) are not considered PBFs in this assessment due to low numbers in the Migratory Bird EAAA. Crested Honey Buzzard was either not reported (EcoConServ *et al.* 2024) or rarely recorded (<10 birds) (GreenPlus 2021b, 2021a, 2022b, 2022a; EcoConServ & EcoConsult 2023a) from surveys at the Project and adjacent sites, while Demoiselle Crane was not recorded in multiple bird migration surveys in the vicinity of the Project area (GreenPlus 2021b, 2021a, 2022a, 2022b; EcoConServ & EcoConsult 2023a; EcoConServ *et al.* 2024).

Egypt has a current IUCN-compliant national Red List for mammals (Basuony *et al.* 2010), however no species identified as Critically Endangered or Endangered from that assessment are present in the project area and not already considered.

4.3.4 PBF Criterion iv: Ecological structure and functions that are vital to maintaining the viability of biodiversity features

PR6 requires that ecological functions that are vital to maintaining the viability of Priority Biodiversity Features also qualify as Priority Biodiversity Features. While the Gebel el Zeit KBA is identified as a PBF, it is not clear that there are any specific ecological structures or functions within the KBA which are vital to maintaining the viability of the feature. Rather, evidence is that birds use different areas of the KBA to rest and recover from migration in different seasons and under different environmental conditions. This suggests that it is the location along the flyway, rather than any specific structures or functions within the KBA, which make the KBA so important to the species for which the KBA is designated. As such, no PBFs have been identified under Criterion iv.

The Project area is unlikely to qualify as a PBF for Egyptian Spiny-tailed Lizard under Criterion iv, as it is unlikely that the area contains specific ecological functions that are vital for the survival of this species' population.

4.4 Determination of Natural Habitat

Both the Project area and the wider Resident Species EAAA appear to be broadly in Natural Habitat (desert), with small areas of Modified Habitat (farmland, oil wells, and other infrastructure) (Figure 4), based on satellite-derived landcover layers (European Space Agency (ESA) WorldCover 2021¹⁵) and aerial imagery (GoogleEarth, viewed November 2024). Natural Habitat is represented by sand desert, wadi and rock outcrop. Modified Habitat is comprised of small agricultural areas (mostly poultry farms), towns/settlements, oil fields and roads, all of which are scattered throughout both EAAAs. Almost all of the area inside the Project boundary appears to be Natural Habitat, based on both landcover layers and review of aerial imagery.

5 Conclusions and recommendations for the Project

Based on the available data, this CHA finds that the Project is within an area that is certain or likely to meet the IFC/EBRD/EIB definitions of CH for: Black Stork, Common Crane, Eastern Imperial Eagle, Egyptian Vulture, Eurasian (Steppe) Buzzard, European Honey-buzzard, Great White Pelican, Greater Spotted Eagle, Lesser Spotted Eagle, Levant Sparrowhawk, Steppe Eagle and White Stork.

For those species for which the area qualifies as CH, to align with IFC PS6 / EIB ESS4, the Project cannot implement any project activities unless all of the following are demonstrated:

¹⁵ ESA WorldCover project. Contains Copernicus Sentinel data (2021) processed by ESA WorldCover consortium (Zanaga *et al.* 2022).

- No other viable alternatives within the region exist for development of the project;
 - on modified or natural habitats that are not critical (IFC PS6);
 - and there is rigorous justification of overriding public interest based on human health, public safety considerations and/or beneficial consequences of primary importance for the environment (EIB ESS4);
- The project does not lead to measurable adverse impacts;
 - on those biodiversity values for which the critical habitat was designated, and on the ecological processes supporting those biodiversity values (IFC PS6);
 - that will result in any detrimental effect on the ecological and conservation status of the critical habitat, and impacts are avoided and minimised to the extent possible through changes in footprint or design (EIB ESS4);
- The project does not lead to a net reduction in the global and/or national/regional population of any Critically Endangered, Endangered or Vulnerable species over a reasonable period of time;
- Stakeholders are consulted in accordance with ESS Standards 2 and 7 (EIB only); and,
- A robust, appropriately designed, and long-term biodiversity monitoring and evaluation program is integrated into the client's management program.

Where these requirements can be met, the Project must demonstrate a Net Gain for each species in accordance with IFC PS6, EBRD PR6 and EIB ESS4.

The Project is in an area of mostly Natural Habitat. Therefore, the Project is required under PS6 to fully exercise the mitigation hierarchy, with an emphasis on measures aimed at avoiding and minimizing impacts. The Project Environmental and Social Impact Assessment should quantify the residual impacts to Natural Habitat and determine whether such impacts are considered significant. Where significant residual impacts on NH remain, additional remediation and offset measures are likely to be required to achieve>NNL, where feasible, on NH and associated significant biodiversity.

Project infrastructure is entirely within the Gebel el Zeit KBA and so the requirements of PS6 paragraph 20 and ESS4 paragraphs 27-29 apply (IFC 2012; EIB 2022). The Project must;

- Demonstrate that the proposed development in the area is legally permitted and that the design of the project is consistent with a recognised management plan for the protected or designated conservation area. In the absence of a recognised plan, the project should be compatible with the achievement of the relevant conservation objectives used to designate the area in question;
- Consult, as appropriate, the relevant managing authorities for the protected area, local communities and other relevant stakeholders on the proposed project; and,
- Seek to implement additional programmes, as appropriate, to promote and enhance the conservation objectives and effective management of the protected area.

The Project is within an area that meets the EBRD definition of PBFs for Black Kite, Booted Eagle, Lesser Kestrel, Long-legged Buzzard, Pallid Harrier, Red-footed Falcon, Saker Falcon, Short-toed Eagle, Sooty Falcon and Egyptian Spiny-tailed Lizard. EBRD PR6 requires no net loss and preferably a net gain of PBFs over the long term, to achieve measurable conservation outcomes.

Where the Project can meet the requirements of PS6 and PR6, the Project's mitigation strategy must be described in a Biodiversity Action Plan (BAP, as recommended by IFC PS6) which is designed to achieve net gains of those biodiversity values for which Critical Habitat was designated, and no net loss for Natural Habitat, where feasible, and for PBFs. A quantified Residual Impact Assessment for Critical Habitat-qualifying features, Natural Habitat and PBFs will also be required – this could be as part of the BAP or contained within the Project's Environmental and Social Impact Assessment documents. EIB requires a compensation/offset implementation and management plan to be developed to demonstrate that the project can achieve Net Gain for CH-qualifying features (ESS4 paragraph 21, EIB 2022) – this function could be fulfilled by the BAP required by IFC PS6.

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