ZGI d.o.o. Mostar,
Rudarska 247,
88000 Mostar, BiH
e-mail: info@zgi.eu,
web: www.zgi.eu
tel.: +387 36 33 42 80

CRITICAL HABITAT ASSESSMENT STUDY

WF Poklecani

September, 2025

Zaštita okoliša i energijska efikasnost

Laboratorij

Projektiranje

Zaštita

Client:	Public company Elektroprivreda HZHB Mostar Ulica kralja Petra Krešimira IV, 6-A 88000 Mostar, BiH
Project:	Wind farm Poklečani
Consultant:	ZGI d.o.o. Mostar, Rudarska 247, 88000 Mostar, BiH e-mail: info@zgi.eu, web: www.zgi.eu tel.: +387 36 33 42 80

Authors:

Lejla Smailagić Vesnić, MSc in Biology - Ecology

Jelena Šimunović, MSc Biol.and Geogr.

Mirela Marić, prof.biol.et. chem.

Document no.:

Director:

Sandro Zovko, B.E.E.

Date:

September 2025

Contents

Figures

Tables

Abbreviations

AOI	**Area of Influence**
BD	**Birds Directive**
BMP	**Biodiversity Management Plan**
CH	**Critical Habitat**
CHA	**Critical Habitat Assessment**
ESIA	**Environmental and Social Impact Assessment**
HD	**Habitats Directive**
HVB	**High Value Biodiversity**
IBA	**Important Bird Area**
IUCN	**International Union for Conservation of Nature**
KBA	**Key Biodiversity Areas**
N2000	**Natura 2000 Area**
PA	**Protected Area**
Qha	**Quality hectares**

1 Introduction

Project Background

The Critical Habitat Assessment is conducted under the ESIA process and in accordance with the following principles:

- EIB Environmental and Social Standard (2022),
- EIB Guidance Note for Standard 3 (2018), and
- KfW Development Bank Sustainability Guideline which include application of the World Bank Standards:
  World Bank Standard - ESS1 Assessment and Management of Environmental and Social Risks and Impacts,
  World Bank Standard - ESS6: Biodiversity Conservation and Sustainable Management of Living Natural Resources

2 Technical Description of the Project

The main ESIA findings will be presented for the better understanding of the Project Area of Influence and sittings of the WF Poklecani. Detailed information about the WF Poklecani can be found in the ESIA Wind Farm Poklecani.

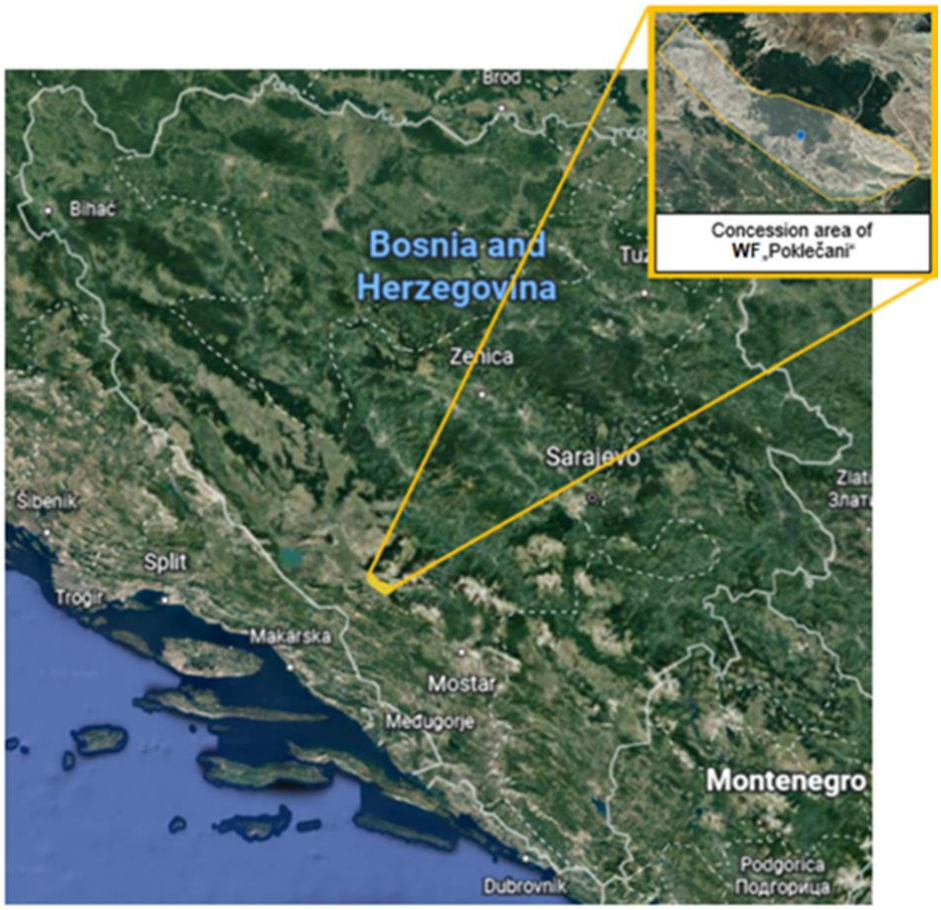


Figure 1: WF Poklecani location

The Poklecani wind farm will be in the northern part of the municipality of Posusje, approx. 13 km northeast of the centre of the municipality, in the wider mountainous area of the Stitar Mountain northeast of Rakitno. The planned area of the Poklecani Wind Farm is 14,206,932 km^2, and the area in question has been assessed as suitable for the construction of a wind power plant based on previous measurements and analyses in terms of economic justification, technical and spatial possibilities. The WF Poklecani project, together with the associated substation (TS), was included in the Spatial Plan of the County of West Herzegovina for the period from 2012 to 2032.

Site Description

Investor JP Elektroprivreda HZ HB d.d. Mostar plans to build the WF Poklecani in the wider area of the Rakitno settlement in the Poklecani area near the village of the same name in the municipality of Posusje, West Herzegovina County.

West Herzegovina County is in the southwest of Bosnia and Herzegovina and is one of the ten counties that make up the Federation of Bosnia and Herzegovina. It consists of the towns of Siroki Brijeg and Ljubuski and the municipalities of Posusje and Grude. The seat of the county is in the town of Siroki Brijeg. The West Herzegovina County borders the Herzeg-Bosnia County to the north, the Herzegovina-Neretva County to the northeast and east, and the Republic of Croatia to the west. With 94,898 inhabitants (2013), the West Herzegovina County is the eighth largest among the cantons, while with 69.67 inhabitants/km2 it is the fifth in terms of density. The total area of the county is 1362.2 km2, which is 5.21 % of the area of the Federation of Bosnia and Herzegovina and 2.66% of the territory of Bosnia and Herzegovina.

The municipality of Posusje is one of the four municipalities that are part of West Herzegovina County. It is located in the western part of the county and borders the neighbouring Republic of Croatia. The area of the municipality of Posusje is 461.1 km². The altitude of Posusje is 675 metres above sea level, the highest point is 2228 metres above sea level, and the lowest is 500 metres above sea level.

It covers the area of the Blidinje Nature Park with the Blidinje Lake in the north, with an area of 3.2 km2 and a maximum depth of 4.5 m, and is located at 1182 m.a.s.l. and the mountain Cvrsnica as the highest mountain in all of Herzegovina, on which is the peak Plocno at 2228 m.a.s.l., which is the highest point of the municipality, and the lowest point is in Podbila at 405 m.a.s.l. Posusje as the administrative seat of the municipality is located at 670 m above sea level and its spatial area as a populated place is 2.21 km². The municipality has a hilly and mountainous terrain.

WF Poklecani will be located in West Herzegovina County, in the northern part of the municipality of Posusje, on Mountain Stitar and Debelo Brdo above the settlements of Poklecani and Rakitno.

WF Poklecani will be located on the concession area, which is bounded by 21 edge points (RP's), the coordinates of which are given in Table 1. The total area of the concession area is 14,206,932 m^2, i.e. 14.2 km^2.

Table 1: Gauss – Krüger coordinates of the edge points of the concession area

Edge point	Y	X
1.	6456021	4822652
2.	6452975	4824914
3.	6450802	4827189
4.	6451676	4828174
5.	6453077	4826646
6.	6453685	4826052

Edge point	Y	X
7.	6453844	4825946
8.	6454191	4825814
9.	6454616	4825825
10.	6455445	4825490
11.	6455911	4825358
12.	6456145	4825273
13.	6456376	4825155
14.	6456958	4824797
15.	6457192	4824676
16.	6457701	4824548
17.	6458446	4824045
18.	6458567	4823911
19.	6458655	4823713
20.	6458553	4823378
21.	6457236	4822668

Figure 2: WF Poklecani project

Project location

The location where the WF Poklecani is planned to be built is approximately 79 km southwest of the capital Sarajevo, 37 km northwest of Mostar, 14 km northeast of Posusje and 24 km southeast of Tomislavgrad.

It is located in an uninhabited area 24 km northeast of Posusje and 2.5 km northeast of the village of Poklecani in the municipality of Posusje, which is also the closest inhabited area. The majority of the land on which WF Poklecani is planned to be built is state-owned, while the rest is privately owned. A large part of the land is bare, i.e. it represents a rocky area in the karst and a mountain clearing, while the rest of the land, which is included in the concession field, is covered with a forest of beech and conifers.

The concession area has a total area of 14,206,932.00 m^2 (14.2 km^2) and is characterised by hilly terrain with a mixture of forest and rock.

Legal framework

WF Poklecani project has been included in projects of strategic importance for FBiH, included in the Spatial Plan of West Herzegovina County, a concession for the construction has been obtained, there is a long-term cycle of measurements.

Wind measurements and field observations for the WF Poklecani have been ongoing since December 2006, when the investor installed the first 10-meter mast for measuring wind potential equipped with NRG measuring equipment at the Poklecani location (1270 m above sea level) - ROW I. For the measurement period from 2006 – 2008 the mean value of the measured wind speeds at a height of 10 m was 6,99 m/s.

In November 2010, the 10-meter measuring mast was replaced with a new 50-meter mast with high-precision measuring equipment with associated guarantees and certificates (MEASNET certificates) issued by internationally recognized institutions and test laboratories. Measurements have been carried out continuously from November 2010 until 2023.

In July 2014, a second 50 m measuring mast was installed at the WF Poklecani location, ROW 2 (1424 m above sea level), which was equipped with precise measuring equipment with associated guarantees and certificates (MEASNET certificates) issued by internationally recognized institutions and test laboratories. Measurement data from this mast available from July 2014 to January 2021.

In June 2021, a 100 m measuring mast was installed at the Poklecani location (6456776.46, 4823165.17, 1329.50 m a.s.l.) - ROW 1. The location is well exposed to all wind directions and accessible for installation, operation and maintenance. Access by all-terrain vehicles is possible. Measurements with a 100 m measuring mast are in progress.

In February 2010, the FB&H Government issued a decision declaring the public interest in the construction of electricity facilities (Decision of the Government of the FB&H on declaring the public interest and starting the preparation and construction of priority PF's in the FB&H[1] one of which is WF Poklecani.

The Government of the Federation of Bosnia and Herzegovina also passed Decisions on preparation for construction of these facilities, including the Decision on preparation and construction of WF Poklecani[2], and the Decision on preparation and construction of WF Poklecani 132 MW. [3]

The Government of the Federation of Bosnia and Herzegovina also adopted Decision No. 1292/2021, on Amendments to the Decision on Declaration of Public Interest and Access to Preparation and Construction of Priority Electricity Facilities in the Federation of Bosnia and Herzegovina. [4]

The Government of West Herzegovina County, on the 45th session dated January 24, 2013, issued the Resolution on the concession award for wind energy use in the purpose of construction and operation of wind power plant Poklecani, Posusje municipality.[5]

[1] Official Gazette of the Federation of B&H, No. 8/10 from February 24, 2010
[2] Official Gazette of the Federation of B&H, No. 25/10 from April 28, 2010
[3] Official Gazette of the Federation of B&H, No. 49/21 dated June 16, 2021
[4] Official Gazette of the Federation of B&H, No. 67/21, from August 19, 2021
[5] National papers WHC No. 2/2013

In July of 2014 the Concession agreement was signed with the The Government of the West Herzegovina Canton[6] which grants the investor the right to build and use a wind farm for the production of electricity in the locality Poklecani in the municipality of Posusje.

The Proposed Development

In 2021, a Feasibility Study for WF Poklecani[7] was prepared by JP Elektroprivreda HZ HB, as well as a Wind Study of WF Poklecani (made by the external company Megajoule Adria d.o.o. Zagreb) where the IEC class of the wind turbine was determined on the basis of measurement data at heights of 10 m, 30 m and 50 m above the ground performed for two periods of measurement data obtained from the measurement column installed in ROW I, for the year 2011 and the period January 2015 – October 2016. Based on the conducted analyses, an IEC class IA wind turbine was selected.

After choosing the IEC wind turbine class, wind farm modeling was performed for 8 different types of wind turbines. After comparing the results of different models, the wind turbine with power 6.6 MW, hub height 122.5 m, IEC class IA (alternative 1) showed better performance.

Based on the contract „Geotechnical and geophysical research for WF Poklecani''[8] , geotechnical and geomechanical investigation works were carried out in accordance with the rulebook „Regulations on geotechnical research and testing and the organization and content of geotechnical engineering missions''[9], and the documentation was prepared Preparatory geotechnical study (Mission G1) WF Poklecani which is the basis for creating a conceptual project. The results of the Investigations carried out so far show that, in the geotechnical sense, there are no restrictions for the foundation or construction of wind turbines at the planned locations of 20 wind turbines (Table 2).

Table 2: Coordinates of wind turbines in the concession area

Wind turbine No.	Gauss-Kruger coordinates		Decimal degrees coordinates	
	Y	X	ϕ	λ
WT1	6452044	4827571	43.590982	17.401078
WT2	6452290	4826964	43.585534	17.404178
WT3	6452802	4826799	43.584082	17.410532
WT4	6452169	4826294	43.579496	17.402739
WT5	6453097	4826342	43.579987	17.414225
WT6	6453339	4825788	43.575016	17.417269
WT7	6453725	4825366	43.571242	17.422084
WT8	6454157	4825056	43.568478	17.427458
WT9	6454480	4824594	43.56434	17.431496
WT10	6455091	4824427	43.562874	17.439073
WT11	6455470	4824038	43.559395	17.443796
WT12	6455905	4823689	43.55628	17.449209
WT13	6456398	4823421	43.553897	17.455332
WT14	6456909	4823164	43.551613	17.461677
WT15	6456013	4825232	43.570175	17.45042
WT16	6456397	4824956	43.567713	17.455196
WT17	6456958	4824490	43.563551	17.462177
WT18	6457416	4824047	43.55959	17.467882

[6] No. 5415/14, dated July 7, 2014
[7] Book no. 1/VE-POKL-2021
[8] no. I-1267/222
[9] O.G.FB&H 60/09

Wind turbine No.	Gauss-Kruger coordinates		Decimal degrees coordinates	
	Y	X	ϕ	λ
WT19	6458013	4824052	43.559669	17.47527
WT20	6458469	4823860	43.557967	17.480929

In December 2022, new analyses and calculations were performed for the proposed arrangement of 20 wind turbines with the use of measurement data for the period September 2021 – October 2022 (data from the 50-metre measuring mast at row 1), presentation in chapter 8 Alternatives.

The project envisages a wind farm consisting of 20 wind turbines with three horizontal axis blades. For the purpose of the Project the selected model from alternative 1 is chosen, whose maximum dimensions of the turbine are: rotor with a diameter of 155 m, hub height of 122.5 m and total height to the top of the wind turbine which is 200 m. The total installed power of the wind power plant will be 132 MW, 20 wind turbines[10].

The Critical Habitat Assessment and ESIA were conducted based on the selected alternative 1.

3 Methodology and guidelines used for the assessment

All trigger fauna, flora species and habitats will be included in the Critical Habitat Assessment. Triggers for fauna, flora, habitats, and vegetation will be defined below.

Critical habitat assessment (CHA) is conducted to determine the potential impact of a project on species and habitats that may meet the criteria for critical habitat (CH).

The assessment is carried out in accordance with:

- EIB Environmental and Social Standard (2022),
- EIB Guidance Note for Standard 3 (2018), and
- KfW Development Bank Sustainability Guideline which include application of the World Bank Standards:
  World Bank Standard - ESS1 Assessment and Management of Environmental and Social Risks and Impacts,
  World Bank Standard - ESS6: Biodiversity Conservation and Sustainable Management of Living Natural Resources

Critical habitat refers to the most significant and highest priority areas for biodiversity conservation globally and nationally. It is determined based on principles of vulnerability and irreplaceability in conservation biology. The identification of critical habitat relies on quantitative thresholds of biodiversity priority, often aligned with recognized standards such as the IUCN Red List criteria, local Red lists, and Key Biodiversity Area (KBA) thresholds. The designation of critical habitat depends on the presence of high biodiversity values and whether a project is planned within that habitat.

To conduct a Critical Habitat Assessment, a study must be defined, and a baseline established. The extent of the study depends on the specific biodiversity features of interest and the ecological functions that support them, which can vary for each feature. The CHA process begins with initial screening and scoping to identify biodiversity features that might trigger Critical Habitat. In addition to

[10] WF Poklecani Feasibility Study, JP Elektroprivreda HZ HB d.d. Mostar, March 2021.

a rapid field assessment, publicly available studies, and data about the ecological characteristics of the study area are reviewed.

Where known or likely trigger species are present, efforts are made to define an appropriate and relevant study area based on habitat types, species survey data, project details, and expert opinions.

The study area for the CHA is somewhat independent of the Project Area of Influence. It may encompass a larger geographical area where most of the biodiversity impacts are expected. These larger geographical areas, ecologically appropriate areas of analysis (EAAA), are determined based on features that may require additional studies or targeted mitigation[11]. EAAA considers the broader distribution of potentially affected biodiversity features and the ecological patterns, processes, and functions necessary for their maintenance. Defining an appropriate EAAA ensures an assessment of ecologically relevant features and areas rather than focusing solely on the project footprint. It also considers ecological functions across the entire area, reducing the risk of missing discontinuous or seasonal CH triggers. EAAA determination is done separately for each biodiversity receptor, unless there is significant overlap in EAAA for species groups, in which case aggregation is considered. When there is uncertainty regarding distribution, a precautionary approach is applied, slightly enlarging the EAAA. Further evaluation of EAAA is conducted based on the extent of occurrence (EOO) using IUCN data if available and expert inputs to facilitate CHA. The EAAA will also encompass ecosystems identified for restoration/conservation by national systematic planning.

To understand the potential impact of the project activities, a desktop survey was conducted for the larger project area. This was necessary due to a lack of data on flora, fauna, and habitats in the Project Area of Influence. Additionally, because of the proximity to Natura 2000 sites, Important Bird Areas, and Protected Areas, all relevant data concerning species and habitats of conservation interest were considered. Several factors were defined to assess the potential impacts of the project activities:

- Distance of the Project Area of Influence from potential Natura 2000 sites, Protected Areas, and Important Bird Areas (IBAs);
- Presence of flora and fauna species of conservation importance in the Project AoI;
- Presence of habitats of conservation significance in the Project AoI.

The following EU legislation were considered in the CHA:

- Annex I, II, and IV of the Habitats Directive[12],
- Annex I of the Birds Directive[13]
- Conservation status CR, VU, EN according to the IUCN Red List
- Resolution 4 and 6 of the Bern Convention[14]

Species and habitats are assessed through three stages:

i. In the first stage, data gathered from both desktop and field surveys (Section 7; Table 21*: List of habitats, flora and fauna species brought for further analysis*) are analysed. Species are evaluated and assigned a conservation status, considering the EU legislation referenced earlier.

[11] EIB Guidance Note for Standard 3 (2018), p. 9
[12] Directive 92/43/EEC
[13] Directive 2009/147/EC
[14] Council of Europe. (1979). Convention on the Conservation of European Wildlife and Natural Habitats, as amended (ETS No. 104). Retrieved from https://www.coe.int/en/web/conventions/full-list/-/conventions/treaty/104

ii. In the second stage, only species confirmed during field surveys are brought further for analysis (Table 22)
iii. In the third stage, species meeting the EIB criteria for CH or HVB are summarized, and the potential impacts that Project activities have on species and habitats are assessed. Selected species recorded during field surveys are assessed for potential impacts that the Project activities could have.

Under EIB Environmental and Social Standards (2022)[15] the most sensitive of the high-value biodiversity features are considered as Critical Habitat and include the following:

a) highly threatened and/or unique ecosystem;
b) a habitat of priority and/or significant importance to critically endangered, endangered or vulnerable species, as defined by the IUCN Red List of threatened species and in relevant national legislation;
c) a habitat of priority and/or significant importance to a population, range or distribution of endemic or restricted-range species, or highly distinctive assemblages of species;
d) a habitat required for the survival of migratory species and/or congregatory species;
e) biodiversity and/or an ecosystem of significant social, economic or cultural importance to local communities and indigenous groups;
f) a habitat of key scientific value and/or associated with key evolutionary processes.

Under the World Bank Standard - ESS6: Biodiversity Conservation and Sustainable Management of Living Natural Resources (2018)[16], the most sensitive of the high-value biodiversity features are considered as Critical Habitat and include the following:

a) Habitat of significant importance to Critically Endangered or Endangered species, as listed in the IUCN Red List of threatened species or equivalent national approaches;
b) Habitat of significant importance to endemic or restricted-range species;
c) Habitat supporting globally or nationally significant concentrations of migratory or congregatory species;
d) Highly threatened or unique ecosystems; and
e) Ecological functions or characteristics that are needed to maintain the viability of the biodiversity values described above in (a) to (d).

Criteria for the sensitive biodiversity features

The criteria for the selection of sensitive biodiversity features (critical habitat – criteria 1 to 6 – and high value biodiversity – criteria 7 and 8), which include species requiring further assessment as part of the CHA, are as follows:

Critical Habitat Criterion thresholds

Criterion 1: Highly threatened or unique ecosystems.

Areas will be considered critical habitat under Criterion 1 if they are occupied by or are needed to support:

a) Priority Habitats listed in Annex I of the Habitats Directive and habitats considered to be their equivalent in countries outside the EU;

[15] European Investment Bank Environmental and Social Standards (2022), p. 28.
[16] Environmental & Social Framework for IPF Operations ESS6: Biodiversity Conservation and Sustainable Management of Living Natural Resources (2022), p. 8.

b) ≥5% of the global extent of an ecosystem type meeting the criteria for IUCN's Red List of Ecosystems with a status of critically endangered or endangered;
c) Examples of ecosystems outside the EU and not yet assessed by IUCN, but determined to be of high priority for conservation on the basis of regional or national level systematic conservation planning or informed specialist input.

Criterion 2: Population of critically endangered, endangered or vulnerable species, as defined by the IUCN Red List of threatened species and in relevant legislation.

Areas will be considered critical habitat under Criterion 2 if they are occupied by or are needed to support:

a) A population of an IUCN Red-listed endangered or critically endangered species that is ≥ 0.5% of the global population and/or ≥ 5 established reproductive units of an endangered or critically endangered species;
b) Significant concentration of an IUCN Red-listed vulnerable species or of multiple IUCN Red-listed vulnerable species, especially where the loss of the area would result in the change of the IUCN Red List status to endangered or critically endangered.
c) Nationally or regionally important concentration of a species listed as endangered or critically endangered on a regional/national IUCN Red List, or equivalent on national/regional listing.
d) A population of species regularly occurring[17] listed in Annex IV of the Habitats Directive.

Criterion 3: Population range or distribution of endemic or restricted-range species, or highly distinctive assemblages of species.

Areas will be considered critical habitat under Criterion 3 if:

a) They regularly hold ≥10% of the global population size and support ≥10 reproductive units of an endemic or restricted-range species.
b) They are considered by relevant specialists to support unique or rare assemblages of species that occur there habitually, predictably or repeatably. The constituent species may not meet other critical habitat thresholds mentioned here in their own right but may present assemblages that are considered important to maintain high biodiversity in the area.

Endemic species are defined as species confined to a defined area. Single-site endemics are species for which populations are found in one location only globally, whereas national endemics are species confined to the country of concern. Restricted-range refers to a limited extent of occurrence (EOO), so most endemic species are also restricted-range:

> For terrestrial vertebrates and plants, a restricted-range species is defined as those species that have an extent of occurrence less than 50,000 square-km,
> For marine systems, restricted-range species are provisionally being considered those with an extent of occurrence of less than 100,000 square-km,
> For coastal, riverine and other aquatic species in habitats that do not exceed 200 km width at any point (e.g. rivers), restricted range is defined as having a global range less than or equal to 500 km linear geographic span (i.e. the distance between occupied locations furthest apart).

[17] The qualifier "regularly occurring'" is expected to be included in the next revision of the EIB guidance note

Criterion 4: Habitat required for the survival of migratory species and/or congregatory species.

Migratory species have a significant proportion of the members of the entire population (or any geographically separate part of the population) cyclically and predictably crossing one or more national jurisdictional boundaries.

Congregatory species are considered to be species that habitually form social groups, sometimes in large numbers and often in particular areas on which they depend (e.g. for their breeding success).

Areas will be considered as critical habitats under Criterion 4 if:

a) They sustain ≥ 1%of the global population of a migratory or congregatory species at any point of the species' lifecycle on a cyclical or otherwise regular basis.
b) They are needed to support migratory or congregatory species during periods of environmental stress.

Criterion 5: Biodiversity and/or ecosystem with significant social, economic, or cultural importance to local communities and indigenous groups.

Areas of semi-natural and natural habitat used by indigenous peoples and local communities to obtain essential or priority benefits will be considered critical from an ecosystem service perspective. Criteria for identifying priority ecosystem services should be developed for each project, with input from social specialists and the relevant users and beneficiaries. Priority ecosystem services are services (including cultural services) on which people depend strongly for their livelihood or wellbeing, with limited access to acceptable alternatives. Impacts must be compatible with sustained and sustainable use of priority ecosystem services and mitigation measures must be identified as necessary to ensure that a) ecosystems retain the capacity to supply the services on which indigenous people or local communities depend or b) to ensure that they are able to obtain essential benefits. In some circumstances communities may accept alternative benefits to those derived from ecosystem services affected by a project, but those alternatives should not be imposed on people without meaningful consultation.

Criterion 6: Habitat of key scientific value and/or associated with key evolutionary processes.

This may include, but is not limited to, exceptional representations of:

a. Landscapes with high spatial heterogeneity and therefore high levels of species diversity;
b. Environmental gradients, also known as ecotones, that produce transitional habitat which is associated with the process of speciation and high species and genetic diversity;
c. Edaphic interfaces that juxtapose soil types (e.g. serpentine outcrops, limestone and gypsum deposits), which have led to the formation of unique plant communities;
d. Connectivity between habitats (e.g. biological corridors) with importance for species migration and gene flow, which is especially important in fragmented habitats and for the conservation of metapopulations. This also includes biological corridors across altitudinal and climatic gradients and from "crest to coast."
e. Sites of demonstrated importance to climate change adaptation for either species or ecosystems.

For the purpose of this Assessment, we defined the following **Criterion 7 and 8** (following the EBRD's Priority Biodiversity Feature highlighted in **ANNEX**; Table 24. In the absence of criteria for high-value biodiversity determination, the criteria set under the guidance note[18] of EBRD PR 6 for Priority Biodiversity Feature will be used.

[18] https://www.ebrd.com/sites/Satellite?c=Content&cid=1395317577712&d=&pagename=EBRD%2FContent%2FDownloadDocument

High Value Biodiversity Criterion thresholds

Criterion 7: Population of critically endangered, endangered or vulnerable species, as defined by the IUCN Red List of threatened species and in relevant legislation.

Species will be considered *High Value Biodiversity* under Criterion 7 if:

a) The EAAA for regularly occurring species and their habitats is listed in Annex II of Habitats Directive, Annex I of Birds Directive, or Resolution 6 of Bern Convention
b) The EAAA supports < 0.5% of global population OR < 5 reproductive units of IUCN Red List CR or EN species.
c) The EAAA supports regularly occurring IUCN Red List VU species
d) The EAAA for regularly occurring nationally or regionally listed IUCN Red List EN or CR species

Criterion 8: Threatened or unique ecosystems

Habitats will be considered *High Value Biodiversity* under Criterion 8 if:

a) The EAAA is habitat type listed in Annex 1 of EU Habitats Directive or Resolution 4 of Bern Convention
b) The EAAA is < 5% of the global extent of an ecosystem type with IUCN Red List status of CR or EN
c) The EAAA is an ecosystem identified for restoration/conservation by national systematic planning (e.g., EU 2030 Biodiversity Strategy)

In addition, habitats that are nationally, regionally, and internationally considered and assessed as priority (*) habitats under the EU Habitats Directive (Annex I) will be analysed in CHA.

All flora, fauna species and habitats (desktop and field survey data) will be assessed against the EIB criteria and will be mentioned in the document, but only the species that were confirmed during field surveys that met the EIB criteria for CH and HVB will be analysed further for impact.

Since the criteria mentions terms such as "regularly occurring on the Project site," in order to define which species will be considered and assessed against the criteria, we used the definitions set by IUCN for terms "vagrant species" and "regularly occurring".

Regularly occurring species: The occurrence of a species is normally or typically found at the site during one or more stages of its life cycle[19].

Vagrant species: A taxon that is currently found only occasionally within the boundaries of a region[20].

4 Project Area of Influence (AOI)

The project's area of influence is the geographical area that may have potential environmental or social impacts related to the construction and/or use of the project, and it includes: (i) the primary location(s) of the project and associated facilities, including access roads, storage areas, construction camps, and the like; (ii) areas potentially affected by cumulative impacts of further planned development of the project, any existing projects or conditions.

It is determined that the project's area of influence includes:

[19] IUCN (2016). A Global Standard for the Identification of Key Biodiversity Areas, Version 1.0. First edition. Gland, Switzerland: IUCN.
[20] IUCN. (2012). Guidelines for Application of IUCN Red List Criteria at Regional and National Levels: Version 4.0. Gland, Switzerland and Cambridge, UK: IUCN. iii + 41pp.

- The surrounding buffer zone of the Wind Turbines,
- The surrounding buffer zone access roads to the Wind Turbines,
- Areas reserved for excavation pits and landfills.

Due to the complexity of the project, the area of influence is specifically determined for each impact based on the observed conditions on the ground, knowledge of the nature and intensity of the impact, conducted surveys, and/or results of modelling.

For example, the Ecologically Appropriate Area of Analysis (EAAA) is determined to include "a broader distribution of potentially affected biodiversity characteristics and ecological patterns, processes, and functions necessary for their maintenance through this distribution."[21]

The project's area of influence reflects the ecological characteristics of the area and the biology of identified biodiversity characteristics based on field research, characteristics of surrounding habitats and ecosystems (e.g., habitat type, land use, natural barriers), literature data, known distribution, and expert opinions for each individual species.

Determining the EAAA is done separately for each biodiversity receptor unless species belonging to a specific group have significant EAAA overlap, and EAAA can be aggregated. In case of uncertainty about distribution, a conservative approach is applied, and the EAAA is slightly expanded as a precautionary measure. Further evaluation of EAAA is conducted regarding the scope of occurrence based on data from the International Union for Conservation of Nature and Natural Resources (if available) and expert input to facilitate a critical assessment of habitats.

The estimated impact on land and soil quality is assessed within the direct impact zone of 500 meters on each side of the main and access roads leading to the Wind Turbines, which includes the expropriation zone, and within the proposed excavation landfill area. The buffer zone of 500 m is taken for flora and fauna species excluding birds, where the buffer zone for birds is 2 km for smaller species and 6 km for bigger species in line with guidelines and methodology set by Scottish Natural Heritage[22] and Prakljacic et.al.[23]

5 Protected areas and Key Biodiversity Areas

The review of protected areas in the Project region nature conservation areas in the project region are listed in table 3.

Table 3: Overview of Protected areas in the Project area

Site code	Site name	Project situated within borders of PA
Proposed Natura 2000 sites		
BA8300064	Prenj-Cvrsnica-Cabulja	Yes
BA8300022	Duvanjsko polje	No
Important Bird Areas (IBA)		
BA006	Duvanjsko polje	No
Protected Areas		
-	Blidinje Nature Park	No

[21] EIB for Standard 4 on Biodiversity and Ecosystems, 2022
[22] Recommended bird survey methods to inform impact assessment of onshore wind farms (2017). Scottish Natural Heritage
[23] Prakljaić. et.al (2011): Wind turbines and birds, Podgorica

Blidinje Nature Park

The Nature Park was declared on March 30, 1995, by the Law on Proclamation of the Blidinje Area as a Nature Park[24], where Article 2 stipulates that the borders of the park will be determined by the spatial plan "Nature Park Blidinje".

The spatial plan of the Blidinje Nature Park was created in 2000 by the Faculty of Architecture in Zagreb (authors: Sreko Pegan and Ante Marinković-Uzelac), where the boundaries of the park are only descriptively defined according to the nearest toponyms and geographical and geological landmarks such as mountain peaks, mountain ridges, streams, rivers, valleys, hunting routes, old roads, railroad, etc.

It is also important to emphasize that all subsequent documents for the Blidinje Nature Park, such as the Blidinje PP Management Plan, were made using parts of the boundaries for the proposed Natura 2000 area, which is much larger than the borders of the current Blidinje Nature Park. Also, the Spatial Plan for the Blidinje Nature Park area (made by the Faculty of Architecture of the University of Zagreb in 2000) is a document that is cited as a source in all official documents issued after 2000, but nowhere is it stated that it was officially adopted by the competent ministries or from the park administration itself.

The investor turned to the competent Ministry of Spatial Planning, Construction and Environmental Protection of the West Herzegovina County, which issued Statement no. 06-02-23-8-257-2/21[25] from the Spatial Plan of the West Herzegovina County, which confirms that the construction of the Pokleani wind farm in the area is foreseen by the Spatial Plan and that the purpose of the land in that area is the development of renewable energy sources. Due to environmental restrictions, JP EP HZ HB moved the location outside the Blidinje Nature Park, together with the planned connection to TS 220/x kV Poklecani.

Furthermore, the disputed location, if it was indeed inside the park, would be located in protection zone 3 of Blidinje NP, in which, according to the Management Plan of Blidinje NP[26], it is allowed to use the space for other purposes, which must be in accordance with the principles of sustainable development, without impairing the purpose and objectives of the protected area.

Natura 2000 sites

The Government of the Federation of Bosnia and Herzegovina has endorsed the Regulation on the Natura 2000 program - Protected Areas in Europe[27]. This initiative aims to create an ecological network safeguarding natural habitats and species in the FBiH while integrating specific areas into the international network of protected habitats.

The Law on Nature Protection of the FBiH[28] acknowledges Natura 2000 sites, allowing designated areas for the European Natura 2000 program to be included in the international ecological network. However, as Bosnia and Herzegovina is not part of the EU, Natura 2000 sites are not mandatory for

[24] Official Gazette of the HR H-B, No. 13/95
[25] Official Gazette of the HR H-B, No. 06-02-23-8-257-2/21
[26] Management plan of Blidinje Nature Park, Federal Ministry of Nature and tourism, 2011. Contract No. BA-FMPAP-TF-091919-CQ-09-CS-10/FBIH (675/10)
[27] Official Gazette of the FBiH, No. 41/11
[28] Official Gazette of the FBiH, No. 66/13

protection. Article 58 of the Law on Nature Protection grants the FBiH Government the authority to establish a specially protected Natura 2000 site within the ecological network.

Two proposed Natura 2000 sites are present in the vicinity of the Project AoI. First is the proposed Natura 2000 site Prenj-Cvrsnica-Cabulja (BA8300064), where wind generators are planned within the area. The second is Duvanjsko polje (BA8300022), located approximately 7 kilometers of air distance from the Project AoI. In the Natura 2000 site Prenj-Cvrsnica-Cabulja three wind generators are planned. Specifically, generators 18, 19, and 20 are positioned within 300 meters of the area's boundary, while generators 15, 16, and 17 are situated at a distance of approximately 500 meters from the edge of the Natura area.

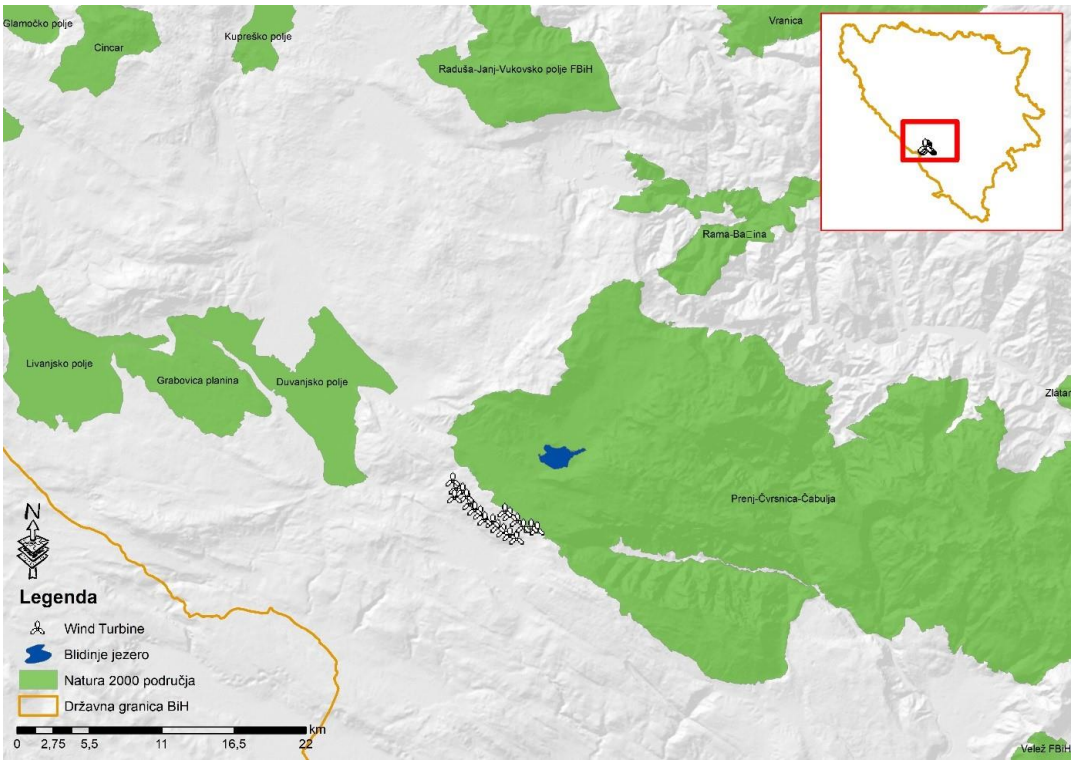


Figure 3: Position of proposed Natura 2000 sites in the vicinity of the Project Area of Influence.

To date, no area in the FBiH has been officially declared, and the management plan for the proposed Natura 2000 sites Prenj-Cvrsnica-Cabulja (BA8300064) and Duvanjsko polje (BA8300022) remains unadopted. Additionally, there are no adopted by-laws for Natura 2000 in the FBiH.

Prenj-Cvrsina-Cabulja (BA8300064)

Site identification			
Type C	**Code** BA8300064	**Proposed name**	Prenj-Cvrsnica-Cabulja
Site location			
Longitude 17.75481078	**Latitude** 43.59037992	**Area (ha)** 97097.629392070	**Sitelenght (km)** 267.79978525

Site description is provided to gain insight into the important habitat types and species present in the proposed Natura 2000 site Prenj-Cvrsnica-Cabulja (BA8300064). Flora, fauna, and habitats listed in the official natura 2000 - standard data form[29] for the nomination of the Natura 2000 site are important features in need of protection.

For the potential Natura 2000 site Prenj-Cvrsnica-Cabulja, the impact is assessed since three wind turbines enter along the edge of the area boundary (Figure 4).

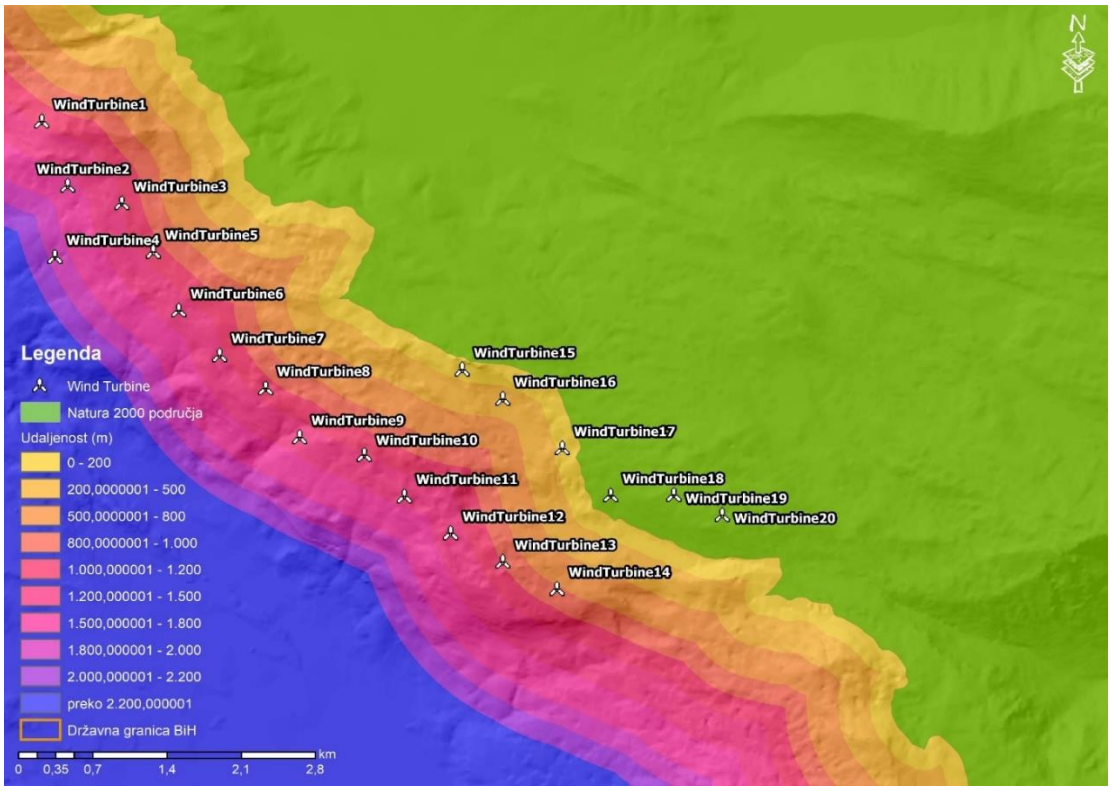


Figure 4: Distance of the proposed wind turbines in relation to the proposed Natura 2000 site Prenj-Cvrsnica-Cabulja (Site Code - BA8300064)

Duvanjsko Polje (BA8300022)

Site identification			
Type C	**Code** BA8300022	**Proposed name** Duvanjsko Polje	
Site location			
Longitude 17.24264113	**Latitude** 43.6472971	**Area (ha)** 7464.75058312	**Sitelenght (km)** 66.79903673

Site description is provided to gain insight into the important habitat types and species present in the proposed Natura 2000 site Duvanjsko Polje (BA8300022). Flora, fauna, and habitats listed in the official

[29]https://fmoit.gov.ba/okolis/zastita-prirode/popis-natura-2000-federacije-bih/ (all proposed Natura 2000 data forms can be found on the provided website)

natura 2000 - standard data form[30] for the nomination of the Natura 2000 site are important features in need of protection.

The overview of important features of Duvanjsko Polje are mentioned in the document. It is important to note that the project is not anticipated to have any negative impacts on the Natura 2000 area. The project is not planned in the borders of the area, therefore no direct impacts are expected. During the overview of the Project footprint no cumulative or indirect effects were assessed.

IBA Duvanjsko Polje (BA006)

Site identification Duvanjsko polje (BA006)			
Site location			
Longitude 43° 40' 13" North (43.67°)	**Latitude** 17° 15' 21" East (17.26°)	**Area (ha)** 12,508	**Altitude** 865-910 m

Site description (2018 baseline)

Duvanjsko polje is located in Western Bosnia, close to Croatia and SE of larger Livanjsko polje. It can be reached from N and NW through a regional road Kupres – Tomislavgrad and Livno – Tomislavgrad. From South it is accessible by a regional road Mostar – Livno. Duvanjsko polje is 20 km long (Mesihovina - Mokronoge), and 12 km wide (Brisnik - Mandino Selo). This karst polje is hydrologically part of the Cetina River basin. It is regularly flooded polje, with total flood surface of 53,07 km2. The lowest parts of polje are occasionally (winter, autumn or spring) flooded. The main river that flows on the polje is Šujica. This site is also very rich in cultural and historical sense: paleolitic village, prehistoric buildings, roman necropolis, late antic fort, middle-age necropolis etc. The IBA Duvanjsko polje covers an area of 12,508 hectares.

IBA Duvanjsko polje is an important stop over site on the Adriatic Flyway.

Most important species are *Aythya nyroca*, *Grus grus* and *Vanellus vanellus*. Other important migrants and wintering species are *Circus cyaneus*, *Falco vespertinus*, *Streptopelia turtur*, *Anthus pratensis*, *Aythya ferina*, *Platalea leucorodia*, *Buteo rufinus*. Important breeders are *Circus aeruginosus*, *Circus pygargus* , *Buteo rufinus*, *Vanellus vanellus*, *Streptopelia turtur*, *Merops apiaster*, *Sylvia nisoria*.

The planned project is strategically positioned away from the boundaries of the designated area, including the proposed access roads, machinery sites, construction landfills, and wind generator placements. As a result, the project is not anticipated to directly affect the IBA Duvanjsko Polje. Consequently, there will be no immediate adverse effects from the project's implementation.

Furthermore, considering potential cumulative impacts in conjunction with other projects, there are currently no ongoing activities in proximity to the Protected Area that could exacerbate any negative effects when combined with the planned Windfarm Poklecani project.

[30] https://fmoit.gov.ba/okolis/zastita-prirode/popis-natura-2000-federacije-bih/ (all proposed Natura 2000 data forms can be found on the provided website)

6 Survey Methodology

Desktop survey

To obtain a comprehensive understanding of the conditions related to flora, fauna, vegetation, and habitats prior to field surveys, a preliminary desktop survey was performed. This survey encompassed an assessment of both flora and fauna species and the screening of significant habitats in the Project Area of Influence (AoI). For the analysis of literature data and the assessment of the habitats and species in the Project Area of Influence, all relevant literature sources were used, such as scientific papers, reports, and in addition, each hired expert also included personal data from field research from previous years to gain insight into the presence of species and habitats of conservation concern in the Project AoI.

Desktop survey for flora, vegetation, and habitats

Flora

There are no recorded data on the flora for the Project AoI. A 5 km area was taken for literature research, however, there were no literary references for the Poklecani area (in the 5 km area). This scarcity of information is attributed to the broader context of research and field data collection in Bosnia and Herzegovina. Over a period of 30 years, there has been a notable dearth of comprehensive studies and on-site observations in this region. The absence of literary references for the specified areas is therefore not unexpected, as it aligns with the overall limited availability of data related to the flora and vegetation in Bosnia and Herzegovina over the past three decades.

Vegetation

According to the European Environment Agency (2002), the researched area belongs to the Mediterranean biogeographical region. The Euro-Siberian-Boreo-American region covers a wide area from the lowest parts to the foothills, including the extreme limit of forest vegetation. In this area, the region is differentiated into three lower phytogeographical units - provinces:

- Illyrian,
- Mesian,
- Province of relict pine forests.

The Illyrian province is characterized by a moderate continental climate, a favourable hydrothermal regime during the growing season; and on the horizontal and vertical profile within the wider research area, it is differentiated into the following vegetation belts and sub-belts:

- Xerothermal deciduous forests and thickets of honey oak and molasses of the sub-Mediterranean zone of the *Quercetalia pubescentis* order;
- Xerothermic deciduous low forests and thickets of Oriental hornbeam of the order Ostryo - *Carpinetalia orientalis* (*Carpinion orinetalis*);
- Xerothermic deciduous low forests and thickets of black hornbeam of the order *Ostryo - Carpinetalia orientalis* (Seslerio-Ostryon);
- Moderate - moist oak - hornbeam forests (*Carpinion betuli illyricum*);
- Beech forests of the order Fagetalia sylvaticae (Fagion illyricum):
    - Mountain moderately - humid beech forests (*Fagetum "montanum"*);
    - Thermophilic beech forests (*Seslerio-Fagion*),
    - Thermophilic beech and syrian maple forests (*Aceri obtusati - Fagetum "illyricum"*),

- Mountain beech - fir forests (*Abieti - Fagetum*),
- Mediterranean - montane beech forests (*Fagetum mediterraeo montanum*),
- Foothill beech forests (*Aceri - Fagetum "subalpinum"*);

- Dark coniferous forests of spruce and fir (*Vaccinio - Piceion*);
- Low thickets of juniper pine (*Pinion mugi "illyricum"*).

The Moesian province includes warmer parts of the horizontal and vertical profile. These are mainly canyon sections and slopes oriented towards the south. In this area, the Moesian province is differentiated into the following vegetation belts and sub-belts:

- Xerothermic forests of wort (Quercion confertae);
- Mesothermophilic forests of sessile oak (Quercion petraeae);
- Beech forests of the order (Fagion moesiacae):
  - Mountain beech forests (Fagetum moesiacae "montanum");
  - Thermophilic forests of Mesian beech and autumn sedge (Seslerio-Fagetum moesiacae);
  - Thermophilic forests of Mesian beech and syrian maple (Aceri obtusati- Fagetum moesiacae);
  - Mountain forests of Moesian beech and fir (Abieti-Fagetum moesiacae);
  - Foothill forests of Mesian beech (Aceri-Fagetum mosiacae).

The province of relict pine forests includes parts of the area of the endemic Bosnian pine - *Pinus heldreichii* and the Illyrian black pine - *Pinus nigra susp. austriaca*. Based on ecological and spatial characteristics, this province is differentiated into several clearly separated phytogeographical sectors:

- Illyrian black pine forests on the dolomites *Pinion austriacae*;
- Illyrian black pine forests with manna ash *Orno - Ericenion "dolomiticum"*;
- Communities of Illyrian black pine in crevices of carbonate rocks (*Onosmo - Pinetum "illyricum"*);
- Bosnian pine forests, *Pinion heldreichii*;
  - Mediterranean - montane pine forests *Pinetum heldreichii "mediterraneo - montanum"*;
  - Mountain forests of pine and spruce *Piceo - Pinetum heldreichii*;
  - Mountain forests of beech and “munika” *Fago - Pinetum heldreichii*;
  - *Pinetum heldreichii subalpinum* subalpine forests;
  - *Munika* communities in cracks of Amphoricarpo-Pinetum heldreichii carbonate rocks.

The Alpine-High Nordic region ecologically and spatially continues on the foothill belt of the Euro-Siberian-Boreo-American region. It includes the area of high mountain peaks, above the upper limit of forest vegetation, i.e. predominantly juniper pine *Pinetum mugi*, and sometimes also above low forests of pine *Pinetum heldreichii "subalpinum"*, and subalpine forests of juniper and beech *Fagetum "subalpinum*". The region in this area is represented by the High Dinaric Province. Three belts can be clearly distinguished on the vertical profile of this province:

- Discontinuous belt of subnivean vegetation around snowdrops on carbonates (*Salicion retusae*);
- Mountain cliffs or high mountain "tundra",
- Mountain cliffs most exposed to the wind, with narrow-leaved sedge (*Seslerion juncifoliae*);
  - Mountain cliffs at the highest positions with the Dinaric blade *Oxytropidion dinaricae*;
  - Mountain cliffs at the highest positions with the Prenj blade *Oxytropidenion prenjae*;
  - Mountain cliffs in more sheltered habitats (*Festucion bosniacae*).

- Pre-mountain cliffs:
  - Foothill cliffs in more exposed habitats *Seslerion robustae*;
  - Foothill cliffs in the sheltered places of *Stachydi-Festucenion bosniacae*.

Based on real forest vegetation, Travnik sheet 1:200,000 (Stefanovic and Beus, 1979) the following occurs in the given area: beech forests (*Fagetum montanum*).

Habitats

Based on available literature data and data provided by the expert for flora, vegetation, and habitats, seven types of habitats were defined within the WF Poklecani researched area (Table 4).

Table 4 Overview of Natura 2000 habitat types within the research area at WF Poklecani

Natura 2000 code	Habitat type
6170	Alpine and subalpine calcareous grasslands
62A0	Eastern sub-Mediterranean dry grasslands (*Scorzoneratalia villosae*)
8120	Calcareous and calcshist screes of the montane to alpine levels (*Thlaspietea rotundifolii*)
8210	Calcareous rocky slopes with chasmophytic vegetation
8140	Eastern Mediterranean screes
8310	Caves not open to the public
95A0	High oro-Mediterranean pine forests

Overview of Natura 2000 habitats and species of flora and fauna in proposed Natura 2000 sites

Considering the fact that there are no available literature data for the Project Area of Influence, in order to gain insight into the potential presence of flora and fauna species and review habitats where wind turbines will be placed, the species of flora and fauna that comprise potential Natura 2000 sites have been revised. All literature data can be found on the website of the Federal Ministry of Environment and Tourism for all potential Natura 2000 sites of Bosnia and Herzegovina[31]. The list of species of significance for the nomination of Natura 2000 sites is found in data forms.

In this chapter, flora and fauna, as well as habitats that are significant for the designation of the Natura 2000 site Prenj-Cvrsnica-Cabulja and Duvanjsko polje, will be presented. The reason for considering a broader area rather is that the Project Area of Influence lacks a sufficient source of literature data. If certain species and habitats are not confirmed within the Project Area of Influence, they will not be further considered for assessment, as the Project will not have a direct negative impact on the species and habitats. The broader literature data serve to establish a quality and quantitative database, anticipating what can be expected in the Project AoI of Poklecani before conducting field survey.

Prenj- Cvrsina-Cabulja (BA8300064)

Table 5: Annex I habitat types present in the proposed Natura 2000 site Prenj-Cvrsnica-Cabulja (BA8300064)

Habitat code	Habitat description	Cover (ha)	Relativity	Conservation	Suitable habitat in the Project AoI
8310	Caves not open to the public	2	B	B	No
62A0	Eastern sub-Mediterranean dry grasslands (*Scorzoneratalia villosae*)	20	A	B	No

[31] https://www.fmoit.gov.ba/bs/okolis/zastita-prirode/ekoloska-mreza-natura-2000 (Accessed on March 5, 2024.)

Habitat code	Habitat description	Cover (ha)	Relativity	Conservation	Suitable habitat in the Project AoI
4060	Alpine and Boreal heaths	1.12	A	A	No
8210	Calcareous rocky slopes with chasmophytic vegetation	10.56	A	A	No
8140	Eastern Mediterranean screes	0.48	A	A	No
4070	Bushes with Pinus mugo and *Rhododendron hirsutum* (*Mugo Rhododendretum hirsuti*)	1.73	A	A	No
6170	Alpine and subalpine calcareous grasslands	22.4	A	A	No
3240	Alpine rivers and their ligneous vegetation with *Salix elaeagnos*	0.17	A	A	No
8120	Calcareous and calcshist screes of the montane to alpine levels (*Thlaspietea rotundifolii*)	0.15	A	A	No
6430	Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels	DD	A	A	No
91K0	Illyrian Fagus sylvatica forests (*Aremonio-Fagion*)	23.4	B	A	No
9530 *	(Sub-) Mediterranean pine forests with endemic black pines	1.2	A	A	No
95A0	High oro-Mediterranean pine forests	4.9	A	A	Yes
91E0 *	Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion*, *Alnion incanae*, *Salicion albae*)	0.1	B	B	No
4080	Sub-Arctic *Salix* spp. Scrub	0.1	A	A	No
5130	*Juniperus communis* formations on heaths or calcareous grasslands	0.1			No
9180	*Tilio-Acerion* forests of slopes, screes, and ravines	0.3			No
9140	Medio-European subalpine beech woods with *Acer* and *Rumex arifolius*	2.2	B	B	No
9250	*Quercus trojana* woods	0.2			No
91R0	Dinaric dolomite Scots pine forests (*Genisto januensis-Pinetum*)	0.5			No

*Relativity: **A** - excellent representativity; **B** - good representativity; **C** - significant representativity; **D** - non-significant presence*
*Conservation status: **A** - excellent conservation; **B** - good conservation; **C** – average or reduced conservation; * priority habitat;*

Table 6: Flora and fauna species of importance of the proposed Natura 2000 site Prenj-Cvrsnica-Cabulja

Group	Scientific name	Common name	NP	Likely present in the PAoI/ Suitable habitat in the PAoI
M	*Dinaromys bogdanovi*	The Balkan snow vole	X	No
M	*Canis lupus*	Graz wolf	X	No
M	*Rupicapra rupicapra balcanica*	Balkan chamois	X	No
M	*Ursus arctos*	Brown bear	X	No
M	*Lynx lynx*	Eurasian lynx	X	No
I	*Euplagia quadripunctaria*	The Jersey tiger	X	No

Group	Scientific name	Common name	NP	Likely present in the PAoI/ Suitable habitat in the PAoI
I	*Euplagia aurinia*	-	X	No
I	*Lucanus cervus*	Stag Beetle	X	No
I	*Morimus funereus*	Long-horned beetle	X	No
A	*Bombina variegata*	Yellow-bellied toad	X	No
R	*Testudo hermanni*	Western Hermann's tortoise	X	No
R	*Vipera ursinii*	The meadow viper	X	No
F	*Salmo marmoratus*	Marbled trout	X	No
F	*Cottus gobio*	European bullhead	X	No
F	*Pomatoschistus canestrinii*	Canestrini's goby	X	No
F	*Salmothymus otusirostris*	-	X	No
F	*Squalius svallize*	-	X	No
B	*Aegolius funereus*	Boreal owl	X	No
B	*Tringa glareola*	Wood sandpiper	X	No
B	*Tetrao urogallus*	Capercaillie	X	No
B	*Platalea leucorodia*	Eurasian Spoonbill	X	No
B	*Picoides tridactylus*	Three-toed Woodpecker	X	No
B	*Neophron percnopterus*	Egyptian Vulture	-	No
B	*Lullula arborea*	Woodlark	X	No
B	*Lanius collurio*	Red-backed shrike	X	No
B	*Lanius minor*	Lesser Grey Shrike	X	No
M	*Lutra lutra*	The Eurasian otter	X	No
B	*Hieraaetus pennatus*	Booted Eagle	X	No
B	*Gyps fulvus*	Griffon Vulture	X	No
B	*Gypaetus barbatus*	The bearded vulture	-	No
B	*Alectoris graeca*	Rock Partridge	X	Yes
B	*Anthus campestris*	Tawny Pipit	X	No
B	*Aquila chrysaetos*	Golden Eagle	X	No
B	*Bonasa bonasia*	Hazel Grouse	X	No
B	*Bubo bubo*	Eurasian eagle-owl	X	No
B	*Caprimulgus europaeus*	European nightjar	X	No
B	*Circaetus gallicus*	Short-toed Eagle	X	Yes
B	*Circus pygargus*	Montagu's Harrier	X	Yes
B	*Emberiza hortulana*	Ortolan Bunting	X	No
B	*Falco biarmicus*	Lanner Falcon	X	No
B	*Falco peregrinus*	Peregrine falcon	X	No
P	*Botrychium simplex*	The little grapefern	X	No
P	*Aquilegia kitaibelii*	-	X	No
M	*Rhinolophus euryale*	Mediterranean horseshoe bat	X	Yes
M	*Rhinolophus ferrumequinum*	Greater horseshoe bat	X	No
M	*Rhinolophus hipposideros*	Lesser horseshoe bat	X	Yes
M	*Myotis blythii*	Lesser mouse-eared bat	X	No
M	*Myotis myotis*	Greater mouse-eared bat	X	Yes
M	*Miniopterus schreibersii*	Common bent-wing bat	X	Yes
P	*Cerastium dinaricum*	-	X	No
P	*Scilla litardierei*	Amethyst Meadow Squill	X	No
P	*Pulsatilla vulgaris ssp. Grandis*	Greater Pasque Flower	X	No
P	*Arabis scopoliana*	-	X	No

Group	Scientific name	Common name	NP	Likely present in the PAoI/ Suitable habitat in the PAoI
P	*Campanula serrata*	Campanula napuligera	X	No
P	*Eryngium alpinum*	Queen-of-the-alps	X	No
P	*Cypripedium calceolus*	Lady's-slipper	X	No
I	*Rosalia alpina*	Alpine longhorn beetle	X	No
I	*Cerambyx cerdo*	The great capricorn beetle	X	No

***NP** – Not Present: in case that a species is no longer present in the proposed Natura 2000 site: x*

Duvanjsko polje (BA8300022)

Table 7: Annex I habitat types present in the proposed Natura 2000 site Duvanjsko polje (BA8300022)

Habitat code	Habitat description	Cover (ha)	Relativity	Conservation	Likely present in the PAoI
91E0	Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion*, *Alnion incanae*, *Salicion albae*)	0.11	C	C	No
3180	Turloughs	71.09	A	B	No
8310	Caves not open to the public	2	C	C	No
62A0	Eastern sub-Mediterranean dry grasslands (*Scorzoneratalia villosae*)	6	B	B	No
6540	Sub-Mediterranean grasslands of the *Molinio-Hordeion secalini*	20	A	B	No

*Relativity: **A** - excellent representativity; **B** - good representativity; **C** - significant representativity; **D** - non-significant presence*
*Conservation status: **A** - excellent conservation; **B** - good conservation; **C** – average or reduced conservation; * **priority habitat**; ** habitats outside the Project Area of Influence*

Table 8: Flora and fauna species of importance of the proposed Natura 2000 site Duvanjsko polje (BA8300022)

Group	Scientific name	Common name	NP	Likely present in the Project AoI
M	*Ursus arctos*	Brown bear	X	No
M	*Canis lupus*	Grey wolf	X	No
R	*Testudo hermanni*	Hermann's tortoise	X	No
F	*Chondrostoma phoxinus*	The minnow-nase	X	No
F	*Aulopyge huegelii*	The Dalmatian barbelgudgeon	X	No
B	*Tringa glareola*	Wood sandpiper	X	No
B	*Crex crex*	Corn crake	X	No
B	*Aquila chrysaetos*	Golden eagle	X	No
B	*Hieraaetus fasciatus*	Bonelli's eagle	X	No
B	*Aythya nyroca*	Ferruginous duck	X	No
B	*Botaurus stellaris*	Eurasian bittern	X	No
B	*Egretta alba*	Great egret	X	No
B	*Picus canus*	Grey-headed woodpecker	X	Yes
B	*Philomachus pugnax*	Ruff	X	No
B	*Pernis apivorus*	European honey buzzard	X	No
B	*Pandion haliaetus*	Osprey	X	No
B	*Platalea leucorodia*	Eurasian spoonbill	X	No
B	*Nycticorax nycticorax*	Black-crowned night heron	X	No
B	*Milvus milvus*	Red kite	X	No
B	*Lullula arborea*	Woodlark	X	Yes
B	*Lanius minor*	Lesser grey shrike	X	Yes
B	*Lanius collurio*	Red-backed shrike Birds	X	Yes

Group	Scientific name	Common name	NP	Likely present in the Project AoI
B	*Circus cyaneus*	Hen harrier	X	No
B	*Grus grus*	Common crane	X	No
B	*Falco vespertinus*	Red-footed falcon	X	No
B	*Coracias garrulus*	European roller	X	No
B	*Circus pygargus*	Montagu's harrier Birds	X	No
B	*Ixobrychus minutus*	Little bittern	X	No
B	*Ficedula albicollis*	Collared flycatcher	X	No
B	*Falco columbarius*	Merlin	X	No
B	*Falco peregrinus*	Peregrine falcon	X	No
B	*Egretta garzetta*	Little egret	X	No
B	*Emberiza hortulana*	Ortolan bunting	X	No
B	*Dendrocopos medius*	Middle spotted woodpecker	X	No
B	*Circus macrourus*	Pallid harrier	X	No
B	*Circus aeruginosus*	Western marsh harrier	X	Yes
B	*Circaetus gallicus*	Short-toed snake eagle	X	Yes
B	*Ciconia nigra*	Black stork	X	No
B	*Ciconia ciconia*	White stork	X	No
B	*Alectoris graeca*	Rock partridge	X	No
B	*Buteo rufinus*	Long-legged buzzard	X	No
M	*Rhinolophus euryale*	Mediterranean horseshoe bat	X	Yes
M	*Rhinolophus ferrumequinum*	*Greater horseshoe bat*	X	No
M	*Rhinolophus hipposideros*	Lesser horseshoe bat	X	Yes
M	*Miniopterus schreibersii*	Common bent-wing bat	X	Yes
M	*Myotis myotis*	Greater mouse-eared bat	X	Yes
M	*Myotis capaccinii*	Long-fingered bat	X	No
M	*Myotis blythii*	Lesser mouse-eared bat	X	No
M	*Myotis emarginatus*	Geoffroy's bat	X	No
P	*Eleocharis carniolica*	-	X	No
P	*Scilla litardierei*	Dalmatian scilla	X	No

***NP** – Not Present: in case that a species is no longer present in the proposed Natura 2000 site: x*

IBA Duvanjsko Polje

Table 9: Trigger species for nomination of IBA Duvanjsko polje that meet the IBA criteria

Scientific name	Common name	Conservation status			Season
		BD	GL IUCN	RL FBIH	
Aythya ferina	Common Pochard	IIA	VU	LC	Winter
Aythya nyroca	Ferruginous Duck	I	NT	DD	Passage
Streptopelia turtur	European Turtle- dove	IIB	VU	LC	Breeding/passage*
Grus grus	Common Crane	I	LC	NT	Passage
Platalea leucorodia	Eurasian Spoonbill	I	LC	EN	Passage
Vanellus vanellus	Northern Lapwing	IIB	NT	-	Passage/breeding*
Circus cyaneus	Hen Harrier	I	LC	DD	Winter
Falco vespertinus	Red-footed Falcon	I	VU	VU	Passage
Anthus pratensis	Meadow Pipit	-	LC	LC	Winter

**two populations*

Table 10: Important bird species present on the site but do not trigger the IBA criteria

Scientific name	Common name	Conservation status		
		BD	GL IUCN	RL FBIH
Buteo rufinus	Long-legged buzzard	I	LC	-
Circus aeruginosus	Western marsh harrier	I	LC	-
Circus pygargus	Montagu's harrier	I	LC	-
Merops apiaster	European bee-eater	-	LC	-
Sylvia nisoria	Barred warbler	I	LC	-

Desktop survey for fauna

This chapter includes a review of the literature survey. The survey considered the wider project area due to the proximity of proposed Natura 2000 sites included in the assessment, as well as the potential presence of species of conservation concern.

Large and small mammals

Desktop survey indicates that eight species inhabit the area within a 10 km radius (Table 11). The actual number of small mammal species is likely higher, given the habitat diversity within this range. However, mammal species assessment is not included in the document, as the project's zone of influence is limited and expected to have negligible effects on mammals in the study area. The conclusion is based on the assumption that there will be no habitat fragmentation and no significant impact on widely distributed species. Although the turbine locations are minimal, the assessment also considered construction routes, laydown areas, and site compounds, which are expected to bisect or cross the site and contribute to overall impacts during construction. The evaluation of potential impacts encompassed the entire project footprint, including planned turbine locations, equipment placement areas, and access routes. Potential effects on Dinaric vole habitats are assessed as negligible, considering the species' preference for sedge habitats and the absence of specific data confirming its presence in the directly affected area.

Table 11: Overview of the mammal fauna based on literature data for the area with a radius of 10 km

Scientific name	Common name	Conservation status[32]			
		GL IUCN	RL FBIH	HD	BC
Canis lupus	Wolf	LC	EN	II, IV	Res. 6.
Ursus arctos	Bear	LC	VU	II, IV	Res. 6.
Capreolus capreolus	Roe deer	LC	LC	-	-
Rupicapra rupicapra	Chamois	LC	EN	-	-
Lepus europeus	European hare	LC	LC	-	-
Vulpes vulpes	Fox	LC	LC	-	-
Apodemus sylvaticus	Filed mouse	LC	LC	-	-
Dinaromys bogdanovi	Balkan snow vole	VU	VU	II, IV	-

[32] Conservation status: **GL IUCN** - Global IUCN red list of Threatened species (IUCN. 2023. The IUCN Red List of Threatened Species. Version 2023-1. https://www.iucnredlist.org. Accessed on [16.01.2024].); **RL FBIH** - Red List of the Federation of Bosnia and Herzegovina (Đug et.al (2013): Red List of Fauna of the Federation of Bosnia and Herzegovina); **HD** – Habitat Directive (Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora); **BC** – Bern Convention, Resolution 6. (Resolution No. 6 (1998) listing the species requiring specific habitat conservation measures (including revised Annex I to Resolution No. 6 (1998), adopted in 2011 by the Standing Committee)

6.1 Amphibians

Desktop survey indicates that 11 amphibian species inhabit the area within a 10 km radius, reflecting the habitat diversity in the region, including Lake Blidinje (Table 12).

Table 12: Overview of the amphibian fauna based on literature data for the area with a radius of 10 km

Scientific name	Common name	Conservation status			
		GL IUCN	RL FBIH	HD	BC
Salamandra atra	Alpine salamander	LC	VU	IV	Res. 6.
Salamandra salamandra	Fire salamander	VU	LC	-	-
Lissotriton vulgaris	Smooth newt	LC	VU	-	-
Bombina variegata	Yellow-bellied toad	LC	NT	II,IV	Res. 6.
Bufo bufo	Common toad	LC	LC	-	-
Pseudepidalea viridis	European green toad	LC	LC	IV	-
Hyla arborea	European tree frog	LC	LC	IV	-
Rana dalmatina	Agile frog	LC	LC	IV	-
Rana graeca	Greek stream frog	LC	NT	IV	-
Rana temporaria	Common frog	LC	NT	V	-
Pelophylax ridibundus	Marsh frog	LC	LC	V	-

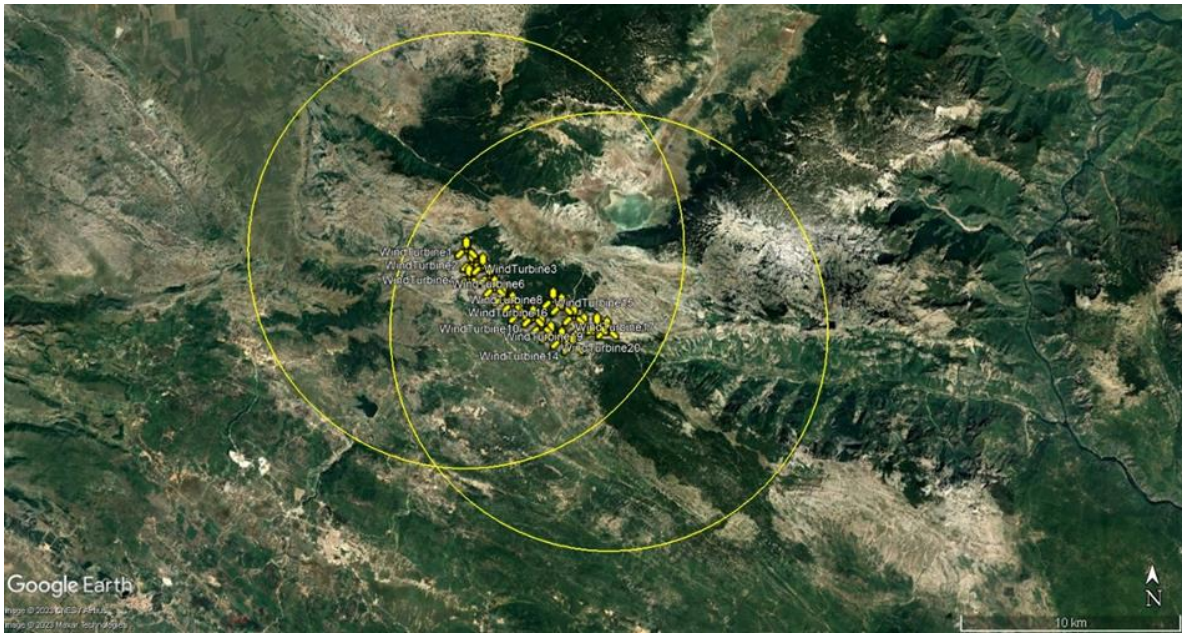


Figure 5: The area includes the Desktop survey of biodiversity data in a radius of 10 km in relation to the northernmost and southernmost generator in the Poklecani locality

6.2 Reptiles

Desktop survey indicates that 9 reptile species inhabit the area within a 10 km radius (Table 13).

Table 13: Overview of the reptile literature data in the 10 km radius

Scientific name	Common name	Conservation status			
		GL IUCN	RL FBIH	HD	BC
Vipera ursinii	Meadow viper	VU	EN	II, IV	Res. 6.

Scientific name	Common name	Conservation status			
		GL IUCN	RL FBIH	HD	BC
Vipera ammodytes	Horned Viper	LC	LC	IV	-
Zamenis longissimus	Aesculapian snake	LC	LC	IV	-
Coronella austriaca	Smooth snake	LC	LC	IV	-
Zamenis situla	European ratsnake	LC	VU	II, IV	-
Platyceps najadum	Dahl's whip snake	LC	LC	IV	-
Natrix natrix	Grass snake	LC	LC	-	-
Natrix tesselata	Dice snake	LC	LC	IV	-
Lacerta agilis	Sand lizard	LC	LC	IV	-

6.3 Invertebrates

Speleological research has been continuously conducted in the wider area of Mt. Čvrsnica. As early as the 19th century, several species were described, including *Leonhardia hilfi* (Reitter, 1901); *Leptomeson leonhardi* (Reitter, 1902); *Duvalius* (*Neoduvalius*) *vranensis* (Breit, 1904); *Neobisium tanataleum* Beier & Kratochvil, 1932; and *Pseudosinella vranensis* (Lang, 1935). The entire area is considered valuable from a biospeleological perspective. No speleological features were observed during field surveys or on 1:25,000 topographic maps; therefore, there is no indication that the project poses a threat to habitats of troglophilous species.

Within the protected area of Blidinje Nature Park, 91 butterfly species have been recorded, three of which have notable conservation status: *Parnassius apollo* (IUCN NT, HD IV), *Parnassius mnemosyne* (IUCN NT, HD IV), and *Maculinea arion* (IUCN NT, HD IV). Considering the diversity of habitats within a 10 km radius, including Lake Blidinje and its tributaries, the presence of crayfish and other aquatic invertebrates (e.g., *Sympetrum flaveolum*, Ephemeroptera, and Plecoptera) can be expected. However, this does not apply to the Project Area of Influence, as these species are dependent on water bodies, which are absent in that area. Consequently, the Project Area of Influence does not provide suitable habitat for these species. (Table 14).

Table 14: Overview of the invertebrate fauna[33]

Scientific name	Common name	Conservation status			
		GL IUCN	RL FBIH	HD	BC
Odonata					
Sympetrum flaveolum	Yellow-winged darter	LC	VU	-	
Lepidoptera					
Pieris brassicae	Large white	LC	LC	-	-
Iphiclides podalirius		-	-	-	-
Coleoptera					
Coprimorphus scrutato	Searching dung beetle		LC	-	-
Chrysolina cribrosa	/		-	IV	
Lucanus cervus	Stag beetle		VU	II	
Cerambyx cerdo	great capricorn beetle			II, IV	

Birds

No records on bird fauna were found for the Project Area of Influence during desktop survey.

[33] Based on literature data for the area with a radius of 10 km and the field localities radius of 500 meters where the individuals were found

Bird experts used the following criteria to select target species for the field survey:

- Species with a known risk of collision with wind turbines;
- Species with an uncertain or negative short-term and/or long-term trend in Bosnia and Herzegovina (BirdLife International, 2021);
- Species registered or expected in the wider area of WF Poklecani
- Species of birds listed in Annex I of the 2009/147/EC Birds Directive,
- Species listed in the IUCN Red List as NT, VU, EN or CR (*suggested by* BirdLife International, 2021);
- Species listed in the Prenj-Cvrsnica-Cabulja and Duvanjsko polje proposed Natura 2000 Dataforms;
- Species listed important for the IBA Duvanjsko polje

Target species

Target species include:

1. Common crane, *Grus grus*
2. Rock Partidge, *Alectoris graeca*
3. Northern goshawk, *Accipiter gentilis*
4. Sparrowhawk, *Accipiter nisus*
5. Short-toed snake eagle, *Circaetus gallicus*
6. Marsh harrier, *Circus aeruginosus*
7. Hen harrier, *Circus cyaneus*
8. Pallid harrier, *Circus macrourus*
9. Montagu's harrier, *Circus pygargus*
10. Long-legged buzzard, *Buteo rufinus*
11. European honey buzzard, *Pernis apivorus*
12. Greater spotted eagle, *Aquila clanga*
13. Golden eagle, *Aquila chrysaetos*
14. Red-footed falcon, *Falco vespertinus*
15. Merlin, *Falco columbarius*

Bats

No records on bat fauna were found for the Project Area of Influence during desktop survey.

The bat experts considered target bat species based on the species risk of collision with the wind turbines (Rodrigues et al. 2014)[34], and species the experts considered have a likeness of appearing in the Project AoI:

High Risk target species:

- Noctule *Nyctalus noctula*;
- Common Pipistrelle Bat *Pipistrellus pipistrellus*;
- Nathusius' Pipistrelle Bat *Pipistrellus nathusii*; and
- Soprano Pipistrelle *Pipistrellus pygmaeus*

Medium Risk target species:

[34] Rodrigues, L., Bach, L., Dubourg-Savage, M-J, Karapandža, B., Kova, D., Kervyn, T., Dekker, J., Kepel, A., Bach, P., Collins, J., Harbusch, C., Park, K., Micevski, B. &Minderman, J., 2015. Guidelines for consideration of bats in wind farm projects - Revision 2014.

- Serotine Bat *Eptesicus serotinus*; and
- European Free -Tailed Bat *Tadarida teniotis*

Field survey methodology

Flora, vegetation, and Habitats

Field survey for flora and habitats was conducted from March to August 2023. Flora and habitats exhibit stable characteristics over short periods, making seasonal research adequate and representative of current state and distribution. To establish the baseline condition within the Project AoI, a standardized and replicable transect approach was employed across various habitats along pre-determined routes. This approach involved quantifying or estimating the abundance and coverage of species within a 100-meter long and 5-meter wide transect. While plant species were primarily identified in situ, a portion of plant materials was collected and photographed for subsequent validation and confirmation. Habitat classification relies on expert identification during field surveys, coupled with validation aligning with the floristic composition and physical attributes of the habitat.

Fauna

Large and small mammals, invertebrates, amphibians, and reptiles

The planning and execution of the field survey were guided by the principles outlined in the "Good Practices for the Collection of Biodiversity Baseline Data[35]"document. During this survey, the team conducted an evaluation of the existing habitat conditions and visited the proposed wind turbine locations to assess the invertebrate and mammal populations. Throughout this process, they documented habitats and species through photography, and they meticulously recorded GPS coordinates for the identified species.

The fieldwork took place over a period spanning from May to August 2023. These surveys involved active sampling and the use of pan traps to capture insects. Additionally, vertebrates, amphibians, and reptiles were assessed through active microhabitat surveys, while small mammals were trapped using live animal traps. A field camera was also deployed to conduct a survey of large mammal species.

Birds

The overall methodology for the surveys is based on guidance for bird surveys methods for wind farms developed by Scottish National Heritage (2017) complemented by specialist knowledge of the site conditions and species. The field survey was done from April 2021 to June 2022.

There are two main broad survey types involved:

1) Distribution and Abundance Surveys. These are surveys to record numbers and distribution of breeding, wintering and migrant birds using the site. They will allow the evaluation of a site's importance and provide information to help quantify predicted impacts from disturbance and displacement.

2) Vantage Point (VP) Surveys. These surveys comprise a series of watches from a fixed location to quantify the flight activity of birds at a proposed development site, which provides data to estimate the collision risk.

The survey area and design adequately covered the entire development area, i.e. the largest possible layout, all the alternative layouts and ancillary structures and works. This includes access tracks;

[35]Gullison, R.E., J. Hardner, S. Anstee, M. Meyer. 2015. Good Practices for the Collection of Biodiversity Baseline Data. Prepared for the Multilateral Financing Institutions Biodiversity Working Group & Cross-Sector Biodiversity Initiative

borrow pits, electrical substations and grid connections. Therefore, the main breeding and wintering bird survey areas was at least 500 m beyond the development/planning application boundary. For access tracks and grid connections, the survey area was 500 m either side of the proposed limits of variation of the route.

Vantage point surveys

The survey methodologies used are based on national guidance Prakljacic et al. (2011) and international best practice (Scottish Natural Heritage, 2017). Vantage Point surveys are designed to quantify the level of flight activity and its distribution over the survey area. Five vantage point (VP) watches were conducted within the wind farm project site.

During the VP watches, details of all target species (i.e. those identified in scoping assessment as vulnerable to collision) seen or heard were recorded.

Bats

The field survey was done from February 2021 to November 2022. Manual bat detector surveys on the ground were conducted by transects based on Bat Conservation Trust guidelines[36]. Transects were performed on foot at an approximate speed of about 2 km/h. Every 100 meters, stops and recordings were made at a point of 3-5 minutes. Echolocation calls were continually recorded by a detector at a 45-degree angle to the direction of walk. A time expansion, full spectrum or frequency division detector was used for the recording, and the data was subsequently analysed to identify bat calls. Bat activity was recorded using a Manual bat detector (Pettersson D240X), which has heterodyne and frequency division with frequency range: 10-120 kHz (min.) and with a digital recorder.

Manual bat detector surveys on the ground were conducted by transects based on Bat Conservation Trust guidelines (Hundt, 2012).

Transects were performed on foot at an approximate speed of about 2 km/h. Every 100 meters, stops and recordings were made at a point of 3-5 minutes. Echolocation calls were continually recorded by a detector at a 45-degree angle to the direction of walk. A time expansion, full spectrum or frequency division detector was used for the recording, and the data was subsequently analysed to identify bat calls. Bat activity was recorded using a Manual bat detector (Pettersson D240X), which has heterodyne and frequency division with frequency range: 10-120 kHz (min.) and with a digital recorder.

One automated bat detector was installed on the ground at different locations. An automated bat detector (Ciel CDP 102 R3 box) was used.

Old dwellings and barn ruins surrounding the planned wind farm were examined for bat presence, but no bat species were found in the structures during June field visits. Potential bat roost sites were also surveyed, however, no caves or facilities suitable for roosting bats were identified. Additionally, the landscape within the planned wind farm area lacks a significant number of trees with cavities that could support roosting bats. Potential bat roosts within 500 meters of each turbine location were monitored using manual bat detectors to detect bats entering or leaving roosts. No active roosts were confirmed. It is important to note that bats are known to regularly commute long distances between roosts and feeding grounds. Therefore, even if bats do not regularly roost on the site, they may still

[36] Bat Surveys for Professional Ecologists, Good Practice Guidelines (4th edition)

commute across the area to reach supporting habitats nearby. Bat activity has been recorded on the site (see Table 19). This confirms that bats do use the area, at least transiently, as part of their commuting routes. Bats are included in the BMP for the Wind Farm Poklecani and appropriate mitigation measures are included for the species during all phases of the Project cycle.

Field Survey results

Habitats

Only one type of Natura 2000 habitat was recorded during field surveys: 95A0 - High oro-Mediterranean pine forests.

Flora

Based on field survey conducted in the broader research area, according to the categorization of the Red List of flora of the Federation of Bosnia and Herzegovina, a total of 8 species have been identified as endangered (Table 15), with 7 species identified within the Project AoI, outside the AoI species *Anacamptis pyramidalis* has been identified, which is also listed under the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention), specifically under Resolution No. 6, which includes plant species requiring special conservation measures for their habitats.

Table 15: Overview of flora species recorded during filed survey

Scientific name	Common name	Conservation status				Present in the Project AoI
		GL IUCN	RL FBIH	HD	BC	
Anacamptis pyramidalis	Pyramidal orchid	-	NT	-	Res 6.	No
Helleborus hercegovinus	-	-	VU	-		WT2, WT4, WT13, WT14, WT17, WT18, WT19
Helleborus multifidus	-	-	VU	-		WT14, WT17
Viola elegantula	-	-	LC	-		WT7, WT8, WT10, WT12
Pedicularis brachyodonta	-	-	VU	-		WT17, WT178
Pinus heldreichii	-	-	LC	-		WT1, WT5, WT6, WT7, WT9, ,WT15, WT17, WT18
Genista sylvestris Scop. subsp. *dalmatica*	-	-	LC	-		WT4
Scabiosa silenifolia	-	-	LC	-		WT17

Large and small mammals

During field surveys, no species of small or large mammals were recorded. The expert did not note the existence of traces or shelters for the mentioned group.

Invertebrates

During filed surveys 17 invertebrate species were recorded, of which 2 species are of conservation concern (Southern festoon - *zerinthia polyxena* and Apollo - *parnasius appolo*) (*Table 16*).

Table 16: Overview of invertebrate fauna recorded during filed survey in the Project AoI

Scientific name	Common name	Conservation status				Present in the Project AoI
		GL IUCN	RL FBIH	HD	BC	
Lepidoptera						
Colias alfacariensis	Berger's clouded yellow	LC	LC	-	-	WT8
Colias croceus	Clouded yellow	LC	LC	-	-	WT7, WT10

Scientific name	Common name	Conservation status				Present in the Project AoI
		GL IUCN	RL FBIH	HD	BC	
Erebia melas	Black ringlet	LC	LC	-	-	WT15
Hyponephele lycaon	Dusky Meadow Brown	LC	LC	-	-	WT8
Lasiommata maera	Large wall brown	LC	LC	-	-	WT7
Lasiommata megera	Wall brown	LC	LC	-	-	WT10
Lysandra coridon	Chalkhill blue	LC	LC	-	-	WT10
Parnasius appolo	Apollo	-	VU	IV		WT8
Vanessa cardui	Painted lady	LC	LC	-	-	WT8, 10
Zerynthia polyxena	Southern festoon	-	NT	IV		WT7
Amata phegea		-	-	-	-	WT3, 5
Papilio machaon		LC	-	-	-	WT9
Coleoptera						
Geotrupes vernalis	Spring dumbledor	-	NT	-		WT10, 15
Geotrupes alpinus	/	-	LC	-	-	WT9, 10, 11,
Melolontha melolontha	Cockchafer	-	LC	-	-	WT5, 10, 15
Hymenoptera						
Formica pratensis	black-backed meadow ant	-	-	-	-	WT5
Manica rubida	Great European Fire ant	-	-	-	-	WT8, 10
Bombus pascuorum	Common carder bee	-	-	-	-	WT9, 10, 11, 14

Amphibians

No species of amphibians has been recorded in the Project AoI during field surveys, which is not surprising considering that the Project AoI lacks water bodies that would support the life cycle or would be favourable conditions for the survival of this group.

Reptiles

Two species of reptiles were recorded during filed surveys, one species is of conservation concern (Sand lizard – lacerta agilis, the species is listed on the Annex IV of the Habitats Directive) (Table 17)

Table 17: Overview of reptile fauna recorded during the filed survey in the Project AoI

Scientific name	Common name	Conservation status				Present on Project Area of Influence
		GL IUCN	RL FBIH	HD	BC	
Vipera berus	Common European viper	LC	LC	-	-	Yes, WT7
Lacerta agilis	Sand lizard	LC	LC	IV	-	Yes, WT9

Birds

Table 18 lists all bird species recorded during the one-year field survey.

Table 18: Overview of bird fauna recorded during the field surveys in the Project AoI

Scientific name	Common name	Conservation status		
		GL IUCN	BD[37]	BC
Columba livia	Rock Pigeon	LC	Annex II, A	Annex III

[37] BD – Bird Directive

Scientific name	Common name	Conservation status		
		GL IUCN	BD[37]	BC
Columba palumbus	Common Wood-pigeon	LC	Annex II, A	-[38]
Streptopelia turtur	European Turtle-dove	VU	Annex II, B	Annex III
Apus apus	Common Swift	LC	+[39]	Annex III
Merops apiaster	European Bee-eater	LC	+	Annex II
Upupa epops	Eurasian Hoopoe	LC	+	Annex II
Jynx torquilla	Eurasian Wryneck	LC	+	Annex II
Dendrocopos major	Great Spotted Woodpecker	LC	+	Annex II
Dryocopus martius	Black Woodpecker	LC	Annex I	Annex II
Picus viridis	Eurasian Green Woodpecker	LC	+	Annex II
Lullula arborea	Wood Lark	LC	Annex I	Annex III
Alauda arvensis	Eurasian Skylark	LC	Annex II	Annex III
Hirundo rupestris	Eurasian Crag-martin	LC	+	Annex II
Hirundo rustica	Barn Swallow	LC	+	Annex II
Motacilla alba	White Wagtail	LC	+	Annex II
Anthus trivialis	Tree Pipit	LC	+	Annex II
Anthus pratensis	Meadow Pipit	LC	+	Annex II
Anthus spinoletta	Water Pipit	LC	+	Annex II
Lanius collurio	Red-backed Shrike	LC	Annex I	Annex II
Lanius minor	Lesser Grey Shrike	LC	Annex I	Annex II
Troglodytes troglodytes	Winter Wren	LC	+	Annex II
Prunella modularis	Hedge Accentor	LC	+	Annex II
Monticola saxatilis	Rufous-tailed Rock-thrush	LC	+	Annex II
Turdus merula	Eurasian Blackbird	LC	Annex II	Annex III
Turdus pilaris	Fieldfare	LC	Annex II	Annex III
Turdus philomelos	Song Thrush	LC	Annex II	Annex III
Turdus viscivorus	Mistle Thrush	LC	Annex II	Annex III
Erithacus rubecula	European Robin	LC	+	Annex II
Phoenicurus ochruros	Black Redstart	LC	+	Annex II
Saxicola rubetra	Whinchat	LC	+	Annex II
Oenanthe oenanthe	Northern Wheatear	LC	+	Annex II
Regulus regulus	Goldcrest	LC	+	Annex II
Regulus ignicapillus	Firecrest	LC	+	Annex II
Phylloscopus trochilus	Willow Warbler	LC	+	Annex II
Phylloscopus collybita	Common Chiffchaff	LC	+	Annex II
Sylvia atricapilla	Blackcap	LC	+	Annex II
Sylvia borin	Garden Warbler	LC	+	Annex II
Sylvia communis	Common Whitethroat	LC	+	Annex II
Sylvia curruca	Lesser Whitethroat	LC	+	Annex II
Muscicapa striata	Spotted Flycatcher	LC	+	Annex II
Ficedula albicollis	Collared Flycatcher	LC	Annex I	Annex II

[38] Isn't protected by convention or directive

[39] Bird species not mentioned in the annexes but are covered by the general protection regime provided by Article 1 of the Directive to all species of birds naturally occurring in the wild state in the European territory of the Member States to which the Treaty applies.

Scientific name	Common name	Conservation status		
		GL IUCN	BD[37]	BC
Parus palustris	Marsh Tit	LC	-	Annex II
Parus lugubris	Sombre Tit	LC	-	Annex II
Parus ater	Coal Tit	LC	-	Annex II
Parus major	Great Tit	LC	+	Annex II
Parus caeruleus	Blue Tit	LC	-	Annex II
Sitta europaea	Wood Nuthatch	LC	+	Annex II
Certhia familiaris	Eurasian Tree-creeper	LC	+	Annex II
Emberiza citrinella	Yellowhammer	LC	+	Annex II
Emberiza cia	Rock Bunting	LC	+	Annex II
Miliaria calandra	Corn Bunting	LC	+	Annex II
Fringilla coelebs	Chaffinch	LC	+	Annex III
Fringilla montifringilla	Brambling	LC	+	Annex III
Serinus serinus	European Serin	LC	+	Annex II
Carduelis chloris	European Greenfinch	LC	+	Annex II
Carduelis spinus	Eurasian Siskin	LC	+	Annex II
Carduelis carduelis	European Goldfinch	LC	+	Annex II
Loxia curvirostra	Red Crossbill	LC	+	Annex II
Coccothraustes coccothraustes	Hawfinch	LC	+	Annex II
Passer domesticus	House Sparrow	LC	+	-
Passer montanus	Eurasian Tree Sparrow	LC	+	Annex III
Sturnus vulgaris	Common Starling	LC	Annex II	-
Oriolus oriolus	Eurasian Golden-oriole	LC	+	Annex II
Garrulus glandarius	Eurasian Jay	LC	Annex II	-
Pica pica	Black-billed Magpie	LC	Annex II	-
Corvus monedula	Eurasian Jackdaw	LC	Annex II	-
Corvus corone	Carrion Crow	LC	Annex II	-
Corvus corax	Common Raven	LC	+	Annex III
Alectoris graeca	Rock Partridge	NT	Annex I, II	Annex III
Accipiter gentilis	Goshawk	LC	+	Annex II
Buteo buteo	Buzzard	LC	+	Annex II
Circaetus gallicus	Short-toed Eagle	LC	Annex I	Annex II
Circus aeruginosus	Marsh Harrier	LC	Annex I	Annex II
Falco subbuteo	Hobby	LC	+	Annex II
Falco tinnunculus	Kestrel	LC	+	Annex II

Bats field survey results

Table 19 lists all the bat species registered during the one-year field survey.

Table 19: Overview of bat fauna recorded during field survey in the Project AoI

Scientific name	Common name	Status		
		GL IUCN	BC	HD
Pipistrellus pipistrellus	Common pipistrelle	LC	-	Annex IV
Rhinolophus euryale	Mediterranean horseshoe bat	VU	Res. 6.	Annex II, IV

Scientific name	Common name	Status		
		GL IUCN	BC	HD
Myotis myotis	Greater mouse-eared bat	LC	Res. 6.	Annex II, IV
Rhinolophus blasii	Blasius' horseshoe bat	VU	Res. 6.	Annex II, IV
Vespertilio murinus	Parti-coloured bat	LC	-	Annex IV
Plecotus austriacus	Grey long-eared bat	LC	-	Annex IV
Myotis blythii	Lesser mouse-eared bat	NT	Res. 6.	Annex II, IV
Miniopterus schreibersii	Schreiber's Bat	NT	Res. 6.	Annex II, IV

Natura 2000 habitats in the Project AoI

During desktop surveys and field surveys, priority habitats within the Project Area of Influence were not recorded. By analyzing literature and field data, it has been observed that within the Project Area of Influence (AoI), there is one fragmented Natura 2000 habitat. An overview of Natura 2000 habitats in the broader area is provided in Table 20**Error! Reference source not found.**.

Table 20: Overview of the Natura 2000 habitats in the wider area

Code	Habitat name	Present in the Project Area of Influence	Annex I habitat
6170	Alpine and subalpine calcareous grasslands	No	Yes
62A0	Eastern sub-Mediterranean dry grasslands (Scorzoneratalia villosae)	No	Yes
8120	Calcareous and calcshist screes of the montane to alpine levels (Thlaspietea rotundifolii)	No	Yes
8210	Calcareous rocky slopes with chasmophytic vegetation	No	Yes
8140	Eastern Mediterranean screes	No	Yes
8310	Caves not open to the public	No	Yes
95A0	High oro-Mediterranean pine forests	Yes; wind generator 18, 19, 20	Yes

The Natura 2000 habitat 95A0 - High oro-Mediterranean pine forests, that is present both in the Project Area of Influence and the proposed Natura 2000 site Prenj-Cvrsnica-Cabulja, displays distinct characteristics. As shown in **Error! Reference source not found.** the extent of this habitat expands from t he turbines, notably increasing in a northern direction beyond the 300 m mark situated between the two wind turbines (wind turbines 12 and 13). Importantly, it should be emphasized that the habitat 95A0 is not confined to this specific area but is widely distributed across several mountain massifs, encompassing Prenj, Cvrsnica, Cabulja, Velež, Orjen, Hranisava, and others. Munika (*Pinus heldreichii*) as the main edifying species of the given habitat is marked as LC IUCN; LC on the Red List of Flora of FBiH.

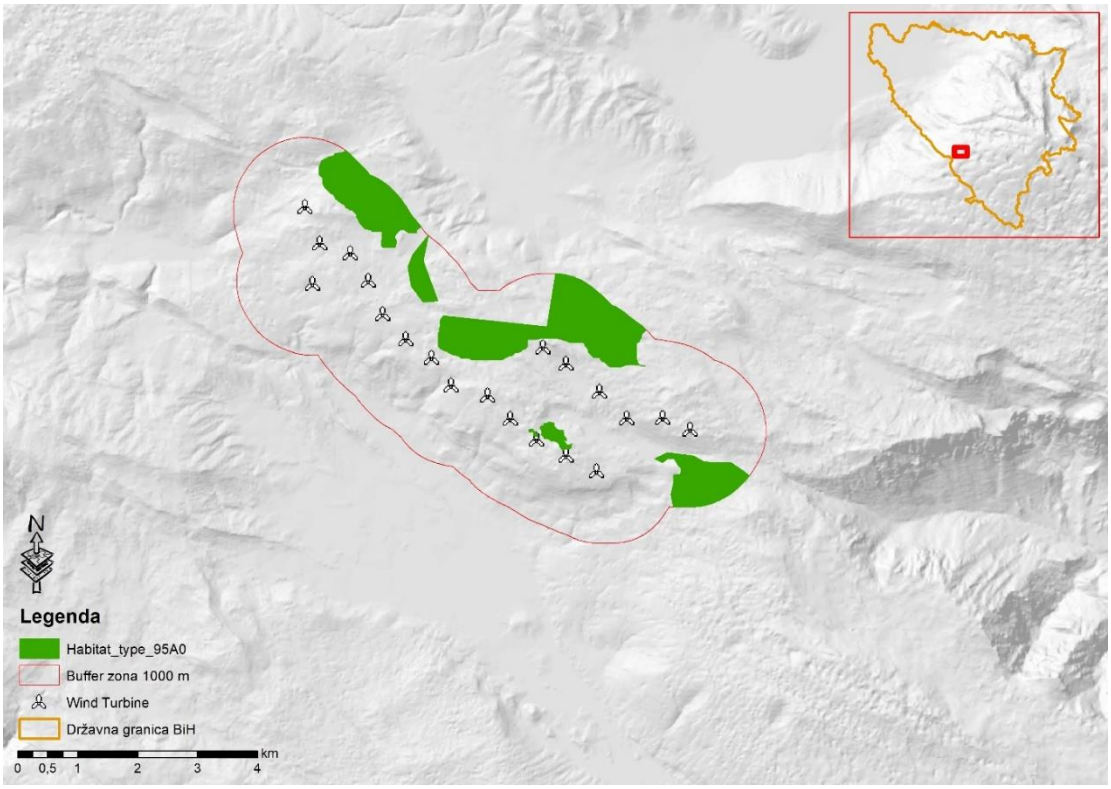


Figure 6: Habitat 95A0 distribution within the Project Area of Influence

Duvanjsko polje (BA8300022)

Site identification			
Type C	**Code** BA8300022	**Proposed name**	Duvanjsko polje
Site location			
Longitude 17.24264113	**Latitude** 43.6472971	**Area (ha)** 7464.75058312	**Sitelenght (km)** 66.79903673

The proposed Natura 2000 site Duvanjsko Polje (BA8300022) is located 7 km away from the Project Area of Influence, and the Project is not expected to have a direct or cumulative impact on the proposed site. Habitat and species of conservation concern that are important for the proposal of Duvanjsko polje are considered in the assessment.

No Natura 2000 habitats are distributed where the road Crvenica-Rakitno is planned to be positioned. In addition, the planned road is at approximately 2.4 kilometres distance from the proposed Natura 2000 site Duvanjsko polje. Therefore, it has been evaluated and determined to have no impact on the proposed site including species and habitats of conservation concern, as illustrated in Figure 4

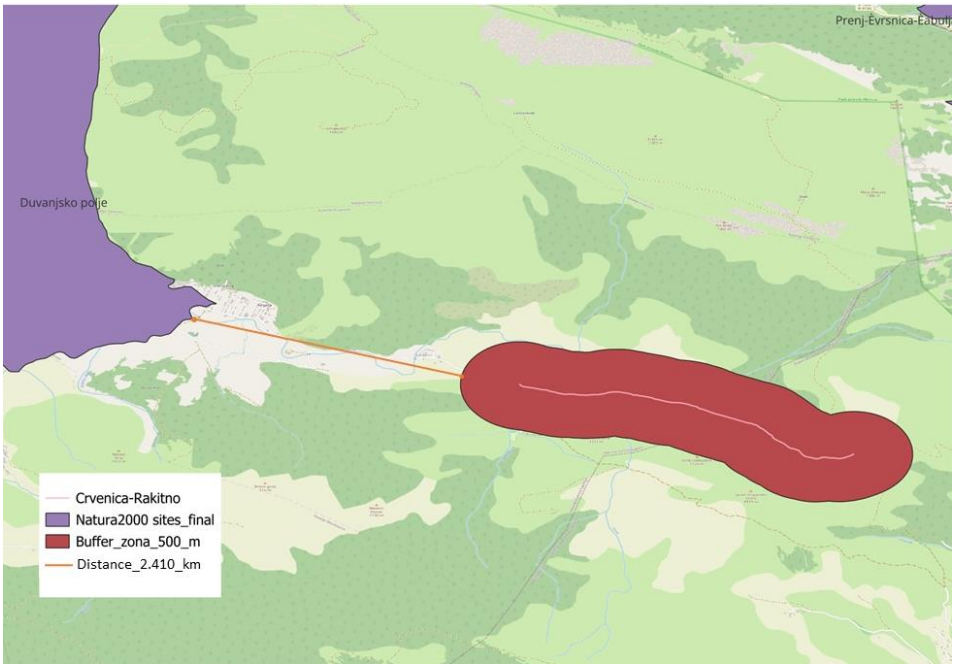


Figure 7: Additional road Crvenica-Rakitno and its distance in relation to the proposed Natura 2000 site Duvanjsko polje

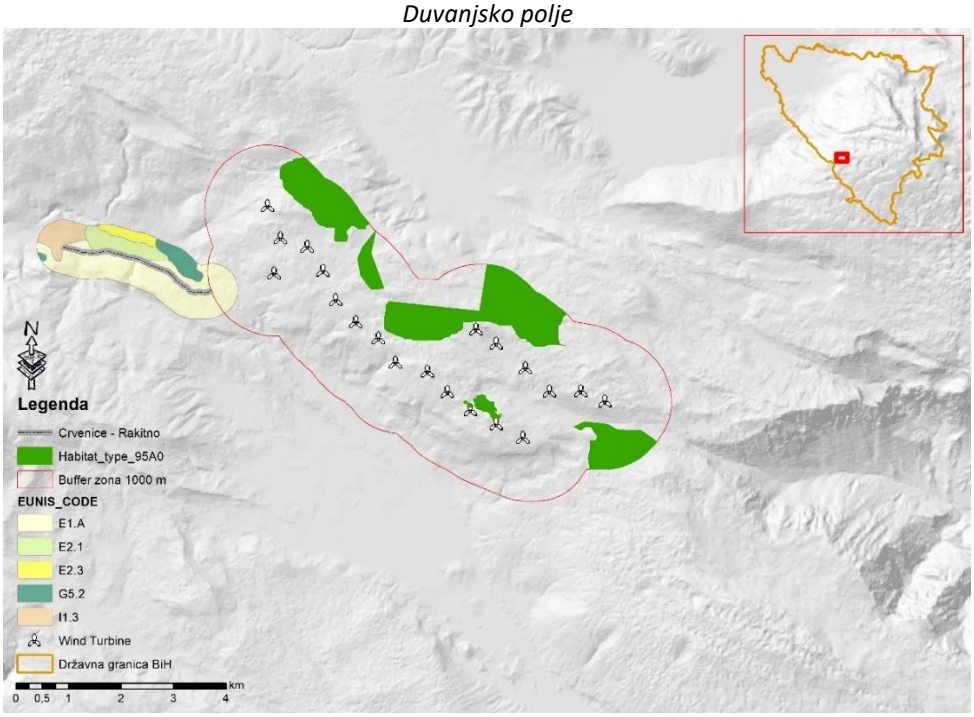


Figure 8: Crvenica-Rakitno road position in relation to the Project site

7 Species of conservation concern

For further analysis against the EIB criteria for Critical Habitat and High Value Biodiversity, species of importance are brought forward in Table 21. The selection process involves data gathered from both desktop surveys and field surveys. Species of importance, defined as the species that trigger the criteria

outlined in Standard 3 on Biodiversity and Ecosystems, have been singled out for further analysis, were the conservation status that could trigger the CH or HVB is listed for each group of species.

The conservation status that defines the “species of conservation concern” encompass species falling under different Directives, including those identified as Endangered (EN), Vulnerable (VU), or Critically Endangered (CR) according to the International Union for Conservation of Nature (IUCN) global red list. Additionally, species listed in Annex I, II, and IV of the Habitats Directive, as well as those specified in Annex I of the Birds Directive, are also considered due to the requirements of the Directives on which they are listed.

Table 21: List of habitats, flora and fauna species brought for further analysis

Scientific name	Common name	Conservation status			Confirmed during field survey in the Project AoI	Comment
		IUCN	FBIH	Habitat/Birds Directive		
Habitats						
9530*	(Sub-) Mediterranean pine forests with endemic black pines	-	-	HD Annex 1, **priority habitat*	No; Literature data *Natura 2000 data form*	Habitat will not be assessed against the EIB criteria, due to being outside of the Project AoI. No direct or negative impact is expected.
91E0*	Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion*, *Alnion incanae*, *Salicion albae*)	-	-	HD Annex 1, **priority habitat*	No; Literature data *Natura 2000 data form*	Habitat will not be assessed against the EIB criteria, due to being outside of the Project AoI. No direct or negative impact is expected.
91E0	Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion*, *Alnion incanae*, *Salicion albae*)	-	-	HD Annex 1	No; Literature data *Natura 2000 data form*	Habitat will not be assessed against the EIB criteria, due to being outside of the Project AoI. No direct or negative impact is expected.
62A0	Eastern sub-Mediterranean dry grasslands (*Scorzoneratalia villosae*)	-	-	HD Annex 1	No; Literature data *Natura 2000 data form*	Habitat will not be assessed against the EIB criteria, due to being outside of the Project AoI. No direct or negative impact is expected.
91K0	Illyrian Fagus sylvatica forests (*Aremonio-Fagion*)	-	-	HD Annex 1	No; Literature data *Natura 2000 data form*	Habitat will not be assessed against the EIB criteria, due to being outside of the Project AoI. No direct or negative impact is expected.
91R0	Dinaric dolomite Scots pine forests (*Genisto januensis-Pinetum*)	-	-	HD Annex 1	No; Literature data *Natura 2000 data form*	Habitat will not be assessed against the EIB criteria, due to being outside of the Project AoI. No direct or negative impact is expected.
95A0	High oro-Mediterranean pine forests	-	-	HD Annex 1	Yes	Habitat present in the Project AoI. The habitat will be included in further analysis and assessment against the EIB criteria.

Scientific name	Common name	Conservation status			Confirmed during field survey in the Project AoI	Comment
		IUCN	FBIH	Habitat/Birds Directive		
3180	Turloughs	-	-	HD Annex 1	No; Literature data *Natura 2000 data form*	Habitat will not be assessed against the EIB criteria, due to being outside of the Project AoI. No direct or negative impact is expected.
3240	Alpine rivers and their ligneous vegetation with *Salix elaeagnos*	-	-	HD Annex 1	No; Literature data *Natura 2000 data form*	Habitat will not be assessed against the EIB criteria, due to being outside of the Project AoI. No direct or negative impact is expected.
4060	Alpine and Boreal heaths	-	-	HD Annex 1	No; Literature data *Natura 2000 data form*	Habitat will not be assessed against the EIB criteria, due to being outside of the Project AoI. No direct or negative impact is expected.
4070	Bushes with *Pinus mugo* and *Rhododendron hirsutum* (*Mugo Rhododendretum hirsuti*)	-	-	HD Annex 1	No; Literature data *Natura 2000 data form*	Habitat will not be assessed against the EIB criteria, due to being outside of the Project AoI. No direct or negative impact is expected.
4080	Sub-Arctic *Salix* spp. Scrub	-	-	HD Annex 1	No; Literature data *Natura 2000 data form*	Habitat will not be assessed against the EIB criteria, due to being outside of the Project AoI. No direct or negative impact is expected.
5130	*Juniperus communis* formations on heaths or calcareous grasslands	-	-	HD Annex 1	No; Literature data *Natura 2000 data form*	Habitat will not be assessed against the EIB criteria, due to being outside of the Project AoI. No direct or negative impact is expected.
6170	Alpine and subalpine calcareous grasslands	-	-	HD Annex 1	No; Literature data *Natura 2000 data form*	Habitat will not be assessed against the EIB criteria, due to being outside of the Project AoI. No direct or negative impact is expected.
6430	Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels	-	-	HD Annex 1	No; Literature data *Natura 2000 data form*	Habitat will not be assessed against the EIB criteria, due to being outside of the Project AoI. No direct or negative impact is expected.

Scientific name	Common name	Conservation status			Confirmed during field survey in the Project AoI	Comment
		IUCN	FBIH	Habitat/Birds Directive		
6540	Sub-Mediterranean grasslands of the *Molinio-Hordeion secalini*	-	-	HD Annex 1	No; Literature data *Natura 2000 data form*	Habitat will not be assessed against the EIB criteria, due to being outside of the Project AoI. No direct or negative impact is expected.
8120	Calcareous and calcshist screes of the montane to alpine levels (*Thlaspietea rotundifolii*)	-	-	HD Annex 1	No; Literature data *Natura 2000 data form*	Habitat will not be assessed against the EIB criteria, due to being outside of the Project AoI. No direct or negative impact is expected.
8140	Eastern Mediterranean screes	-	-	HD Annex 1	No; Literature data *Natura 2000 data form*	Habitat will not be assessed against the EIB criteria, due to being outside of the Project AoI. No direct or negative impact is expected.
8210	Calcareous rocky slopes with chasmophytic vegetation	-	-	HD Annex 1	No; Literature data *Natura 2000 data form*	Habitat will not be assessed against the EIB criteria, due to being outside of the Project AoI. No direct or negative impact is expected.
8310	Caves not open to the public	-	-	HD Annex 1	No; Literature data *Natura 2000 data form*	Habitat will not be assessed against the EIB criteria, due to being outside of the Project AoI. No direct or negative impact is expected.
9140	Medio-European subalpine beech woods with *Acer* and *Rumex arifolius*	-	-	HD Annex 1	No; Literature data *Natura 2000 data form*	Habitat will not be assessed against the EIB criteria, due to being outside of the Project AoI. No direct or negative impact is expected.
9180	*Tilio-Acerion* forests of slopes, screes, and ravines	-	-	HD Annex 1	No; Literature data *Natura 2000 data form*	Habitat will not be assessed against the EIB criteria, due to being outside of the Project AoI. No direct or negative impact is expected.
9250	*Quercus trojana* woods	-	-	HD Annex 1	No; Literature data *Natura 2000 data form*	Habitat will not be assessed against the EIB criteria, due to being outside of the Project AoI. No direct or negative impact is expected.
Flora						

Scientific name	Common name	Conservation status			Confirmed during field survey in the Project AoI	Comment
		IUCN	FBIH	Habitat/Birds Directive		
Aquilegia kitaibelii	-	DD	EN	-	No; Literature data *Natura 2000 data form*	The species will not be assessed against the criteria since it was not confirmed during field survey. No direct or negative impact is expected.
Arabis scopoliana	-	DD	VU	-	No; Literature data *Natura 2000 data form*	The species will not be assessed against the criteria since it was not confirmed during field survey. No direct or negative impact is expected.
Botrychium simplex	The little grapefern	-	-	-	No; Literature data *Natura 2000 data form*	The species will not be assessed against the criteria since it was not confirmed during field survey. No direct or negative impact is expected.
Campanula serrata	Campanula napuligera	LC	-	-	No; Literature data *Natura 2000 data form*	The species will not be assessed against the criteria since it was not confirmed during field survey. No direct or negative impact is expected.
Cerastium dinaricum	-	VU	EN	-	No; Literature data *Natura 2000 data form*	The species will not be assessed against the criteria since it was not confirmed during field survey. No direct or negative impact is expected.
Cypripedium calceolus	Lady's-slipper	NT	CR	Annex II, IV	No; Literature data *Natura 2000 data form*	The species will not be assessed against the criteria since it was not confirmed during field survey. No direct or negative impact is expected.
Eleocharis carniolica	-	LC	VU	-	No; Literature data *Natura 2000 data form*	The species will not be assessed against the criteria since it was not confirmed during field survey. No direct or negative impact is expected.
Eryngium alpinum	Queen-of-the-alps	LC	VU	Annex II, IV	No; Literature data *Natura 2000 data form*	The species will not be assessed against the criteria since it was not confirmed during field survey. No direct or negative impact is expected.
Helleborus hercegovinus	-	-	VU	-	No	The species will not be assessed against the criteria since it was not confirmed during field survey. No direct or negative impact is expected.
Helleborus multifidus	-	-	VU	-	No	The species will not be assessed against the criteria since it was not confirmed during field survey. No direct or negative impact is expected.

Scientific name	Common name	Conservation status			Confirmed during field survey in the Project AoI	Comment
		IUCN	FBIH	Habitat/Birds Directive		
Pedicularis brachyodonta	-	-	VU	-	No	The species will not be assessed against the criteria since it was not confirmed during field survey. No direct or negative impact is expected.
Pulsatilla vulgaris ssp. Grandis	Greater Pasque Flower	NT	-	-	No; Literature data *Natura 2000 data form*	The species will not be assessed against the criteria since it was not confirmed during field survey. No direct or negative impact is expected.
Scilla litardierei	Dalmatian scilla	NT	-	-	No; Literature data *Natura 2000 data form*	The species will not be assessed against the criteria since it was not confirmed during field survey. No direct or negative impact is expected.
Fauna						
Mammals						
Apodemus sylvaticus	Filed mouse	LC	LC	-	No; Literature data	The species will not be assessed against the criteria since it was not confirmed during field survey. No direct or negative impact is expected.
Canis lupus	Grey wolf	LC	EN	Annex II, IV	No; Literature data	The species will not be assessed against the criteria since it was not confirmed during field survey. No direct or negative impact is expected.
Capreolus capreolus	Roe deer	LC	LC	-	No; Literature data	The species will not be assessed against the criteria since it was not confirmed during field survey. No direct or negative impact is expected.
Dinaromys bogdanovi	Balkan snow vole	VU	VU	Annex II, IV	No; Literature data *Natura 2000 data form*	The species will not be assessed against the criteria since it was not confirmed during field survey. No direct or negative impact is expected.
Lepus europeus	European hare	LC	LC	-	No; Literature data	The species will not be assessed against the criteria since it was not confirmed during field survey. No direct or negative impact is expected.

Scientific name	Common name	Conservation status			Confirmed during field survey in the Project AoI	Comment
		IUCN	FBIH	Habitat/Birds Directive		
Lutra lutra	The Eurasian otter	NT	EN	Annex II, IV	No; Literature data *Natura 2000 data form*	The *Eurasian otter* will be excluded from further assessment, since the life cycle of the species depends on water. There is no likeliness of the presence of the species thorough the Project activities. No direct or negative impact is expected.
Lynx lynx	Eurasian lynx	LC	-	Annex II, IV	No; Literature data *Natura 2000 data form*	The species will not be assessed against the criteria since it was not confirmed during field survey. No direct or negative impact is expected.
Rupicapra rupicapra balcanica	Balkan Chamoix	LC	EN	Annex II, IV	No; Literature data *Natura 2000 data form*	The species will not be assessed against the criteria since it was not confirmed during field survey. No direct or negative impact is expected.
Ursus arctos	Brown bear	LC	VU	Annex II, IV	No; Literature data	The species will not be assessed against the criteria since it was not confirmed during field survey. No direct or negative impact is expected.
Vulpes vulpes	Fox	LC	LC	-	No; Literature data	The species will not be assessed against the criteria since it was not confirmed during field survey. No direct or negative impact is expected.
Amphibians						
Salamandra atra	Alpine salamander	LC	VU	Annex IV	No; Literature data	Amphibians will be excluded from further assessment since the Project AoI does not have water bodies to support the life cycle of the group. There is no likeliness of the species being present in the project AoI.
Bombina variegata	Yellow-bellied toad	LC	NT	Annex II, IV	No; Literature data *Natura 2000 data form*	
Pseudepidalea viridis	European green toad	LC	LC	Annex IV	No; Literature data	
Hyla arborea	European tree frog	LC	LC	Annex IV	No; Literature data	
Rana dalmatina	Agile frog	LC	LC	Annex IV	No; Literature data	
Rana graeca	Greek stream frog	LC	NT	Annex IV	No; Literature data	
Rana temporaria	Common frog	LC	NT	Annex V	No; Literature data	

Scientific name	Common name	Conservation status			Confirmed during field survey in the Project AoI	Comment
		IUCN	FBIH	Habitat/Birds Directive		
Pelophylax ridibundus	Marsh frog	LC	LC	-	No; Literature data	
Bufo bufo	Common toad	LC	LC	-	No; Literature data	
Salamandra salamandra	Fire salamander	VU	LC	-	No; Literature data	
Lissotriton vulgaris	Smooth newt	LC	VU	-	No; Literature data	
Reptiles						
Coluber najadum	Dahl's whip snake	LC	LC	HD Annex IV	No; Literature data	The species will not be assessed against the criteria since it was not confirmed during field survey. No direct or negative impact is expected.
Coronella austriaca	Smooth snake	LC	LC	HD Annex IV	No; Literature data	The *Smooth snake* will be excluded from further assessment, since the species life cycle is dependent on water bodies. Due to lack of water bodies in the Project AoI there is no likeliness of the species being present in the project AoI.
Lacerta agilis	Sand lizard	LC	LC	HD Annex IV	Yes, WT9	The species will be assessed against the criteria since it was recorded during field surveys.
Natrix natrix	Grass snake	LC	LC	-	No; Literature data	The species will not be assessed against the criteria since it was not confirmed during field survey. No direct or negative impact is expected.
Natrix tesselata	Dice snake	LC	LC	HD Annex IV	No; Literature data	The *Dice snake* will be excluded from further assessment, since the species life cycle is dependent on water bodies. Due to lack of water bodies in the Project AoI there is no likeliness of the species being present in the project AoI.
Platyceps najadum	Dahl's whip snake	LC	LC	HD Annex IV	No; Literature data	The species will not be assessed against the criteria since it was not confirmed during field survey. No direct or negative impact is expected.

Scientific name	Common name	Conservation status			Confirmed during field survey in the Project AoI	Comment
		IUCN	FBIH	Habitat/Birds Directive		
Testudo hermanni	Western Hermann's tortoise	NT	-	HD Annex II, IV	No; Literature data	The species will not be assessed against the criteria since it was not confirmed during field survey. No direct or negative impact is expected.
Vipera ammodytes	Horned Viper	LC	LC	HD Annex IV	No; Literature data	The species will not be assessed against the criteria since it was not confirmed during field survey. No direct or negative impact is expected.
Vipera berus	Common European viper	LC	LC	-	Yes, WT7	The species will be assessed against the criteria since it was recorded during field surveys.
Vipera ursinii	Meadow viper	VU	EN	HD Annex II, IV	No; Literature data	The species will not be assessed against the criteria since it was not confirmed during field survey. No direct or negative impact is expected.
Zamenis longissimus	Aesculapian snake	LC	LC	IV	No; Literature data	The species will not be assessed against the criteria since it was not confirmed during field survey. No direct or negative impact is expected.
Zamenis situla	European ratsnake	LC	VU	-	No; Literature data	The species will not be assessed against the criteria since it was not confirmed during field survey. No direct or negative impact is expected.
Ichthyofauna						
Salmo marmoratus	Marbled trout				No; Literature data *Natura 2000 data form*	Ichthyofauna will be excluded from further assessment since the Project AoI does not have water bodies to support the life cycle of the group. There is no likeliness of the species being present in the project AoI.
Chondrostoma phoxinus	The minnow-nase				No; Literature data *Natura 2000 data form*	
Aulopyge huegelii	The Dalmatian barbelgudgeon				No; Literature data *Natura 2000 data form*	
Cottus gobio	European bullhead				No; Literature data *Natura 2000 data form*	
Pomatoschistus canestrinii	Canestrini's goby				No; Literature data *Natura 2000 data form*	
Salmothymus otusirostris	-				No; Literature data *Natura 2000 data form*	

Scientific name	Common name	Conservation status			Confirmed during field survey in the Project AoI	Comment
		IUCN	FBIH	Habitat/Birds Directive		
Squalius svallize	-				No; Literature data *Natura 2000 data form*	
Birds						
Accipiter gentilis	Goshawk	LC	-	-	Yes	The species will be assessed against the criteria, since it was recorded during field surveys.
Aegolius funereus	Boreal owl	LC	EN	BD Annex I	No; Literature data *Natura 2000 data form*	The species will not be assessed against the criteria since it was not confirmed during field survey. No direct or negative impact is expected.
Alauda arvensis	Eurasian Skylark	LC	LC	BD Annex II	Yes	The species will be assessed against the criteria, since it was recorded during field surveys.
Alectoris graeca	Rock Partrige	NT	DD	BD Annex I	Yes	The species will be assessed against the criteria, since it was recorded during field surveys.
Anthus campestris	Tawny Pipit	LC	NT	BD Annex I	No; Literature data *Natura 2000 data form*	The species will not be assessed against the criteria since it was not confirmed during field survey. No direct or negative impact is expected.
Anthus pratensis	Meadow Pipit	LC	LC	-	Yes	The species will be assessed against the criteria, since it was recorded during field surveys.
Anthus spinoletta	Water Pipit	LC	-	-	Yes	The species will be assessed against the criteria, since it was recorded during field surveys.
Anthus trivialis	Tree Pipit	LC		-	Yes	The species will be assessed against the criteria, since it was recorded during field surveys.
Apus apus	Common Swift	LC		-	Yes	The species will be assessed against the criteria, since it was recorded during field surveys.
Aquila chrysaetos	Golden Eagle	LC	EN	BD Annex I	No; Literature data *Natura 2000 data form*	The species will not be assessed against the criteria since it was not confirmed during field survey. No direct or negative impact is expected.
Aythya nyroca	Ferruginous duck	NT	EN	BD Annex I	No; Literature data *Natura 2000 data form*	The species will not be assessed against the criteria since it was not confirmed during field survey. No direct or negative impact is expected.

Scientific name	Common name	Conservation status			Confirmed during field survey in the Project AoI	Comment
		IUCN	FBIH	Habitat/Birds Directive		
Bonasa bonasia	Hazel Grouse	LC	LC	BD Annex I	No; Literature data *Natura 2000 data form*	The species will not be assessed against the criteria since it was not confirmed during field survey. No direct or negative impact is expected.
Botaurus stellaris	Eurasian bittern	LC	EN	BD Annex I	No; Literature data *Natura 2000 data form*	The species will not be assessed against the criteria since it was not confirmed during field survey. No direct or negative impact is expected.
Bubo bubo	Eagle Owl	LC	VU	BD Annex I	Yes	The species will be assessed against the criteria, since it was recorded during field surveys.
Buteo buteo	Buzzard	LC	LC	-	Yes	The species will be assessed against the criteria, since it was recorded during field surveys.
Buteo rufinus	Long-legged buzzard	LC	EN	BD Annex I	No; Literature data *Natura 2000 data form*	The species will not be assessed against the criteria since it was not confirmed during field survey. No direct or negative impact is expected.
Caprimulgus europaeus	European nightjar	LC	NT	BD Annex I	No; Literature data *Natura 2000 data form*	The species will not be assessed against the criteria since it was not confirmed during field survey. No direct or negative impact is expected.
Carduelis carduelis	European Goldfinch	LC	LC	-	Yes	The species will be assessed against the criteria, since it was recorded during field surveys.
Carduelis chloris	European Greenfinch	LC	LC	-	Yes	The species will be assessed against the criteria, since it was recorded during field surveys.
Carduelis spinus	Eurasian Siskin	LC	LC	-	Yes	The species will be assessed against the criteria, since it was recorded during field surveys.
Certhia familiaris	Eurasian Tree-creeper	LC	LC	-	Yes	The species will be assessed against the criteria, since it was recorded during field surveys.
Ciconia ciconia	White stork	LC	EN	BD Annex I	No; Literature data *Natura 2000 data form*	The species will not be assessed against the criteria since it was not confirmed during field survey. No direct or negative impact is expected.
Ciconia nigra	Black stork	LC	DD	BD Annex I	No; Literature data *Natura 2000 data form*	The species will not be assessed against the criteria since it was not confirmed during field survey. No direct or negative impact is expected.

Scientific name	Common name	Conservation status			Confirmed during field survey in the Project AoI	Comment
		IUCN	FBIH	Habitat/Birds Directive		
Circaetus gallicus	Short-toed Snake Eagle	LC	LC	BD Annex I	Yes	The species will be assessed against the criteria, since it was recorded during field surveys.
Circus aeruginosus	Marsh Harrier	LC	VU	BD Annex I	Yes	The species will be assessed against the criteria, since it was recorded during field surveys.
Circus cyaneus	Hen harrier	LC	-	BD Annex I	No; Literature data *Natura 2000 data form*	The species will not be assessed against the criteria since it was not confirmed during field survey. No direct or negative impact is expected.
Circus macrourus	Pallid harrier	NT	-	BD Annex I	No; Literature data *Natura 2000 data form*	The species will not be assessed against the criteria since it was not confirmed during field survey.
Circus pygargus	Montagu's harrier	LC	LC	BD Annex I	Yes	The species will be assessed against the criteria, since it was recorded during field surveys.
Coccothraustes coccothraustes	Hawfinch	LC	LC	-	Yes	The species will be assessed against the criteria, since it was recorded during field surveys.
Columba livia	Rock Pigeon	LC	LC	Annex II, A	Yes	The species will be assessed against the criteria, since it was recorded during field surveys.
Columba palumbus	Common Wood-pigeon	LC	LC	Annex II, A	Yes	The species will be assessed against the criteria, since it was recorded during field surveys.
Coracias garrulus	European roller	NT	-	BD Annex I	No; Literature data *Natura 2000 data form*	The species will not be assessed against the criteria since it was not confirmed during field survey. No direct or negative impact is expected.
Corvus corax	Common Raven	LC	LC	-	Yes	The species will be assessed against the criteria, since it was recorded during field surveys.
Corvus corone	Carrion Crow	LC	LC	Annex II	Yes	The species will be assessed against the criteria, since it was recorded during field surveys.
Corvus monedula	Eurasian Jackdaw	LC	LC	Annex II	Yes	The species will be assessed against the criteria, since it was recorded during field surveys.
Crex crex	Corn crake	LC	VU	BD Annex I	No; Literature data *Natura 2000 data form*	The species will not be assessed against the criteria since it was not confirmed during field survey. No direct or negative impact is expected.

Scientific name	Common name	Conservation status			Confirmed during field survey in the Project AoI	Comment
		IUCN	FBIH	Habitat/Birds Directive		
Dendrocopos major	Great Spotted Woodpecker	LC	LC	-	Yes	The species will be assessed against the criteria, since it was recorded during field surveys.
Dendrocopos medius	Middle spotted woodpecker	LC	LC	BD Annex I	No; Literature data *Natura 2000 data form*	The species will not be assessed against the criteria since it was not confirmed during field survey. No direct or negative impact is expected
Dryocopus martius	Black Woodpecker	LC	LC	BD Annex I	Yes	The species will be assessed against the criteria, since it was recorded during field surveys.
Egretta alba	Great egret	LC	-	BD Annex I	No; Literature data *Natura 2000 data form*	The species will not be assessed against the criteria since it was not confirmed during field survey. No direct or negative impact is expected
Egretta garzetta	Little egret	LC	VU	BD Annex I	No; Literature data *Natura 2000 data form*	The species will not be assessed against the criteria since it was not confirmed during field survey. No direct or negative impact is expected
Emberiza cia	Rock Bunting	LC	-	-	Yes	The species will be assessed against the criteria, since it was recorded during field surveys.
Emberiza citrinella	Yellowhammer	LC	-	-	Yes	The species will be assessed against the criteria, since it was recorded during field surveys.
Emberiza hortulana	Ortolan Bunting	LC	LC	BD Annex I	No; Literature data *Natura 2000 data form*	The species will not be assessed against the criteria since it was not confirmed during field survey. No direct or negative impact is expected
Erithacus rubecula	European Robin	LC	-	-	Yes	The species will be assessed against the criteria, since it was recorded during field surveys.
Falco biarmicus	Lanner Falcon	LC	-	BD Annex I	No; Literature data *Natura 2000 data form*	The species will not be assessed against the criteria since it was not confirmed during field survey. No direct or negative impact is expected
Falco columbarius	Merlin	LC	-	BD Annex I	No; Literature data *Natura 2000 data form*	The species will not be assessed against the criteria since it was not confirmed during field survey. No direct or negative impact is expected

Scientific name	Common name	Conservation status			Confirmed during field survey in the Project AoI	Comment
		IUCN	FBIH	Habitat/Birds Directive		
Falco peregrinus	Peregrine falcon	LC	DD	BD Annex I	No; Literature data *Natura 2000 data form*	The species will not be assessed against the criteria since it was not confirmed during field survey. No direct or negative impact is expected
Falco subbuteo	Hobby	LC	-	-	Yes	The species will be assessed against the criteria, since it was recorded during field surveys.
Falco tinnunculus	Kestrel	LC	LC	-	Yes	The species will be assessed against the criteria, since it was recorded during field surveys.
Falco vespertinus	Red-footed falcon	NT	-	BD Annex I	No; Literature data *Natura 2000 data form*	The species will not be assessed against the criteria since it was not confirmed during field survey. No direct or negative impact is expected
Ficedula albicollis	Collared Flycatcher	LC	LC	BD Annex I	Yes	The species will be assessed against the criteria, since it was recorded during field surveys.
Fringilla coelebs	Chaffinch	LC	-	-	Yes	The species will be assessed against the criteria, since it was recorded during field surveys.
Fringilla montifringilla	Brambling	LC	-	-	Yes	The species will be assessed against the criteria, since it was recorded during field surveys.
Garrulus glandarius	Eurasian Jay	LC	-	BD Annex II	Yes	The species will be assessed against the criteria, since it was recorded during field surveys.
Grus grus	Common crane	LC	-	BD Annex I	No; Literature data *Natura 2000 data form*	The species will not be assessed against the criteria since it was not confirmed during field survey. No direct or negative impact is expected
Gypaetus barbatus	The bearded vulture	LC	-	BD Annex I	No; Literature data *Natura 2000 data form*	The species will not be assessed against the criteria since it was not confirmed during field survey. No direct or negative impact is expected
Gyps fulvus	Griffon Vulture	LC	-	BD Annex I	No; Literature data *Natura 2000 data form*	The species will not be assessed against the criteria since it was not confirmed during field survey. No direct or negative impact is expected
Hieraaetus fasciatus	Bonelli's eagle	-	-	BD Annex I	No; Literature data *Natura 2000 data form*	The species will not be assessed against the criteria since it was not confirmed during field survey. No direct or negative impact is expected

Scientific name	Common name	Conservation status			Confirmed during field survey in the Project AoI	Comment
		IUCN	FBIH	Habitat/Birds Directive		
Hieraaetus pennatus	Booted Eagle	-	-	BD Annex I	No; Literature data *Natura 2000 data form*	The species will not be assessed against the criteria since it was not confirmed during field survey. No direct or negative impact is expected
Hirundo rupestris	Eurasian Crag-martin	LC	-	-	Yes	The species will be assessed against the criteria, since it was recorded during field surveys.
Hirundo rustica	Barn Swallow	LC	-	-	Yes	The species will be assessed against the criteria, since it was recorded during field surveys.
Ixobrychus minutus	Little bittern	LC	EN	BD Annex I	No; Literature data *Natura 2000 data form*	The species will not be assessed against the criteria since it was not confirmed during field survey. No direct or negative impact is expected
Jynx torquilla	Eurasian Wryneck	LC	-	-	Yes	The species will be assessed against the criteria, since it was recorded during field surveys.
Lanius collurio	Red-backed Shrike	LC	LC	BD I	Yes	The species will be assessed against the criteria, since it was recorded during field surveys.
Lanius minor	Lesser Grey Shrike	LC	LC	BD I	Yes	The species will be assessed against the criteria, since it was recorded during field surveys.
Loxia curvirostra	Red Crossbill	LC	-	-	Yes	The species will be assessed against the criteria, since it was recorded during field surveys.
Lullula arborea	Wood Lark	LC	LC	BD I	Yes	The species will be assessed against the criteria, since it was recorded during field surveys.
Merops apiaster	European Bee-eater	LC	-	-	Yes	The species will be assessed against the criteria, since it was recorded during field surveys.
Miliaria calandra	Corn Bunting	LC	-	-	Yes	The species will be assessed against the criteria, since it was recorded during field surveys.
Milvus milvus	Red kite	NT	-	BD Annex I	No; Literature data *Natura 2000 data form*	The species will not be assessed against the criteria since it was not confirmed during field survey. No direct or negative impact is expected
Monticola saxatilis	Rufous-tailed Rock-thrush	LC	-	-	Yes	The species will be assessed against the criteria, since it was recorded during field surveys.

Scientific name	Common name	Conservation status			Confirmed during field survey in the Project AoI	Comment
		IUCN	FBIH	Habitat/Birds Directive		
Motacilla alba	White Wagtail	LC	-	-	Yes	The species will be assessed against the criteria, since it was recorded during field surveys.
Muscicapa striata	Spotted Flycatcher	LC	-	-	Yes	The species will be assessed against the criteria, since it was recorded during field surveys.
Neophron percnopterus	Egyptian Vulture	EN	-	BD Annex I	No; Literature data *Natura 2000 data form*	The species will not be assessed against the criteria since it was not confirmed during field survey. No direct or negative impact is expected
Nycticorax nycticorax	Black-crowned night heron	LC	EN	BD Annex I	No; Literature data *Natura 2000 data form*	The species will not be assessed against the criteria since it was not confirmed during field survey. No direct or negative impact is expected
Oenanthe oenanthe	Northern Wheatear	LC	-	-	Yes	The species will be assessed against the criteria, since it was recorded during field surveys.
Oriolus oriolus	Eurasian Golden-oriole	LC	-	-	Yes	The species will be assessed against the criteria, since it was recorded during field surveys.
Pandion haliaetus	Osprey	LC	-	BD Annex I	No; Literature data *Natura 2000 data form*	The species will not be assessed against the criteria since it was not confirmed during field survey. No direct or negative impact is expected
Parus ater	Coal Tit	LC	-	-	Yes	The species will be assessed against the criteria, since it was recorded during field surveys.
Parus caeruleus	Blue Tit	LC	-	-	Yes	The species will be assessed against the criteria, since it was recorded during field surveys.
Parus lugubris	Sombre Tit	LC	-	-	Yes	The species will be assessed against the criteria, since it was recorded during field surveys.
Parus major	Great Tit	LC	-	-	Yes	The species will be assessed against the criteria, since it was recorded during field surveys.
Parus palustris	Marsh Tit	LC	-	-	Yes	The species will be assessed against the criteria, since it was recorded during field surveys.
Passer domesticus	House Sparrow	LC	-	-	Yes	The species will be assessed against the criteria, since it was recorded during field surveys.

Scientific name	Common name	Conservation status			Confirmed during field survey in the Project AoI	Comment
		IUCN	FBIH	Habitat/Birds Directive		
Passer montanus	Eurasian Tree Sparrow	LC	-	-	Yes	The species will be assessed against the criteria, since it was recorded during field surveys.
Pernis apivorus	European honey buzzard	LC	NT	BD Annex I	No; Literature data *Natura 2000 data form*	The species will not be assessed against the criteria since it was not confirmed during field survey. No direct or negative impact is expected
Philomachus pugnax	Ruff	LC	-	BD Annex I	No; Literature data *Natura 2000 data form*	The species will not be assessed against the criteria since it was not confirmed during field survey. No direct or negative impact is expected
Phoenicurus ochruros	Black Redstart	LC	-	-	Yes	The species will be assessed against the criteria, since it was recorded during field surveys.
Phylloscopus collybita	Common Chiffchaff	LC	-	-	Yes	The species will be assessed against the criteria, since it was recorded during field surveys.
Phylloscopus trochilus	Willow Warbler	LC	-	-	Yes	The species will be assessed against the criteria, since it was recorded during field surveys.
Pica pica	Black-billed Magpie	LC	-	BD Annex II	Yes	The species will be assessed against the criteria, since it was recorded during field surveys.
Picoides tridactylus	Three-toed Woodpecker	LC	VU	BD Annex I	No; Literature data *Natura 2000 data form*	The species will not be assessed against the criteria since it was not confirmed during field survey. No direct or negative impact is expected
Picus canus	Grey-faced Woodpecker	LC	LC	BD Annex I	Yes	The species will be assessed against the criteria, since it was recorded during field surveys.
Picus viridis	Eurasian Green Woodpecker	LC	-	-	Yes	The species will be assessed against the criteria, since it was recorded during field surveys.
Platalea leucorodia	Eurasian Spoonbill	LC	-	BD Annex I	No; Literature data *Natura 2000 data form*	The species will not be assessed against the criteria since it was not confirmed during field survey. No direct or negative impact is expected
Prunella modularis	Hedge Accentor	LC	LC	-	Yes	The species will be assessed against the criteria, since it was recorded during field surveys.
Regulus ignicapillus	Firecrest	LC	-	-	Yes	The species will be assessed against the criteria, since it was recorded during field surveys.

Scientific name	Common name	Conservation status			Confirmed during field survey in the Project AoI	Comment
		IUCN	FBIH	Habitat/Birds Directive		
Regulus regulus	Goldcrest	LC	-	-	Yes	The species will be assessed against the criteria, since it was recorded during field surveys.
Saxicola rubetra	Whinchat	LC	-	-	Yes	The species will be assessed against the criteria, since it was recorded during field surveys.
Serinus serinus	European Serin	LC	-	-	Yes	The species will be assessed against the criteria, since it was recorded during field surveys.
Sitta europaea	Wood Nuthatch	LC	-	-	Yes	The species will be assessed against the criteria, since it was recorded during field surveys.
Streptopelia turtur	European turtle dove	VU	LC	BD Annex II B	Yes	The species will be assessed against the criteria, since it was recorded during field surveys.
Sturnus vulgaris	Common Starling	LC	-	BD Annex II B	Yes	The species will be assessed against the criteria, since it was recorded during field surveys.
Sylvia atricapilla	Blackcap	LC	-	-	Yes	The species will be assessed against the criteria, since it was recorded during field surveys.
Sylvia borin	Garden Warbler	LC	-	-	Yes	The species will be assessed against the criteria, since it was recorded during field surveys.
Sylvia communis	Common Whitethroat	LC	-	-	Yes	The species will be assessed against the criteria, since it was recorded during field surveys.
Sylvia curruca	Lesser Whitethroat	LC	-	-	Yes	The species will be assessed against the criteria, since it was recorded during field surveys.
Tetrao urogallus	Capercaillie	LC	CR	BD Annex III B	No; Literature data; Natura 2000 data form	The species will not be assessed against the criteria since it was not confirmed during field survey. No direct or negative impact is expected
Tringa glareola	Wood sandpiper	LC	-	BD Annex I	No; Literature data; Natura 2000 data form	The species will not be assessed against the criteria since it was not confirmed during field survey. No direct or negative impact is expected
Troglodytes troglodytes	Winter Wren	LC	-	-	Yes	The species will be assessed against the criteria, since it was recorded during field surveys.
Turdus merula	Euroasian Blackbird	LC	LC	BD Annex II B	Yes	The species will be assessed against the criteria, since it was recorded during field surveys.

Scientific name	Common name	Conservation status			Confirmed during field survey in the Project AoI	Comment
		IUCN	FBIH	Habitat/Birds Directive		
Turdus philomelos	Song Thrush	LC	LC	BD Annex II B	Yes	The species will be assessed against the criteria, since it was recorded during field surveys.
Turdus pilaris	Fieldfare	LC	LC	BD Annex II B	Yes	The species will be assessed against the criteria, since it was recorded during field surveys.
Turdus viscivorus	Mistle Thrush	LC	LC	BD Annex II B	Yes	The species will be assessed against the criteria, since it was recorded during field surveys.
Upupa epops	Eurasian Hoopoe	LC	-	-	Yes	The species will be assessed against the criteria, since it was recorded during field surveys.
Bats						
Hypsugo savii	Savi's pipistrelle	LC	-	HD Annex IV	Yes	The species will be assessed against the criteria, since it was recorded during field surveys.
Miniopterus schreibersii	Schreiber's Bat	NT	EN	HD Annex II, IV	Yes	The species will be assessed against the criteria, since it was recorded during field surveys.
Myotis blythii	Lesser mouse-eared bat	LC	EN	HD Annex II	No; Literature data *Natura 200 data form*	The species will not be assessed against the criteria since it was not confirmed during field survey. No direct or negative impact is expected
Myotis capaccinii	Long-fingered bat	VU	VU	HD Annex II	No; Literature data *Natura 200 data form*	The species will not be assessed against the criteria since it was not confirmed during field survey. No direct or negative impact is expected
Myotis emarginatus	Geoffroy's bat	LC	VU	HD Annex II	No; Literature data *Natura 200 data form*	The species will not be assessed against the criteria since it was not confirmed during field survey. No direct or negative impact is expected
Myotis myotis	Greater mouse-eared bat	LC	EN	HD Annex II, IV	Yes	The species will be assessed against the criteria, since it was recorded during field surveys.
Pipistrellus kuhlii	Kuhl's pipistrelle	LC	VU	HD Annex II, IV	Yes	The species will be assessed against the criteria, since it was recorded during field surveys.
Pipistrellus pipistrellus	Common pipistrelle	LC	VU	HD Annex IV	Yes	The species will be assessed against the criteria, since it was recorded during field surveys.
Plecotus austriacus	Grey long-eared bat	LC	VU	HD Annex IV	Yes	The species will be assessed against the criteria, since it was recorded during field surveys.

Scientific name	Common name	Conservation status			Confirmed during field survey in the Project AoI	Comment
		IUCN	FBIH	Habitat/Birds Directive		
Rhinolophus euryale	Mediterranean horseshoe bat	VU	EN	HD Annex II, IV	Yes	The species will be assessed against the criteria, since it was recorded during field surveys.
Rhinolophus ferrumequinum	Greater horseshoe bat	LC	VU	HD Annex II	No; Literature data *Natura 200 data form*	The species will not be assessed against the criteria since it was not confirmed during field survey. No direct or negative impact is expected
Rhinolophus hipposideros	Lesser horseshoe bat	NT	EN	Annex II, IV	Yes	The species will be assessed against the criteria, since it was recorded during field surveys.
Vespertilio murinus	Parti-coloured bat	LC	VU	Annex IV	Yes	The species will be assessed against the criteria, since it was recorded during field surveys.
Invertebrates						
Amata phegea	Nine-spotted moth	-	-	-	Yes, WT3, 5,	The species will be assessed against the criteria, since it was recorded during field surveys.
Bombus pascuorum	The common carder bee	-	-	-	Yes, WT9, 10, 11, 14	The species will be assessed against the criteria, since it was recorded during field surveys.
Cerambyx cerdo	Great capricorn beetle	NT	/	Annex II, IV	No; Literature data	The species will not be assessed against the criteria since it was not confirmed during field survey. No direct or negative impact is expected
Chrysolina cribrosa	/	-	-	IV	No; Literature data	The species will not be assessed against the criteria since it was not confirmed during field survey. No direct or negative impact is expected
Colias alfacariensis	Berger's clouded yellow	LC	LC	-	Yes, WT8-	The species will be assessed against the criteria, since it was recorded during field surveys.
Colias croceus	Clouded yellow	LC	LC	-	Yes, WT7, WT10	The species will be assessed against the criteria, since it was recorded during field surveys.
Coprimorphus scrutato	Searching dung beetle	-	LC	-	No; Literature data	The species will not be assessed against the criteria since it was not confirmed during field survey. No direct or negative impact is expected
Erebia melas	Black ringlet	LC	LC	-	Yes, WT15	The species will be assessed against the criteria, since it was recorded during field surveys.

Scientific name	Common name	Conservation status			Confirmed during field survey in the Project AoI	Comment
		IUCN	FBIH	Habitat/Birds Directive		
Euphrasya aurinia	Marsh Fritillary	-	-	-	No; Literature data *Natura 200 data form*	The species will not be assessed against the criteria since it was not confirmed during field survey. No direct or negative impact is expected
Euplagia quadripunctaria	The Jersey tiger	-	-	Annex II	No; Literature data *Natura 200 data form*	The species will not be assessed against the criteria since it was not confirmed during field survey. No direct or negative impact is expected
Formica pratensis	black-backed meadow ant	-	-	-	Yes, G5	The species will be assessed against the criteria, since it was recorded during field surveys.
Geotrupes alpinus	/	-	LC	-	Yes, WT9, 10, 11,	The species will be assessed against the criteria, since it was recorded during field surveys.
Geotrupes vernalis	Spring dumbledor	-	NT	-	Yes, WT10, 15	The species will be assessed against the criteria, since it was recorded during field surveys.
Hyponephele lycaon	Dusky Meadow Brown	LC	LC	-	Yes, WT8	The species will be assessed against the criteria, since it was recorded during field surveys.
Iphiclides podalirius		-	-	-	No; Literature data	The species will not be assessed against the criteria since it was not confirmed during field survey. No direct or negative impact is expected
Lasiommata maera	Large wall brown	LC	LC	-	Yes, WT7	The species will be assessed against the criteria, since it was recorded during field surveys.
Lasiommata megera	Wall brown	LC	LC	-	Yes, WT10	The species will be assessed against the criteria, since it was recorded during field surveys.
Lucanus cervus	Stag beetle	NT	VU	Annex II	No; Literature data *Natura 200 data form*	The species will not be assessed against the criteria since it was not confirmed during field survey. No direct or negative impact is expected
Lysandra coridon	Chalkhill blue	LC	LC	-	Yes, WT10	The species will be assessed against the criteria, since it was recorded during field surveys.
Manica rubida	Gigant European Fire Ant	-	-	-	Yes, G8, 10	The species will be assessed against the criteria, since it was recorded during field surveys.
Melolontha melolontha	Cockchafer	-	LC	-	Yes, WT5, 10, 15	The species will be assessed against the criteria, since it was recorded during field surveys.

Scientific name	Common name	Conservation status			Confirmed during field survey in the Project AoI	Comment
		IUCN	FBIH	Habitat/Birds Directive		
Morimus funereus	Long-horned beetle	VU	-	Annex II	No; Literature data *Natura 200 data form*	The species will not be assessed against the criteria since it was not confirmed during field survey. No direct or negative impact is expected
Papilio machaon	Old world swallowtail	LC	-	-	Yes, WT9	The species will be assessed against the criteria, since it was recorded during field surveys.
Parnasius appolo	Apollo	-	VU	IV	Yes, WT8	The species will be assessed against the criteria, since it was recorded during field surveys.
Parnasius appolo	Apollo	NT	VU	Annex IV	Yes	The species will be assessed against the criteria, since it was recorded during field surveys.
Pieris brassicae	Large white	LC	LC	-	No; Literature data	The species will not be assessed against the criteria since it was not confirmed during field survey. No direct or negative impact is expected
Rosalia alpina	Alpine longhorn beetle	VU	-	Annex II, IV	No; Literature data *Natura 200 data form*	The species will not be assessed against the criteria since it was not confirmed during field survey. No direct or negative impact is expected
Sympetrum flaveolum	Yellow-winged darter	LC	VU	-	No; Literature data	The species will not be assessed against the criteria since it was not confirmed during field survey. No direct or negative impact is expected
Vanessa cardui	Painted lady	LC	LC	-	Yes, WT8, 10	The species will be assessed against the criteria, since it was recorded during field surveys.
Zerintia polyxena	Southern festoon	-	NT	IV	Yes, WT7	The species will be assessed against the criteria, since it was recorded during field surveys.

All species that met the following criteria will be further analysed against the EIB criteria for CH/HVB:

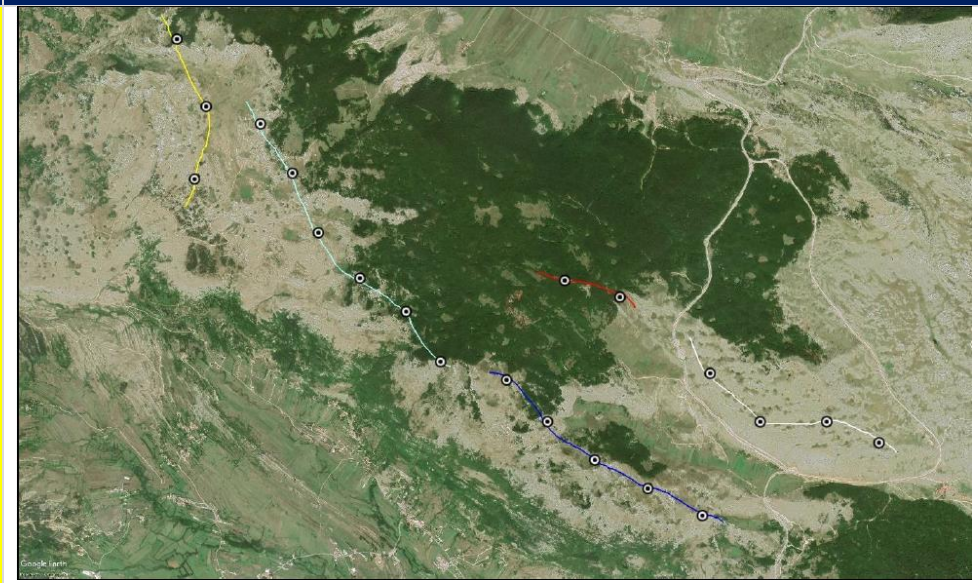
- Are confirmed during field survey
- species of limited distribution regionally or nationally endemic species;
- species on Annex II and IV of the Habitats Directive;
- Habitats on Annex I of the Habitats Directive
- Annex I species of the Birds Directive;
- national CR, VU, EN species;
- global CR, VU, EN species

Table 22: Recorded flora and fauna species assessed against the EIB CH/HVB criteria.

Scientific name	Common name	Conservation status	EIB Criteria met	CH/HVB	Comment on species distribution and presence in the Project Area of Influence
Habitats					
Natura 2000 habitat code					
95A0	High oro-Mediterranean pine forests	Annex I HD	**c8a**	**HVB**	Confirmed during field surveys, the habitat will be under direct negative impact from the Project activities. In the Project AoI, the habitat is fragmented, as shown in **Error! Reference source not found.** The habitat has a wide distribution in BiH: in Bosnia and Herzegovina, it grows in seven localities, namely Prenje, Cvrsnica (the westernmost population), Hranisava - (the northernmost population), Rujiste, Konjicko Igman, Orjen and Vran mountain (Balijan D. et al., 2005). Munich's forests represent the subalpine belt in the high mountains of Herzegovina (Orjen, Velež, Prenj, Cvrsnica, Cabulja). Of the total area of Munich forests in Bosnia and Herzegovina (5865 ha), 80% is located in Prenje and Cvrsnica (Stupar V., in Dreskovic et al, 2011). The habitat 95A0 High oro-Mediterranean pine forests was listed as *High Value Biodiversity* because it met the **Criterion 8: Threatened or unique ecosystems**, under a) The EAAA is habitat type listed in Annex 1 of EU Habitats Directive or Resolution 4 of Bern Convention
Fauna					
Reptiles					
Lacerta agilis	Sand lizard	IUCN LC; FBIH LC; HD IV	N/A	N/A	Species confirmed during field surveys. Species widespread in Europe and Bosnia and Herzegovina. **EOO greater than 50,000 km^2**. In Bosnia and Herzegovina, it can be found in the central and northern areas and is not expected in the Mediterranean area. The Sand lizard can be found in a variety of habitats, including meadows, arable fields, coastal dunes, grasslands, steppe, subalpine and alpine meadows, scrub, hedgerows, open woodlands, alpine areas, traditionally cultivated farmland, and country gardens. Sometimes it can also

Scientific name	Common name	Conservation status	EIB Criteria met	CH/HVB	Comment on species distribution and presence in the Project Area of Influence
					be found in sandy semi-desert areas. EOO greater than 20,000 km2. The species has more than 20 known localities on Bosnia and Herzegovina. The Sand Lizard is listed in the Annex IV of the Habitats Directive but does not meet the Criterion **2: Population of critically endangered, endangered or vulnerable species, as defined by the IUCN Red List of threatened species and in relevant legislation: d) a population of species regularly occurring listed in Annex IV of the Habitats Directive.** The Sand Lizard is not a regularly occurring species in the Project AoI, only two individuals were recorded during field surveys. The species is vagrant in the Project AoI.
Vipera berus	Common European viper	IUCN LC; FBIH LC	N/A	N/A	The Common European viper was recorded during field surveys, but the species does not meet the Criterion **2: Population of critically endangered, endangered or vulnerable species, as defined by the IUCN Red List of threatened species and in relevant legislation: d) a population of species regularly occurring listed in Annex IV of the Habitats Directive.** The species is listed as Least Concern on the IUCN Red List and the Red List of Fauna in the Federation of Bosnia and Herzegovina.
Birds - The project does not lead to a net reduction in the global and/or national/regional population of any Critically Endangered or Endangered species					
Accipiter gentilis	Goshawk	IUCN LC	N/A	N/A	Species confirmed during field survey. The Goshawk does not meet the EIB criteria for High Value Biodiversity or Critical Habitat. The species is listed as Least Concern on the IUCN Red list. The Goshawk is not a species of conservation concern.
Alauda arvensis	Eurasian Skylark	IUCN LC; FBIH LC; BD II	N/A	N/A	Species confirmed during field survey. The Eurasian Skylark does not meet the EIB criteria for High Value Biodiversity or Critical Habitat. The species is listed as Least Concern on the IUCN Red list and Red List of Fauna of the Federation of Bosnia and Herzegovina. The Eurasian Skylark is not a species of conservation concern.

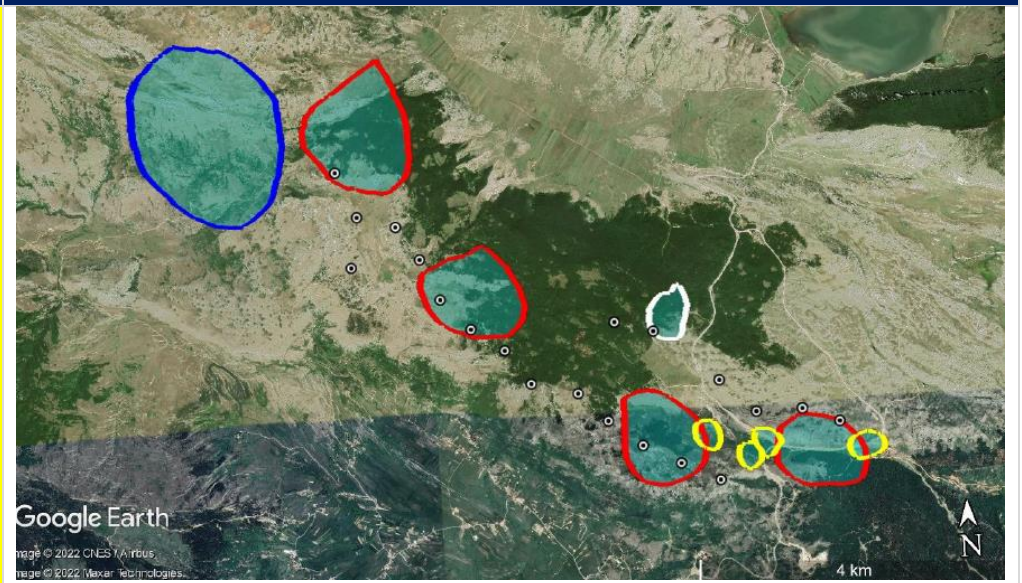
Scientific name	Common name	Conservation status	EIB Criteria met	CH/HVB	Comment on species distribution and presence in the Project Area of Influence
Alectoris graeca	Rock Partrige	**BD I**; IUCN NT; FBIH DD	**C7a**	**HVB**	Species confirmed during field surveys. The species is endemic to Europe, occurring only in the Alps, the Apennines, Sicily and the Balkans. The species utilises a variety of habitats and different altitudes, up to 3,000 m in the Alps and almost down to sea level in Sicily and Greece. Generally, the species prefers open, mountain habitats with grassy patches, low scrub or scattered conifers. The species Rock Partrige was recorded only in one yellow marked transect rout and in *low occurance* rate. **0.05 pairs/ha** on a transect of **1.94 km** long, making it potentially regullarly occuring speices. Due to being recorded in the transect route close to the planned Wind Turbines, it is categorised as **High Value Biodiversity** under the **Criterion 7:** Population of critically endangered, endangered, or vulnerable species, as defined by the IUCN Red List of threatened species and in relevant legislation **– a)** The EAAA for regularly occurring species and their habitats is listed in Annex II of Habitats Directive, **Annex I of Birds Directive**, or Resolution 6 of Bern Convention. The categorisation of the species as regularly occurring is a precautionary measure to prevent adverse impacts on the species habitat.

Scientific name	Common name	Conservation status	EIB Criteria met	CH/HVB	Comment on species distribution and presence in the Project Area of Influence
					 *Figure 9: Transects routes in Wind Park Project AoI, yellow transect is where Alectoris graeca was recorded.*
Anthus pratensis	Meadow Pipit	IUCN LC; FBIH LC	N/A	N/A	Species confirmed during field survey. The Meadow Pipit does not meet the EIB criteria for High Value Biodiversity or Critical Habitat. The species is listed as Least Concern on the IUCN Red list and Red List of Fauna of the Federation of Bosnia and Herzegovina. The Meadow Pipit is not a species of conservation concern.
Anthus spinoletta	Water Pipit	IUCN LC	N/A	N/A	Species confirmed during field survey. The Water Pipit does not meet the EIB criteria for High Value Biodiversity or Critical Habitat. The species is listed as Least Concern on the IUCN Red list. The Water Pipit is not a species of conservation concern.

Scientific name	Common name	Conservation status	EIB Criteria met	CH/HVB	Comment on species distribution and presence in the Project Area of Influence
Anthus trivialis	Tree Pipit	IUCN LC	N/A	N/A	Species confirmed during field survey. The Tree Pipit does not meet the EIB criteria for High Value Biodiversity or Critical Habitat. The species is listed as Least Concern on the IUCN Red list. The Tree Pipit is not a species of conservation concern.
Apus apus	Common Swift	IUCN LC	N/A	N/A	Species confirmed during field survey. The Common Swift does not meet the EIB criteria for High Value Biodiversity or Critical Habitat. The species is listed as Least Concern on the IUCN Red list. The Common Swift is not a species of conservation concern.
Bubo bubo	Eagle Owl	BD I; IUCN LC; FBIH VU	**C7a**	**HVB**	Species confirmed during field surveys. Widespread species in Bosnia and Herzegovina. The European eagle-owl, the nominate subspecies inhabits continental Europe from near the Arctic Circle in Norway, Sweden, Finland, the southern Kola Peninsula, and Arkhangelsk where it ranges north. EOO greater than 50,000 km^2. More than 20 known localities of the species in Bosnia and Herzegovina. The Eagle Owl is listed in the Annex I of the Birds Directive and is listed as Vulnerable in the Red List of Fauna of Federation of Bosnia and Herzegovina and as least Concern in the IUCN Red List of Threatened Species The Eagle owl is a nocturnal species and during nocturnal survey conducted in October of 2021 the species was recorded near Eind Turbine 14. Due to being recorded in the transect route close to the planned Wind Turbines, it is categorised as **High Value Biodiversity** under the **Criterion 7:** Population of critically endangered, endangered, or vulnerable species, as defined by the IUCN Red List of threatened species and in relevant legislation **– a)** The EAAA for regularly occurring species and their habitats is listed in Annex II of Habitats Directive, **Annex I of Birds Directive**, or Resolution 6 of Bern Convention. The categorisation of the species as regularly occurring is a precautionary measure to prevent adverse impacts on the species habitat.

Scientific name	Common name	Conservation status	EIB Criteria met	CH/HVB	Comment on species distribution and presence in the Project Area of Influence
					 *Figure 10: Bubo bubo (Eagle owl) records.*
Buteo buteo	Buzzard	IUCN LC; FBIH LC	N/A	N/A	Species confirmed during field survey. The Buzzard does not meet the EIB criteria for High Value Biodiversity or Critical Habitat. The species is listed as Least Concern on the IUCN Red list and Red List of Fauna of the Federation of Bosnia and Herzegovina. The Buzzard is not a species of conservation concern.
Carduelis carduelis	European Goldfinch	IUCN LC; FBIH LC	N/A	N/A	Species confirmed during field survey. The European Goldfinch does not meet the EIB criteria for High Value Biodiversity or Critical Habitat. The species is listed as Least Concern on the IUCN Red list and Red List of Fauna of the Federation of Bosnia and Herzegovina. The European Goldfinch is not a species of conservation concern.
Carduelis chloris	European Greenfinch	IUCN LC; FBIH LC	N/A	N/A	Species confirmed during field survey. The European Greenfinch does not meet the EIB criteria for High Value Biodiversity or Critical Habitat. The species is listed as Least Concern on the IUCN Red list and Red List of Fauna of the Federation of Bosnia and Herzegovina. The European Greenfinch is not a species of conservation concern.
Carduelis spinus	Eurasian Siskin	IUCN LC; FBIH LC	N/A	N/A	Species confirmed during field survey. The Eurasian Siskin does not meet the EIB criteria for High Value Biodiversity or Critical Habitat. The species is listed as Least Concern on the IUCN Red list and Red List of Fauna of the Federation of Bosnia and Herzegovina. Eurasian Siskin is not a species of conservation concern.

Scientific name	Common name	Conservation status	EIB Criteria met	CH/HVB	Comment on species distribution and presence in the Project Area of Influence
Certhia familiaris	Eurasian Tree-creeper	IUCN LC; FBIH LC	N/A	N/A	Species confirmed during field survey. The Eurasian Tree-creeper does not meet the EIB criteria for High Value Biodiversity or Critical Habitat. The species is listed as Least Concern on the IUCN Red list and Red List of Fauna of the Federation of Bosnia and Herzegovina. The Eurasian Tree-creeper is not a species of conservation concern.
Circaetus gallicus	Short-toed Snake Eagle	IUCN LC; FBIH LC; BD I	**C7a**	**HVB**	Species confirmed during field surveys. Short-toed Snake Eagle breeds northwestern Africa and southern Europe, north to Estonia, south to the Levant, and east to Kazakhstan, also locally Arabian Peninsula, northern China, and Mongolia; also, resident in South Asia (Pakistan, Nepal, and India). The short-toed snake eagle is found in open cultivated plains, arid stony deciduous scrub areas and foothills and semi-desert areas. It requires trees for nesting and open habitats, such as cultivations and grasslands for foraging. In Bosnia and Herzegovina more than 12 known localities of the species. EOO greater than 50,000 km^2. The Short-toed Snake Eagle is listed in the Annex I of the Birds Directive and is listed as Least Concern in the Red List of Fauna of Federation of Bosnia and Herzegovina and as least Concern in the IUCN Red List of Threatened Species The Short-toed Snake Eagle breeding territory was recorded near the Wind Turbines (Figure 11,blue circle). Due to being recorded near the planned Wind Turbines, it is categorised as High Value Biodiversity under the **Criterion 7**: Population of critically endangered, endangered, or vulnerable species, as defined by the IUCN Red List of threatened species and in relevant legislation – **a)** The EAAA for regularly occurring species and their habitats is listed in Annex II of Habitats Directive, **Annex I of Birds Directive**, or Resolution 6 of Bern Convention. The categorisation of the species as regularly occurring is a precautionary measure to prevent adverse impacts on the species.

Scientific name	Common name	Conservation status	EIB Criteria met	CH/HVB	Comment on species distribution and presence in the Project Area of Influence
					 *Figure 11: Breeding territory of the Short-toed Snake Eagle, blue circle*
Circus aeruginosus	Marsh Harrier	BD I; IUCN LC; FBIH VU	N/A	N/A	Species confirmed during field survey. The Marsh Harrier is listed as Least Concern on the IUCN Red list of Threatened Species and as Vulnerable on the Red List of Fauna in the Federation of Bosnia and Herzegovina, the species is also listed in the Annex I of the Birds Directive. During the 12-month monitoring period no nesting pairs or resting or breeding sites were recorded in the Project AoI, Therefore, the species cannot be categorised as regularly occurring in the Project AoI. Vagrant species. The Marsh harrier Shrike does not meet the EIB threshold for High Value Biodiversity or Critical Habitat.

Scientific name	Common name	Conservation status	EIB Criteria met	CH/HVB	Comment on species distribution and presence in the Project Area of Influence
Circus pygargus	Montagu's harrier	IUCN LC; FBIH LC; BD I	N/A	N/A	Species confirmed during field survey. The Montagu's harrier is listed as Least Concern on the IUCN Red list of Threatened Species and as Least Concern on the Red List of Fauna in the Federation of Bosnia and Herzegovina, the species is also listed in the Annex I of the Birds Directive. During the 12-month monitoring period no nesting pairs or resting or breeding sites were recorded in the Project AoI, Therefore, the species cannot be categorised as regularly occurring in the Project AoI. Vagrant species. The Montagu's harrier Shrike does not meet the EIB threshold for High Value Biodiversity or Critical Habitat.
Coccothraustes coccothraustes	Hawfinch	IUCN LC; FBIH LC	N/A	N/A	Species confirmed during field survey. The Hawfinch does not meet the EIB criteria for High Value Biodiversity or Critical Habitat. The species is listed as Least Concern on the IUCN Red list and Red List of Fauna of the Federation of Bosnia and Herzegovina. The Hawfinch is not a species of conservation concern.
Columba livia	Rock Pigeon	IUCN LC; FBIH LC, BD IIA	N/A	N/A	Species confirmed during field survey. The Rock Pigeon does not meet the EIB criteria for High Value Biodiversity or Critical Habitat. The species is listed as Least Concern on the IUCN Red list and Red List of Fauna of the Federation of Bosnia and Herzegovina, and on the Annex II part A of the Birds Directive. The Rock Pigeon is not a species of conservation concern.
Columba palumbus	Common Wood-pigeon	IUCN LC; FBIH LC; BD IIA	N/A	N/A	Species confirmed during field survey. The Common Wood-pigeon does not meet the EIB criteria for High Value Biodiversity or Critical Habitat. The species is listed as Least Concern on the IUCN Red list and Red List of Fauna of the Federation of Bosnia and Herzegovina and on the Annex II part A of the Birds Directive. The Common Wood-pigeon is not a species of conservation concern.
Corvus corax	Common Raven	IUCN LC; FBIH LC	N/A	N/A	Species confirmed during field survey. The Common Raven does not meet the EIB criteria for High Value Biodiversity or Critical Habitat. The species is listed as Least Concern on the

Scientific name	Common name	Conservation status	EIB Criteria met	CH/HVB	Comment on species distribution and presence in the Project Area of Influence
					IUCN Red list and Red List of Fauna of the Federation of Bosnia and Herzegovina. The Common Raven is not a species of conservation concern.
Corvus corone	Carrion Crow	IUCN LC; FBIH LC; BD II	N/A	N/A	Species confirmed during field survey. The Carrion Crow does not meet the EIB criteria for High Value Biodiversity or Critical Habitat. The species is listed as Least Concern on the IUCN Red list and Red List of Fauna of the Federation of Bosnia and Herzegovina and on the Annex II of the Birds Directive. The Carrion Crow is not a species of conservation concern.
Corvus monedula	Eurasian Jackdaw	IUCN LC; FBIH LC; BD II	N/A	N/A	Species confirmed during field survey. The Eurasian Jackdaw does not meet the EIB criteria for High Value Biodiversity or Critical Habitat. The species is listed as Least Concern on the IUCN Red list and Red List of Fauna of the Federation of Bosnia and Herzegovina and on the Annex II of the Birds Directive. The Eurasian Jackdaw is not a species of conservation concern.
Dendrocopos major	Great Spotted Woodpecker	IUCN LC; FBIH LC	N/A	N/A	Species confirmed during field survey. The Great Spotted Woodpecker does not meet the EIB criteria for High Value Biodiversity or Critical Habitat. The species is listed as Least Concern on the IUCN Red list and Red List of Fauna of the Federation of Bosnia and Herzegovina. The Great Spotted Woodpecker is not a species of conservation concern.
Dryocopus martius	Black Woodpecker	IUCN LC; FBIH LC; BD I	N/A	N/A	Species confirmed during field survey. The Black Woodpecker is listed as Least Concern on the IUCN Red list of Threatened Species and as Least Concern on the Red List of Fauna in the Federation of Bosnia and Herzegovina, the species is also listed in the Annex I of the Birds Directive. During the 12-month monitoring period no nesting pairs or resting or breeding sites were recorded in the Project AoI, Therefore, the species cannot be categorised as regularly occurring in the Project AoI. Vagrant species. The Black Woodpecker does not meet the EIB threshold for High Value Biodiversity or Critical Habitat.

Scientific name	Common name	Conservation status	EIB Criteria met	CH/HVB	Comment on species distribution and presence in the Project Area of Influence
Emberiza cia	Rock Bunting	IUCN LC	N/A	N/A	Species confirmed during field survey. The Common Raven does not meet the EIB criteria for High Value Biodiversity or Critical Habitat. The species is listed as Least Concern on the IUCN Red list and Red List of Fauna of the Federation of Bosnia and Herzegovina. The Common Raven is not a species of conservation concern.
Emberiza citrinella	Yellowhammer	IUCN LC	N/A	N/A	Species confirmed during field survey. The Common Raven does not meet the EIB criteria for High Value Biodiversity or Critical Habitat. The species is listed as Least Concern on the IUCN Red list and Red List of Fauna of the Federation of Bosnia and Herzegovina. The Common Raven is not a species of conservation concern.
Erithacus rubecula	European Robin	IUCN LC	N/A	N/A	Species confirmed during field survey. The Common Raven does not meet the EIB criteria for High Value Biodiversity or Critical Habitat. The species is listed as Least Concern on the IUCN Red list and Red List of Fauna of the Federation of Bosnia and Herzegovina. The Common Raven is not a species of conservation concern.
Falco subbuteo	Hobby	IUCN LC	N/A	N/A	Species confirmed during field survey. The Common Raven does not meet the EIB criteria for High Value Biodiversity or Critical Habitat. The species is listed as Least Concern on the IUCN Red list and Red List of Fauna of the Federation of Bosnia and Herzegovina. The Common Raven is not a species of conservation concern.
Falco tinnunculus	Kestrel	IUCN LC; FBIH LC	N/A	N/A	Species confirmed during field survey. The Common Raven does not meet the EIB criteria for High Value Biodiversity or Critical Habitat. The species is listed as Least Concern on the IUCN Red list and Red List of Fauna of the Federation of Bosnia and Herzegovina. The Common Raven is not a species of conservation concern.
Ficedula albicollis	Collared Flycatcher	IUCN LC; FBIH LC; BD I	N/A	N/A	Species confirmed during field survey. The Collared Flycatcher is listed as Least Concern on the IUCN Red list of Threatened Species and as Least Concern on the Red List of Fauna in the Federation of Bosnia and Herzegovina, the species is also listed in the Annex I of the Birds Directive. During the 12-month monitoring period no nesting pairs or resting or breeding

Scientific name	Common name	Conservation status	EIB Criteria met	CH/HVB	Comment on species distribution and presence in the Project Area of Influence
					sites were recorded in the Project AoI, Therefore, the species cannot be categorised as regularly occurring in the Project AoI. Vagrant species. The Collared Flycatcher does not meet the EIB threshold for High Value Biodiversity or Critical Habitat.
Fringilla coelebs	Chaffinch	IUCN LC	N/A	N/A	Species confirmed during field survey. The Chaffinch does not meet the EIB threshold for High Value Biodiversity or Critical Habitat. The species is listed as Least Concern on the IUCN Red list of Threatened Species. No criterions were met, the Chaffinch is not a species of conservation concern.
Fringilla montifringilla	Brambling	IUCN LC	N/A	N/A	Species confirmed during field survey. The Brambling does not meet the EIB threshold for High Value Biodiversity or Critical Habitat. The species is listed as Least Concern on the IUCN Red list of Threatened Species. No criterions were met, the Brambling is not a species of conservation concern.
Garrulus glandarius	Eurasian Jay	IUCN LC; BD II	N/A	N/A	Species confirmed during field survey. The Eurasian Jay does not meet the EIB threshold for High Value Biodiversity or Critical Habitat. The species is listed as Least Concern on the IUCN Red list of Threatened Species and is listed in the Annex II of the Birds Directive. No criterions were met, the Eurasian Jay is not a species of conservation concern.
Hirundo rupestris	Eurasian Crag-martin	IUCN LC	N/A	N/A	Species confirmed during field survey. The Eurasian Crag-martin does not meet the EIB threshold for High Value Biodiversity or Critical Habitat. The species is listed as Least Concern on the IUCN Red list of Threatened Species. No criterions were met, the Eurasian Crag-martin is not a species of conservation concern.
Hirundo rustica	Barn Swallow	IUCN LC	N/A	N/A	Species confirmed during field survey. The Barn Swallow does not meet the EIB threshold for High Value Biodiversity or Critical Habitat. The species is listed as Least Concern on the

Scientific name	Common name	Conservation status	EIB Criteria met	CH/HVB	Comment on species distribution and presence in the Project Area of Influence
					IUCN Red list of Threatened Species. No criterions were met, the Barn Swallow is not a species of conservation concern.
Jynx torquilla	Eurasian Wryneck	IUCN LC	N/A	N/A	Species confirmed during field survey. The Eurasian Wryneck does not meet the EIB threshold for High Value Biodiversity or Critical Habitat. The species is listed as Least Concern on the IUCN Red list of Threatened Species. No criterions were met, the Eurasian Wryneck is not a species of conservation concern.
Lanius collurio	Red-backed Shrike	IUCN LC; FBIH LC; BD I	**C7a**	**HVB**	Species confirmed during field surveys. Its breeding range stretches from Western Europe east to central Russia. It is migratory and winters in the eastern areas of tropical Africa and southern Africa. In Bosnia and Herzegovina more than 12 known localities of the species. EOO greater than 50,000 km^2. The site contains potential suitable breeding habitat near wind generators. Transect yellow is 1.94 km long and the density of pairs for the Red-backed Shrike is 0.52 (pairs/ha), density in the light blue transect (length 3.23 km) is 0.42 pairs/ha, density in the dark blue transect (length 2.69 km) is 0.53 pairs/ha, and the density in the white transect (length 2.37 km) is 0.32 pairs/ha. Based on the breeding survey, the density of pairs per hectar is *low*. The Red-backed Shrike is categorised as **High Value Biodiversity** under the **Criterion 7:** Population of critically endangered, endangered or vulnerable species, as defined by the IUCN Red List of threatened species and in relevant legislation **– a)** The EAAA for regularly occurring species and their habitats is listed in Annex II of Habitats Directive, **Annex I of Birds Directive**, or Resolution 6 of Bern Convention. The categorisation of the species as regularly occurring is a precautionary measure to prevent adverse impacts on the species habitat.
Lanius minor	Lesser Grey Shrike	IUCN LC; FBIH LC; BD I	N/A	N/A	Species confirmed during field survey. The Lesser Grey Shrike is listed as Least Concern on the IUCN Red list of Threatened Species and as Least Concern on the Red List of Fauna in the Federation of Bosnia and Herzegovina, the species is also listed in the Annex I of the Birds Directive. During the 12-month monitoring period no nesting pairs or resting or breeding

Scientific name	Common name	Conservation status	EIB Criteria met	CH/HVB	Comment on species distribution and presence in the Project Area of Influence
					sites were recorded in the Project AoI, Therefore, the species cannot be categorised as regularly occurring in the Project AoI. Vagrant species. The Lesser Grey Shrike does not meet the EIB threshold for High Value Biodiversity or Critical Habitat.
Loxia curvirostra	Red Crossbill	IUCN LC	N/A	N/A	Species confirmed during field survey. The Red Crossbill does not meet the EIB threshold for High Value Biodiversity or Critical Habitat. The species is listed as Least Concern on the IUCN Red list of Threatened Species. No criterions were met, the Red Crossbill is not a species of conservation concern.
Lullula arborea	Wood Lark	IUCN LC; FBIH LC; BD I	**C7a**	**HVB**	Species confirmed during field surveys. It is found across most of Europe, the Middle East, western Asia and the mountains of north Africa. In Bosnia and Herzegovina more than 12 known localities of the species. EOO greater than 50,000 km^2. The site contains potential suitable breeding habitat near wind generators. Transect yellow is 1.94 km long and the density of pairs for the Wood Lark was 0.43 (pairs/ha), density in the light blue transect (length 3.23 km) is 0.12 pairs/ha and dark blue transect (length 2.69 km) is 0.42 pairs/ha. The Wood Lark is categorised as **High Value Biodiversity** under the **Criterion 7:** Population of critically endangered, endangered or vulnerable species, as defined by the IUCN Red List of threatened species and in relevant legislation **– a)** The EAAA for regularly occurring species and their habitats is listed in Annex II of Habitats Directive, **Annex I of Birds Directive**, or Resolution 6 of Bern Convention. The categorisation of the species as regularly occurring is a precautionary measure to prevent adverse impacts on the species habitat.
Merops apiaster	European Bee-eater	IUCN LC	N/A	N/A	Species confirmed during field survey. The European Bee-eater does not meet the EIB threshold for High Value Biodiversity or Critical Habitat. The species is listed as Least Concern on the IUCN Red list of Threatened Species. No criterions were met, the European Bee-eater is not a species of conservation concern.

Scientific name	Common name	Conservation status	EIB Criteria met	CH/HVB	Comment on species distribution and presence in the Project Area of Influence
Miliaria calandra	Corn Bunting	IUCN LC	N/A	N/A	Species confirmed during field survey. The Corn Bunting does not meet the EIB threshold for High Value Biodiversity or Critical Habitat. The species is listed as Least Concern on the IUCN Red list of Threatened Species. No criterions were met, the Corn Bunting is not a species of conservation concern.
Monticola saxatilis	Rufous-tailed Rock-thrush	IUCN LC	N/A	N/A	Species confirmed during field survey. The Rufous-tailed Rock-thrush does not meet the EIB threshold for High Value Biodiversity or Critical Habitat. The species is listed as Least Concern on the IUCN Red list of Threatened Species. No criterions were met, the Rufous-tailed Rock-thrush is not a species of conservation concern.
Motacilla alba	White Wagtail	IUCN LC	N/A	N/A	Species confirmed during field survey. The White Wagtail does not meet the EIB threshold for High Value Biodiversity or Critical Habitat. The species is listed as Least Concern on the IUCN Red list of Threatened Species. No criterions were met, the White Wagtail is not a species of conservation concern.
Muscicapa striata	Spotted Flycatcher	IUCN LC	N/A	N/A	Species confirmed during field survey. The Spotted Flycatcher does not meet the EIB threshold for High Value Biodiversity or Critical Habitat. The species is listed as Least Concern on the IUCN Red list of Threatened Species. No criterions were met, the Spotted Flycatcher is not a species of conservation concern.
Oenanthe oenanthe	Northern Wheatear	IUCN LC	N/A	N/A	Species confirmed during field survey. The Northern Wheatear does not meet the EIB threshold for High Value Biodiversity or Critical Habitat. The species is listed as Least Concern on the IUCN Red list of Threatened Species. No criterions were met, the Northern Wheatear is not a species of conservation concern.
Oriolus oriolus	Eurasian Golden-oriole	IUCN LC	N/A	N/A	Species confirmed during field survey. The Eurasian Golden-oriole does not meet the EIB threshold for High Value Biodiversity or Critical Habitat. The species is listed as Least Concern on the IUCN Red list of Threatened Species. No criterions were met, the Eurasian Golden-oriole is not a species of conservation concern.

Scientific name	Common name	Conservation status	EIB Criteria met	CH/HVB	Comment on species distribution and presence in the Project Area of Influence
Parus ater	Coal Tit	IUCN LC	N/A	N/A	Species confirmed during field survey. The Coal Tit does not meet the EIB threshold for High Value Biodiversity or Critical Habitat. The species is listed as Least Concern on the IUCN Red list of Threatened Species. No criterions were met, the Coal Tit is not a species of conservation concern.
Parus caeruleus	Blue Tit	IUCN LC	N/A	N/A	Species confirmed during field survey. The Blue Tit does not meet the EIB threshold for High Value Biodiversity or Critical Habitat. The species is listed as Least Concern on the IUCN Red list of Threatened Species. No criterions were met, the Blue Tit is not a species of conservation concern.
Parus lugubris	Sombre Tit	IUCN LC	N/A	N/A	Species confirmed during field survey. The Sombre Tit does not meet the EIB threshold for High Value Biodiversity or Critical Habitat. The species is listed as Least Concern on the IUCN Red list of Threatened Species. No criterions were met, the Sombre Tit is not a species of conservation concern.
Parus major	Great Tit	IUCN LC	N/A	N/A	Species confirmed during field survey. The Great Tit does not meet the EIB threshold for High Value Biodiversity or Critical Habitat. The species is listed as Least Concern on the IUCN Red list of Threatened Species. No criterions were met, the Great Tit is not a species of conservation concern.
Parus palustris	Marsh Tit	IUCN LC	N/A	N/A	Species confirmed during field survey. The Marsh Tit does not meet the EIB threshold for High Value Biodiversity or Critical Habitat. The species is listed as Least Concern on the IUCN Red list of Threatened Species. No criterions were met, the Marsh Tit is not a species of conservation concern.
Passer domesticus	House Sparrow	IUCN LC	N/A	N/A	Species confirmed during field survey. The House Sparrow does not meet the EIB threshold for High Value Biodiversity or Critical Habitat. The species is listed as Least Concern on the IUCN Red list of Threatened Species. No criterions were met, the House Sparrow is not a species of conservation concern.

Scientific name	Common name	Conservation status	EIB Criteria met	CH/HVB	Comment on species distribution and presence in the Project Area of Influence
Passer montanus	Eurasian Tree Sparrow	IUCN LC	N/A	N/A	Species confirmed during field survey. The Eurasian Tree Sparrow does not meet the EIB threshold for High Value Biodiversity or Critical Habitat. The species is listed as Least Concern on the IUCN Red list of Threatened Species. No criterions were met, the Eurasian Tree Sparrow is not a species of conservation concern.
Phoenicurus ochruros	Black Redstart	IUCN LC	N/A	N/A	Species confirmed during field survey. The Black Redstart does not meet the EIB threshold for High Value Biodiversity or Critical Habitat. The species is listed as Least Concern on the IUCN Red list of Threatened Species. No criterions were met, the Black Start is not a species of conservation concern.
Phylloscopus collybita	Common Chiffchaff	IUCN LC	N/A	N/A	Species confirmed during field survey. The Common Chiffchaff does not meet the EIB threshold for High Value Biodiversity or Critical Habitat. The species is listed as Least Concern on the IUCN Red list of Threatened Species. No criterions were met, the Common Chiffchaff is not a species of conservation concern.
Phylloscopus trochilus	Willow Warbler	IUCN LC	N/A	N/A	Species confirmed during field survey. The Willow Warbler does not meet the EIB threshold for High Value Biodiversity or Critical Habitat. The species is listed as Least Concern on the IUCN Red list of Threatened Species. No criterions were met, the Willow Warbler is not a species of conservation concern.
Pica pica	Black-billed Magpie	IUCN LC	N/A	N/A	Species confirmed during field survey. The Black-billed Magpie does not meet the EIB threshold for High Value Biodiversity or Critical Habitat. The species is listed as Least Concern on the IUCN Red list of Threatened Species. No criterions were met, the Black-billed Magpie is not a species of conservation concern.
Picus canus	Grey-faced Woodpecker	IUCN LC; FBIH LC; BD I	N/A	N/A	Species confirmed during field survey. The Grey-faced Woodpecker is listed as Least Concern on the IUCN Red list of Threatened Species and as Least Concern on the Red List of Fauna in the Federation of Bosnia and Herzegovina, the species is also listed in the Annex I of the Birds Directive. During the 12-month monitoring period no nesting pairs or resting or

Scientific name	Common name	Conservation status	EIB Criteria met	CH/HVB	Comment on species distribution and presence in the Project Area of Influence
					breeding sites were recorded in the Project AoI, Therefore, the species cannot be categorised as regularly occurring in the Project AoI. Vagrant species. The Grey-faced Woodpecker does not meet the EIB threshold for High Value Biodiversity or Critical Habitat.
Picus viridis	Eurasian Green Woodpecker	IUCN LC	N/A	N/A	Species confirmed during field survey. The Eurasian Green Woodpecker does not meet the EIB threshold for High Value Biodiversity or Critical Habitat. The species is listed as Least Concern on the IUCN Red list of Threatened Species. No criterions were met, the Eurasian Green Woodpecker is not a species of conservation concern.
Prunella modularis	Hedge Accentor	IUCN LC	N/A	N/A	Species confirmed during field survey. The Hedge Accentor does not meet the EIB threshold for High Value Biodiversity or Critical Habitat. The species is listed as Least Concern on the IUCN Red list of Threatened Species. No criterions were met, the Hedge Accentor is not a species of conservation concern.
Regulus ignicapillus	Firecrest	IUCN LC	N/A	N/A	Species confirmed during field survey. The Firecrest does not meet the EIB threshold for High Value Biodiversity or Critical Habitat. The species is listed as Least Concern on the IUCN Red list of Threatened Species. No criterions were met, the Firecrest is not a species of conservation concern.
Regulus regulus	Goldcrest	IUCN LC	N/A	N/A	Species confirmed during field survey. The Goldcrest does not meet the EIB threshold for High Value Biodiversity or Critical Habitat. The species is listed as Least Concern on the IUCN Red list of Threatened Species. No criterions were met, the Goldcrest is not a species of conservation concern.
Saxicola rubetra	Whinchat	IUCN LC	N/A	N/A	Species confirmed during field survey. The Whinchat does not meet the EIB threshold for High Value Biodiversity or Critical Habitat. The species is listed as Least Concern on the IUCN

Scientific name	Common name	Conservation status	EIB Criteria met	CH/HVB	Comment on species distribution and presence in the Project Area of Influence
					Red list of Threatened Species. No criterions were met, the Whinchat is not a species of conservation concern.
Serinus serinus	European Serin	IUCN LC	N/A	N/A	Species confirmed during field survey. The European Serin does not meet the EIB threshold for High Value Biodiversity or Critical Habitat. The species is listed as Least Concern on the IUCN Red list of Threatened Species. No criterions were met, the European Serin is not a species of conservation concern.
Sitta europaea	Wood Nuthatch	IUCN LC	N/A	N/A	Species confirmed during field survey. The Black-billed Magpie does not meet the EIB threshold for High Value Biodiversity or Critical Habitat. The species is listed as Least Concern on the IUCN Red list of Threatened Species. No criterions were met, the Black-billed Magpie is not a species of conservation concern.
Streptopelia turtur	European turtle dove	IUCN VU; FBIH LC; BD I	N/A	N/A	Species confirmed during field survey. The European turtle dove is listed as Vulnerable on the IUCN Red list of Threatened Species and as Least Concern on the Red List of Fauna in the Federation of Bosnia and Herzegovina, the species is also listed in the Annex I of the Birds Directive. During the 12-month monitoring period no nesting pairs or resting or breeding sites were recorded in the Project AoI, Therefore, the species cannot be categorised as regularly occurring in the Project AoI. Vagrant species. The European turtle dove does not meet the EIB threshold for High Value Biodiversity or Critical Habitat.
Sturnus vulgaris	Common Starling	IUCN LC	N/A	N/A	Species confirmed during field survey. The Common Starling does not meet the EIB threshold for High Value Biodiversity or Critical Habitat. The species is listed as Least Concern on the IUCN Red list of Threatened Species. No criterions were met, the Common Starling is not a species of conservation concern.
Sylvia atricapilla	Blackcap	IUCN LC	N/A	N/A	Species confirmed during field survey. The Blackcap does not meet the EIB threshold for High Value Biodiversity or Critical Habitat. The species is listed as Least Concern on the IUCN

Scientific name	Common name	Conservation status	EIB Criteria met	CH/HVB	Comment on species distribution and presence in the Project Area of Influence
					Red list of Threatened Species. No criterions were met, the Blackcap is not a species of conservation concern.
Sylvia borin	Garden Warbler	IUCN LC	N/A	N/A	Species confirmed during field survey. The Garden Warbler does not meet the EIB threshold for High Value Biodiversity or Critical Habitat. The species is listed as Least Concern on the IUCN Red list of Threatened Species. No criterions were met, the Garden Warbler is not a species of conservation concern.
Sylvia communis	Common Whitethroat	IUCN LC	N/A	N/A	Species confirmed during field survey. The Common Whitethroat does not meet the EIB threshold for High Value Biodiversity or Critical Habitat. The species is listed as Least Concern on the IUCN Red list of Threatened Species. No criterions were met, the Common Whitethroat is not a species of conservation concern.
Sylvia curruca	Lesser Whitethroat	IUCN LC	N/A	N/A	Species confirmed during field survey. The Lesser Whitethroat does not meet the EIB threshold for High Value Biodiversity or Critical Habitat. The species is listed as Least Concern on the IUCN Red list of Threatened Species. No criterions were met, the Lesser Whitethroat is not a species of conservation concern.
Troglodytes troglodytes	Winter Wren	IUCN LC	N/A	N/A	Species confirmed during field survey. The Winter Wren does not meet the EIB threshold for High Value Biodiversity or Critical Habitat. The species is listed as Least Concern on the IUCN Red list of Threatened Species. No criterions were met, the Winter Wren is not a species of conservation concern.
Turdus philomelos	Song Thrush	IUCN LC; FBIH LC; BD I	N/A	N/A	Species confirmed during field survey. The Song Thrush is listed as Least Concern on the IUCN Red list of Threatened Species and as Least Concern on the Red List of Fauna in the Federation of Bosnia and Herzegovina, the species is also listed in the Annex I of the Birds Directive. During the 12-month monitoring period no nesting pairs or resting or breeding sites were recorded in the Project AoI, Therefore, the species cannot be categorised as regularly occurring in the Project AoI. Vagrant species.

Scientific name	Common name	Conservation status	EIB Criteria met	CH/HVB	Comment on species distribution and presence in the Project Area of Influence
					The Song Trush does not meet the EIB threshold for High Value Biodiversity or Critical Habitat.
Turdus pilaris	Fieldfare	IUCN LC; FBIH LC; BD I	N/A	N/A	Species confirmed during field survey. The Fieldfare is listed as Least Concern on the IUCN Red list of Threatened Species and as Least Concern on the Red List of Fauna in the Federation of Bosnia and Herzegovina, the species is also listed in the Annex I of the Birds Directive. During the 12-month monitoring period no nesting pairs or resting or breeding sites were recorded in the Project AoI, Therefore, the species cannot be categorised as regularly occurring in the Project AoI. Vagrant species. The Fieldfare does not meet the EIB threshold for High Value Biodiversity or Critical Habitat.
Turdus viscivorus	Mistle Thrush	IUCN LC; FBIH LC; BD II B	N/A	N/A	Species confirmed during field survey. The Mistle Thrush does not meet the EIB threshold for High Value Biodiversity or Critical Habitat. The species is listed as Least Concern on the IUCN Red list of Threatened Species and as Least Concern on the Red List of Fauna in the Federation of Bosnia and Herzegovina, the species is also listed in the Annex II part B of the Birds Directive. No criterions were met, the Mistle Thrush is not a species of conservation concern.
Upupa epops	Eurasian Hoopoe	IUCN LC	N/A	N/A	Species confirmed during field survey. The Eurasian Hoopoe does not meet the EIB threshold for High Value Biodiversity or Critical Habitat. The species is listed as Least Concern on the IUCN Red list of Threatened Species. No criterions were met, the Meadow Pipit is not a species of conservation concern.
Bats - The project does not lead to a net reduction in the global and/or national/regional population of any Critically Endangered or Endangered species					
Pipistrellus pipistrellus	Common pipistrelle	IUCN LC; HD IV	N/A	N/A	Species confirmed during field surveys. Widespread in Europe and Bosnia and Herzegovina. **EOO greater than 50,000 km²**. The range of the Common pipistrelle extends from the British Isles through southern Scandinavia, over much of Europe to the Volga and Caucasus. It also occurs through parts of north-western Africa (Morocco, Algeria and Tunisia) and south-west

Scientific name	Common name	Conservation status	EIB Criteria met	CH/HVB	Comment on species distribution and presence in the Project Area of Influence
					Asia to central and eastern Asia. Trees and woodland are important habitat features for common pipistrelles. Trees close to roosts provide cover as bats emerge. When foraging, they tend to follow woodland edges to aid navigation. Hunting often takes place close to rivers and other water features, as this is where the bat's insect prey is most abundant. The Common pipistrelle is listed as Least Concern in the IUCN Red List of Threatened Species and is listed in the Annex IV of the Habitats Directive. It is important to note that during the 12-month survey, from July of 2021 till June of 2022, not bat shelters, roosting places, hibernation, and maternity colonies were found in the Project AoI. The search was conducted by using manual and automatic bat detectors and visual inspection of the area for speleological objects. Bat activity indexes obtained using manual bat detector from the ground varied from 0.58 – 3.23 during months with bat activity at the site. Obtained values are correspondent with *low* to *moderate* activity of bats in the surveyed area. Moderate bat activity was recorded during summer and autumn in the Project AoI. During the spring months (spring migration), *low* bat activity was recorded in the Project AoI. Due to no recordings on shelters, roost or speleological objects that could support hibernation and muternity colonies, the Common pipistrelle could not be categorised as regularly occuring in the Project AoI. Therefore, despite being listed in Annex IV of the Habitats Directive, the species does not meet Criterion 2 for Critical Habitat. The location of the future Wind Farm Poklecani is not an area of special importance for bats. Vagrant species.
Pipistrellus kuhlii	Kuhl's pipistrelle	IUCN LC; HD II, IV	N/A	N/A	Species confirmed during field surveys. Widespread in Europe and Bosnia and Herzegovina. The species is distributed in the north-west of France, south of Germany, Austria, Slovakia, the Czech Republic, Poland, Bulgaria, Serbia, Romania, Ukraine to southern Russia. **EOO greater than 50,000 km^2.** The habitats where the species can be found include forests, deserts, urban areas, agriculture or pastures, and other habitats. However, the species is

Scientific name	Common name	Conservation status	EIB Criteria met	CH/HVB	Comment on species distribution and presence in the Project Area of Influence
					common in agricultural areas and urban areas. This species' diet is mainly constituted by Diptera, Hymenoptera and Coleoptera. The Kuhl's pipistrelle is listed as Least Concern in the IUCN Red List of Threatened Species and is listed in the Annex II and IV of the Habitats Directive. It is important to note that during the 12-month survey, from July of 2021 till June of 2022, not bat shelters, roosting places, hibernation, and maternity colonies were found in the Project AoI. The search was conducted by using manual and automatic bat detectors and visual inspection of the area for speleological objects. Bat activity indexes obtained using manual bat detector from the ground varied from 0.58 – 3.23 during months with bat activity at the site. Obtained values are correspondent with *low* to *moderate* activity of bats in the surveyed area. Moderate bat activity was recorded during summer and autumn in the Project AoI. During the spring months (spring migration), *low* bat activity was recorded in the Project AoI. Due to no recordings on shelters, roost or speleological objects that could support hibernation and muternity colonies, the Kuhl's pipistrelle could not be categorosed as regularlly occuring in the Project AoI. Therefore, despite being listed in Annex IV of the Habitats Directive, the species does not meet Criterion 2 for Critical Habitat. The location of the future Wind Farm Poklecani is not an area of special importance for bats. Vagrant species.
Rhinolophus euryale	Mediterranean horseshoe bat	IUCN VU; HD II, IV	N/A	N/A	Species confirmed during field surveys. Widespread in Europe and Bosnia and Herzegovina. The Mediterranean horseshoe bat is distributed in the Mediterranean area from northwest Africa over most Mediterranean islands (except the Balearics and Crete), throughout the Iberian Peninsula, southern France, Italy, the Balkan peninsula, Slovakia, Hungary, Romania and the western parts of Asia Minor. **EOO greater than 50,000 km^2.** The species tends to live in warm, wooded areas in foothills and mountains, preferring limestone areas with numerous caves and nearby water. Summer roosts and nurseries are in caves, although

Scientific name	Common name	Conservation status	EIB Criteria met	CH/HVB	Comment on species distribution and presence in the Project Area of Influence
					sometimes in warm attics in the north. More than 10 know localities know in Bosnia and Herzegovina. The Mediterranean horseshoe bat is listed as Vulnerable in the IUCN Red List of Threatened Species and is listed in the Annex IV of the Habitats Directive. It is important to note that during the 12-month survey, from July of 2021 till June of 2022, not bat shelters, roosting places, hibernation, and maternity colonies were found in the Project AoI. The search was conducted by using manual and automatic bat detectors and visual inspection of the area for speleological objects. Bat activity indexes obtained using manual bat detector from the ground varied from 0.58 – 3.23 during months with bat activity at the site. Obtained values are correspondent with *low* to *moderate* activity of bats in the surveyed area. Moderate bat activity was recorded during summer and autumn in the Project AoI. During the spring months (spring migration), *low* bat activity was recorded in the Project AoI. Due to no recordings on shelters, roost or speleological objects that could support hibernation and muternity colonies, the Mediterranean horseshoe bat could not be categorosed as regularlly occuring in the Project AoI. Therefore, despite being listed in Annex IV of the Habitats Directive, the species does not meet Criterion 2 for Critical Habitat.. The location of the future Wind Farm Poklecani is not an area of special importance for bats. Vagrant species.
Rhinolophus hipposideros	Lesser horseshoe bat	IUCN VU; HD II, IV	N/A	N/A	Species confirmed during field surveys. Widespread species in Europe and Bosnia and Herzegovina. *Rhinolophus hipposideros* is widely distributed in the Mediterranean area, occurring in North Africa and on most larger islands to Asia Minor and around the Black Sea. In Asia, it can be found in Kashmir, the Near East, Iran, Iraq and the Arabian Peninsula, as well as part of East Africa. The species inhabits agricultural mosaics, cropland, heathland and shrub, rivers and lakes, urban, and wetlands. EOO greater than 50,000 km^2.

Scientific name	Common name	Conservation status	EIB Criteria met	CH/HVB	Comment on species distribution and presence in the Project Area of Influence
					The Lesser horseshoe bat is listed as Vulnerable in the IUCN Red List of Threatened Species and is listed in the Annex IV of the Habitats Directive. It is important to note that during the 12-month survey, from July of 2021 till June of 2022, not bat shelters, roosting places, hibernation, and maternity colonies were found in the Project AoI. The search was conducted by using manual and automatic bat detectors and visual inspection of the area for speleological objects. Bat activity indexes obtained using manual bat detector from the ground varied from 0.58 – 3.23 during months with bat activity at the site. Obtained values are correspondent with *low* to *moderate* activity of bats in the surveyed area. Moderate bat activity was recorded during summer and autumn in the Project AoI. During the spring months (spring migration), *low* bat activity was recorded in the Project AoI. Due to no recordings on shelters, roost or speleological objects that could support hibernation and muternity colonies, the Lesser horseshoe bat could not be categorosed as regularlly occuring in the Project AoI. despite being listed in Annex IV of the Habitats Directive, the species does not meet Criterion 2 for Critical Habitat. The location of the future Wind Farm Poklecani is not an area of special importance for bats. Vagrant species.
Myotis myotis	Greater mouse-eared bat	IUCN NT; HD II, IV	N/A	N/A	Species confirmed during field surveys. Widespread species in Europe and Bosnia and Herzegovina. The greater mouse-eared bat can be found throughout Europe, with populations in most European countries except Denmark, Latvia, Estonia, Finland and the Scandinavian Peninsula. It is also found on many Mediterranean islands, such as Sicily, Malta, and the Gymnesian Islands. The species primarily inhabit caves and buildings such as churches and castles. They also dwell in relatively open, lightly wooded forests. **EOO is greater than 50,000 km^2.** More than 15 known localities are known in Bosnia and Herzegovina. The Greater mouse-eared bat is listed as Nearly Threatened in the IUCN Red List of Threatened Species and is listed in the Annex II and IV of the Habitats Directive. It is important to note that during the 12-month survey, from July of 2021 till June of 2022, not

Scientific name	Common name	Conservation status	EIB Criteria met	CH/HVB	Comment on species distribution and presence in the Project Area of Influence
					bat shelters, roosting places, hibernation, and maternity colonies were found in the Project AoI. The search was conducted by using manual and automatic bat detectors and visual inspection of the area for speleological objects. Bat activity indexes obtained using manual bat detector from the ground varied from 0.58 – 3.23 during months with bat activity at the site. Obtained values are correspondent with *low* to *moderate* activity of bats in the surveyed area. Moderate bat activity was recorded during summer and autumn in the Project AoI. During the spring months (spring migration), *low* bat activity was recorded in the Project AoI. Due to no recordings on shelters, roost or speleological objects that could support hibernation and muternity colonies, the Greater mouse-eared bat could not be categorosed as regularlly occuring in the Project AoI. Despite being listed in Annex IV of the Habitats Directive, the species does not meet Criterion 2 for Critical Habitat.The location of the future Wind Farm Poklecani is not an area of special importance for bats. Vagrant species.
Hypsugo savii	Savi's pipistrelle	IUCN LC; HD IV	N/A	N/A	Species confirmed during field surveys. Savi's pipistrelle can be found throughout Mediterranean Europe. It also stretches to Asia Minor and the Middle East. In Bosnia and Herzegovina, the species has more than eight known localities. **EOO is greater than 50,000 km^2.** The species inhabits both the coastal and mountainous habitats of the Mediterranean, including sparsely vegetated landscapes. *H. savii* roosts in tree holes and cliff crevices during summer and can hibernate in underground sites during winter. The Savi's pipistrelle is listed as Nearly Threatened in the IUCN Red List of Threatened Species and is listed in the Annex II and IV of the Habitats Directive. It is important to note that during the 12-month survey, from July of 2021 till June of 2022, not bat shelters, roosting places, hibernation, and maternity colonies were found in the Project AoI. The search was conducted by using manual and automatic bat detectors and visual inspection of the area for speleological objects. Bat activity indexes obtained using manual bat detector from the ground varied from 0.58 – 3.23 during months with bat activity at the site. Obtained

Scientific name	Common name	Conservation status	EIB Criteria met	CH/HVB	Comment on species distribution and presence in the Project Area of Influence
					values are correspondent with *low* to *moderate* activity of bats in the surveyed area. Moderate bat activity was recorded during summer and autumn in the Project AoI. During the spring months (spring migration), *low* bat activity was recorded in the Project AoI. Due to no recordings on shelters, roost or speleological objects that could support hibernation and muternity colonies, the Savi's pipistrelle could not be categorosed as regularlly occuring in the Project AoI. Therefore, despite being listed in Annex IV of the Habitats Directive, the species does not meet Criterion 2 for Critical Habitat.. The location of the future Wind Farm Poklecani is not an area of special importance for bats. Vagrant species.
Vespertilio murinus	Parti-coloured bat	IUCN LC; HD IV	N/A	N/A	Species confirmed during field surveys. The species is widely distributed from France, Britain and the Netherlands in the west through central, northern, and eastern Europe and Siberia to the Pacific coast. In the Mediterranean region the species occurs from southeastern France eastwards through northern Italy and Switzerland into most of the Balkans. The Parti-coloured bat inhabits mountain forests, open agricultural areas, villages, and cities. They are migratory species. **EOO greater than 50,000 km^2.** The Part-colored bat is listed as Least Concern in the IUCN Red List of Theatened Species and is listed in the Annex IV of the Habitats Directive. It is important to note that during the 12-month survey, from July of 2021 till June of 2022, not bat shelters, roosting places, hibernation, and maternity colonies were found in the Project AoI. The search was conducted by using manual and automatic bat detectors and visual inspection of the area for speleological objects. Bat activity indexes obtained using manual bat detector from the ground varied from 0.58 – 3.23 during months with bat activity at the site. Obtained values are correspondent with *low* to *moderate* activity of bats in the surveyed area. Moderate bat activity was recorded during summer and autumn in the Project AoI. During the spring months (spring migration), *low* bat activity was recorded in the Project AoI.

Scientific name	Common name	Conservation status	EIB Criteria met	CH/HVB	Comment on species distribution and presence in the Project Area of Influence
					Due to no recordings on shelters, roost or speleological objects that could support hibernation and muternity colonies, the Parti-colored could not be categorosed as regularlly occuring in the Project AoI. Therefore, despite being listed in Annex IV of the Habitats Directive, the species does not meet Criterion 2 for Critical Habitat.The location of the future Wind Farm Poklecani is not an area of special importance for bats. Vagrant species.
Plecotus austriacus	Grey long-eared bat	IUCN LC; HD IV.	N/A	N/A	Species confirmed during field surveys. Widespread in Europe and Bosnia and Herzegovina. **EOO greater than 50,000 km².** Occurs throughout the Mediterranean area and on the Balearics, Sardinia, Corsica and Sicily. No records from North Africa, Malta, Crete, Cyprus and the Near East. In the North, it reaches southern England but not the Baltic Sea coast. The species inhabits pastures and meadows. The Grey long-eared bat is listed as Least Concern in the IUCN Red List of Threatened Species and is listed in the Annex IV of the Habitats Directive. It is important to note that during the 12-month survey, from July of 2021 till June of 2022, not bat shelters, roosting places, hibernation, and maternity colonies were found in the Project AoI. The search was conducted by using manual and automatic bat detectors and visual inspection of the area for speleological objects. Bat activity indexes obtained using manual bat detector from the ground varied from 0.58 – 3.23 during months with bat activity at the site. Obtained values are correspondent with *low* to *moderate* activity of bats in the surveyed area. Moderate bat activity was recorded during summer and autumn in the Project AoI. During the spring months (spring migration), *low* bat activity was recorded in the Project AoI. Due to no recordings on shelters, roost or speleological objects that could support hibernation and muternity colonies, the Grey long-eared bat could not be categorosed as regularlly occuring in the Project AoI. Therefore, despite being listed in Annex IV of the Habitats Directive, the species does not meet Criterion 2 for Critical Habitat.The location of

Scientific name	Common name	Conservation status	EIB Criteria met	CH/HVB	Comment on species distribution and presence in the Project Area of Influence
					the future Wind Farm Poklecani is not an area of special importance for bats. Vagrant species.
Miniopterus schreibersii	Schreiber's Bat	IUCN NT; HD II, IV	N/A	N/A	Species confirmed during field surveys. Widespread in Europe and Bosnia and Herzegovina. **EOO greater than 50,000 km².** Occurs from south-western Europe, in the Balkan and Carpathian Mountains and in the Caucasus. Patchily distributed over its range in some large and vulnerable colonies. This species seems to favour hard-wood forest-rich habitats and mainly roosts in colonies in karst caves, mines, and cellars with other cave-dwelling species. More than 10 known localities in Bosnia and Herzegovina. The Schreiber's Bat is listed as Nearly Threatened in the IUCN Red List of Threatened Species and is listed in the Annex II and IV of the Habitats Directive. It is important to note that during the 12-month survey, from July of 2021 till June of 2022, not bat shelters, roosting places, hibernation, and maternity colonies were found in the Project AoI. The search was conducted by using manual and automatic bat detectors and visual inspection of the area for speleological objects. Bat activity indexes obtained using manual bat detector from the ground varied from 0.58 – 3.23 during months with bat activity at the site. Obtained values are correspondent with *low* to *moderate* activity of bats in the surveyed area. Moderate bat activity was recorded during summer and autumn in the Project AoI. During the spring months (spring migration), *low* bat activity was recorded in the Project AoI. Due to no recordings on shelters, roost or speleological objects that could support hibernation and muternity colonies, the species could not be categorosed as regularlly occuring in the Project AoI. Therefore, despite being listed in Annex IV of the Habitats Directive, the species does not meet Criterion 2 for Critical Habitat.The location of the future Wind Farm Poklecani is not an area of special importance for bats. Vagrant species.
Invertebrates - The project does not lead to a net reduction in the global and/or national/regional population of any Critically Endangered or Endangered species					

Scientific name	Common name	Conservation status	EIB Criteria met	CH/HVB	Comment on species distribution and presence in the Project Area of Influence
Parnasius appolo	Apollo	IUCN NT; FBIH VU; HD IV	N/A	N/A	Species confirmed during field surveys. Widespread species in Europe and Bosnia and Herzegovina. **EOO greater than 50,000 km^2**. Species prefers mountain meadows and pastures, where there are usually cold winters and warm summers. More than 30 known localities in Bosnia and Herzegovina. The Apollo butterfly is listed as Nearly Threatened in the IUCN Red List of Threatened Species, Vulnerable in the Red List of Fauna of Federation of Bosnia and Herzegovina and is listed in the Annex IV of the Habitats Directive. However, the species does not meet the EIB Criterion 2 for Critical Habitat. During field survey, only two individuals of the Apollo butterflies were observed. The species is not regularly occurring in the Project AoI. Notably, the Project AoI habitat was found to be unsuitable for the Apollo butterfly complete life cycle. Consequently, these observed individuals are likely in transit, due to suitable habitats in the vicinity of the Project AoI.
Zerynthia polyxena	Southern festoon	IUCN LC; FBIH NT; HD IV	N/A	N/A	Species confirmed during field surveys. Widespread in Europe and Bosnia and Herzegovina. Species inhabits warm, sunny, and open places such as grassy herb-rich meadows, vineyards, riverbanks, and wetlands. Species has a wide range of suitable habitats in Bosnia and Herzegovina; therefore, its range is not restricted to the Project AoI. **EOO greater than 50,000 km^2.** The species has more than 20 known localities in Bosnia and Herzegovina. The Southern festoon is listed as Least Concern in the IUCN Red List of Threatened Species, Nearly Threatened in the Red List of Fauna of Federation of Bosnia and Herzegovina and is listed in the Annex IV of the Habitats Directive. However, the species does not meet the EIB Criterion 2 for Critical Habitat. During field survey, only two individuals of the Sothern festoon were observed. The species is not regularly occurring in the Project AoI. Notably, the Project AoI habitat was found to be unsuitable for the Apollo butterfly complete life cycle. Consequently, these observed individuals are likely in transit, due to suitable habitats in the vicinity of the Project AoI.

8 Summary of High Value Biodiversity species

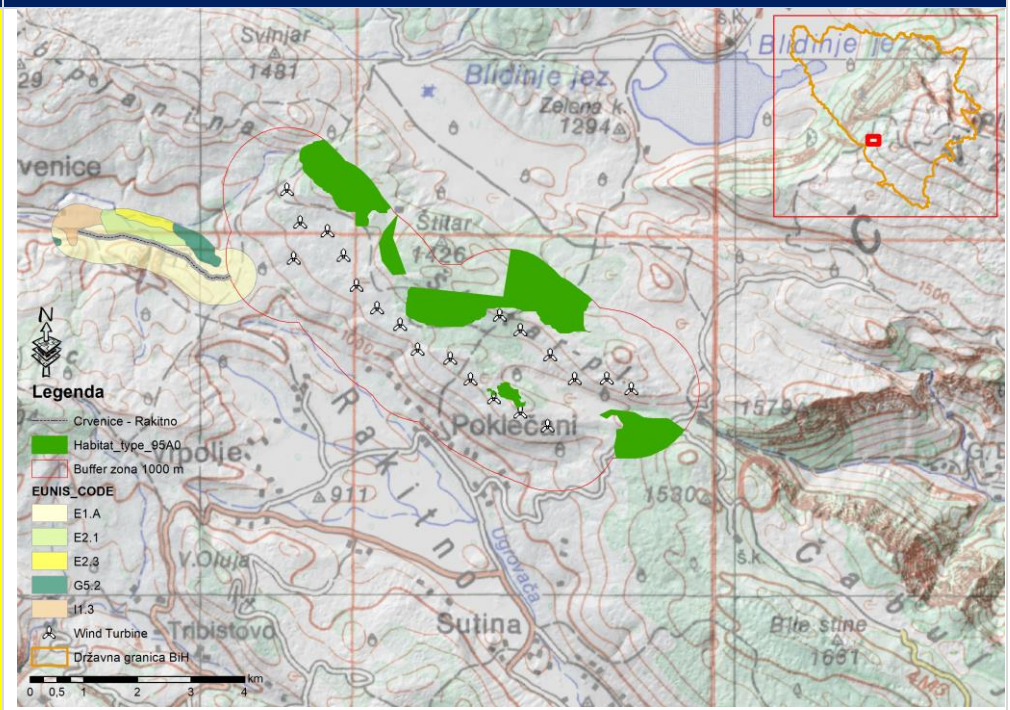
Table 23 list **HVB species and habitats**. During the field survey, no species or habitats were recorded that would trigger the **Critical Habitat**. Habitat 95A0 met the Criterion 8: Threatened or unique ecosystems. Additionally, bird species observed in the survey triggered Criterion 7: Population of critically endangered, endangered, or vulnerable species, as defined by the IUCN Red List of threatened species and in relevant legislation – a) The EAAA for regularly occurring species and their habitats is listed in Annex II of Habitats Directive, Annex I of Birds Directive, or Resolution 6 of Bern Convention.

Table 23: Summery of main findings. Species that met the EIB High Value Biodiversity (HVB) criteria.

Scientific name	Common name	Conservation status	EIB Criteria met	CH/HVB	Comment
Habitats – The Project will not lead to long term instability of the habitat					
95A0	High oro-Mediterranean pine forests	**Annex I of HD**	**c8a**	**HVB**	95A0 habitat type is present in the Project Area of Influence in proximity of wind generator 8, 12, 13 and 15. The habitat meets the criteria for High Value Biodiversity, being listed in the Annex I of the Habitats Directive. It is a common and widespread habitat in Europe and Bosnia and Herzegovina, as well as in the Project Area of Influence in multiple locations. The EAAA around the wind generators 8, 12, 13 and 15 will be impacted by construction works (construction of the main road for the access to wind generators and machine movement and placement of machines). The anticipated impact is minor, considering the high level of fragmentation or patchy distribution of the habitat itself. Despite employing micrositing to minimize environmental impacts, some level of disturbance to habitats is inevitable. To address these effects, revitalization measures will be recommended. Revitalization involves actively restoring or enhancing habitats that have been impacted by, in this case, Project activities. The goal of revitalization efforts is to achieve no loss and if possible, a net positive impact in ecological health compared to the pre-disturbance conditions. Approximately 0.8 ha will be under direct impact. It is advised to avoid any unnecessary access roads, machine movement in the area where the habitat is present outside the planned Project construction site. Since habitat loss and

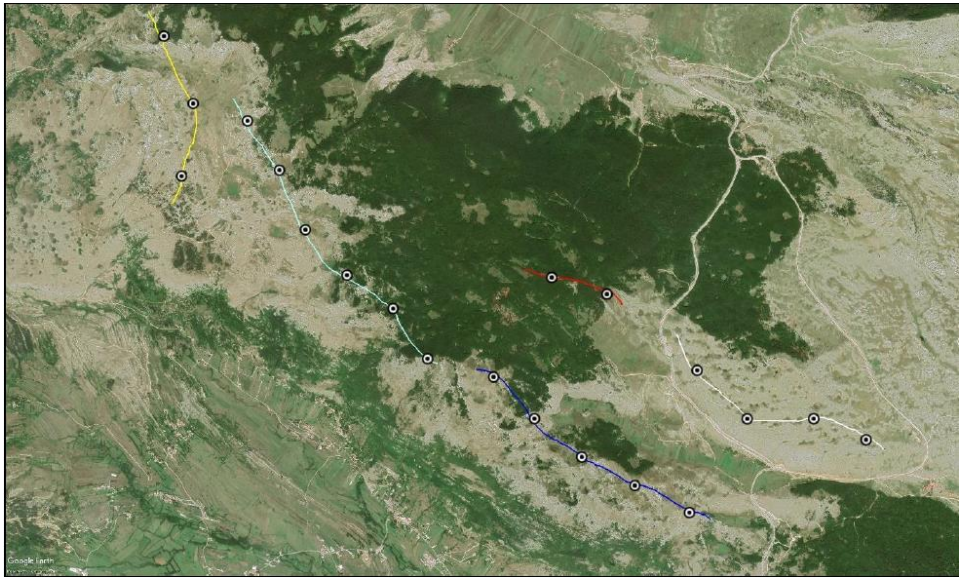
Scientific name	Common name	Conservation status	EIB Criteria met	CH/HVB	Comment
					fragmentation will be caused by construction work, it is necessary to achieve no loss by revitalization of surrounding habitats, at least 0.6 Qha of habitat gain must be achieved by planting autochthonous plant species and other measures to be further developed in the Biodiversity Management Plan (a habitat quality of 0.75 has been assessed for the impacted area). The calculation is based on the EBRD methodology for loss- gain analysis[40]. To avoid a long-term negative impact on habitats, it is necessary to implement and follow detailed mitigation measures that will be specified in the Biodiversity Management Plan for the WF Poklecani. To minimize or avoid habitat fragmentation avoidance or mitigation measures should include: > Zoning - in this case an avoidance measure is to mark, if feasible, 95A0 habitat areas and designate them as exclusion zones for Project activities. This prevents habitat further fragmentation if the habitat. > Revitalization - if avoidance measures cannot be implemented, it is necessary to ensure a net gain of vegetation by planting native plant species. This Revitalization Plan should be written by a flora and habitat expert, as the revitalization process will be conditioned by seasons and the types of species that survive on rocky and similar substrates. > Furthermore, to prevent a larger area from being affected by machinery, it is necessary to designate machine locations and machine movement paths outside the habitat itself. EAAA below (Figure 12).

[40] Guidance note EBRD Performance Requirement 6: Biodiversity conservation and sustainable management of living natural resources, March 2023

Scientific name	Common name	Conservation status	EIB Criteria met	CH/HVB	Comment
					 *Figure 12: EAAA for 95A0 in the Project Area of Influence.*

Birds - The project does not lead to a net reduction in the global and/or national/regional population of any Critically Endangered or Endangered species over time

The Project Area of Influence is not an important resting site for recorded bird species. Regarding breeding birds, especially songbirds, no endangered species at the European level were recorded except *Alectoris graeca*, and *Circaetus gallicus*, species listed in the Annex I of the Birds Directive. EAAA of all HVB bird species are individually present bellow, but mitigation measures are not individually written for all species. Where mitigation measures are not present, general measures written in the BMP apply for species.

Scientific name	Common name	Conservation status	EIB Criteria met	CH/HVB	Comment
Alectoris graeca	Rock Partrige	BD I; IUCN NT	**C7a**	**HVB**	The species meets the criteria for HVB being listed in the Annnex I of the Birds Directive. Bellow are transect routes recorded duting field surveys. The species Rock Partrige was recorded only in the yellow marked transect rout and in low occurance rate. 0.05 pairs/ha on a transect of 1.94 km long. To achieve no loss, machine platous should be restricted in this area. Controlled felling of trees with special measures will be specified in the BMP.  *Figure 13: Transects routes in Wind Park area for monitoring breeding birds and bats in all seasons, yellow transect is where Alectoris graeca was recorded.*

Scientific name	Common name	Conservation status	EIB Criteria met	CH/HVB	Comment
Bubo bubo	Eagle Owl	BD I	**C7a**	**HVB**	The species meets the criteria for HVB being listed in the Annnex I of the Birds Directive. The species is widespread in Bosnia and Herzegovina. The Eagle Owl is a nocturnal species and to achive mitigation in impact during the duration of the Project especially during the pre-construction and construction phase, light pollution and noise pollution should be mitigated. Specific measures will be listed in the BMP.  *Figure 14: Bubo bubo (Eagle owl) records.*
Circaetus gallicus	Short-toed Snake Eagle	IUCN LC; FBIH LC; BD I	**C7a**	**HVB**	The species meets the criteria for HVB being listed in the Annnex I of the Birds Directive. To avoid loss, it is advised to restrict machine passes and deforestation outside the planned Project footprint, especially in areas that are outside the main road of wind generators. To reduce the effects of construction noise and human disturbance on the species, construction should be completed outside of the breeding season (March to August) for the wind turbines 1, 2, 4, 19 and 20. If any breeding signs are recognized during construction, a qualified Ornithologist will be informed promptly for a thorough assessment and instructions on further measures. The BMP will be upgraded based on the necessary measures.

Figure 15: Two EAAAs of bird species Circaetus gallicus *HVB*

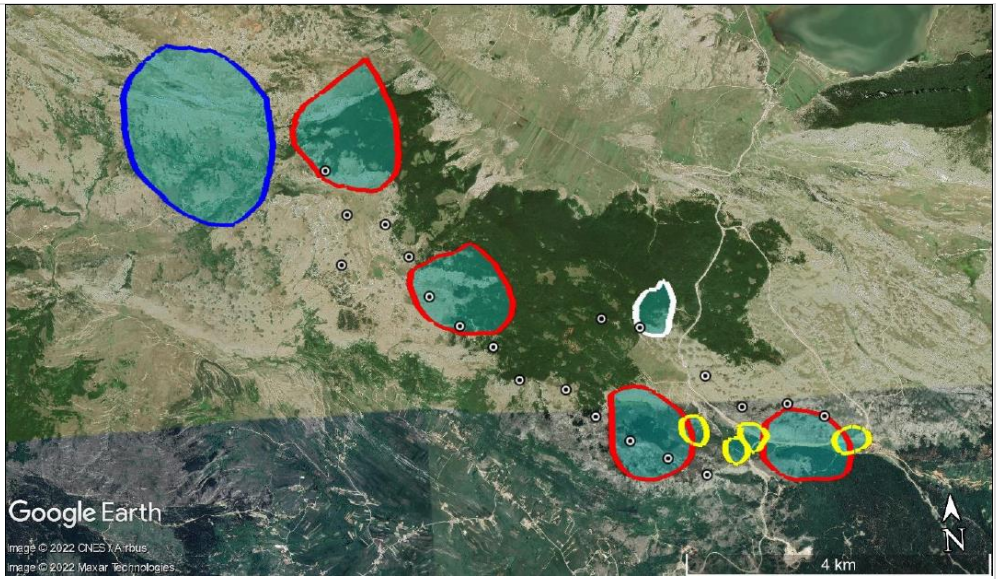


Figure 16: Breeding site of Circaetus gallicus (blue circle).

In order to avoid disturbance or harm to species *Circaetus gallicus* following measures are advised:

- All works involving the removal of vegetation including, but not limited to, trees or hedgerows, will be undertaken outside of the location where the breeding site was located. Construction works will be programmed to avoid disturbance during construction periods. Regarding the potential of collision risk specific mitigation measures will be listed in the BMP.
- Mitigation measures for reducing the potential for collision risk can include passive measures. Such measures consist of alternations of habitats, and design or visual modifications of wind turbines, such as painting or lighting.
- Habitat management measures consist of on-site or off-site habitat alterations to reduce the risk of bird collision with wind turbines. The aim of on-site

Scientific name	Common name	Conservation status	EIB Criteria met	CH/HVB	Comment
					alterations is to decrease the bird activity within the wind farm. Such measures include clearing-cutting forests or reducing the attractiveness of the vegetation around the wind turbines either for the birds or their preys. In contrast, off-site alterations aim to promote bird activity in areas outside the wind farm. The measures include the creation of new areas for foraging habitat and breeding sites away from the wind farm. The procedure consists of superficially tilling the soil (3-8 cm deep) at the base of wind turbines by using a plough, tiller or cultivator once a year for two years.
Lullula arborea	Wood Lark	IUCN LC; FBIH LC; BD I	**C7a**	**HVB**	The species meets the criteria for HVB being listed in the Annnex I of the Birds Directive. The site contains potential suitable breeding habitat near wind generators. Transect yellow is 1.94 km long and the density of pairs for the Wood Lark was 0.43 (pairs/ha), density in the light blue transect (length 3.23 km) is 0.12 pairs/ha and dark blue transect (length 2.69 km) is 0.42 pairs/ha. Based on the breeding survey, the density of pairs is low. If breeding sites are present during the construction activities following measures are advised: > Project construction should be paused from March to July > Feathering the blades or shut-down on demand (i.e.stopping the rotors when a Wood Lark moves through the site). The shut-down can be triggered by human observers. Given the low flight frequency of the speciesat the site, it should not have a significant economic impact on power output.

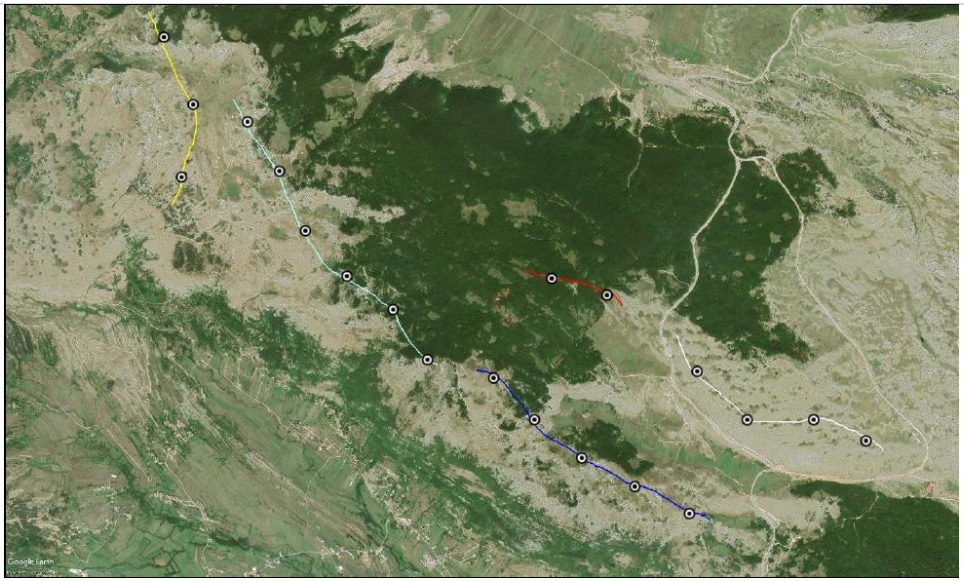


Figure 17: Lullula arborea (Wood Lark) breeding site, yellow, light and dark blue transect.

EAAA below.

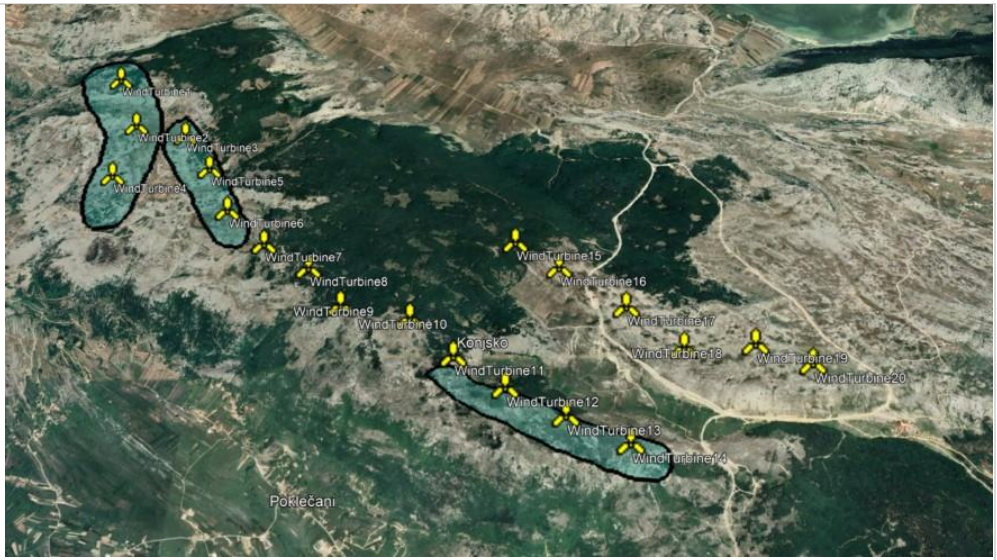


Figure 18: Three EAAA for Lullula arborea (Wood Lark).

The constructor should adhere to a strict plan by following the blueprint of the project without change in main road and access roads. This includes the following:

- Existing roads should be used where possible and not changed without consultation and monitoring of an Ornithologist (in areas where breeding sites were recorded);
- The minimum footprint areas of infrastructure should be used wherever possible, including road widths and lengths;
- Machine activities outside planned roads should be avoided;
- Following construction, rehabilitation of all areas disturbed (e.g. temporary access roads and machine areas) must be undertaken and to this end a habitat restoration plan is to be developed by a biodiversity expert.

Scientific name	Common name	Conservation status	EIB Criteria met	CH/HVB	Comment
Lanius collurio	Red-backed Shrike	IUCN LC; FBIH LC; BD I	**C7a**	**HVB**	The species meets the criteria for HVB being listed in the Annnex I of the Birds Directive. The site contains potential suitable breeding habitat near wind generators. Transect yellow is 1.94 km long and the density of pairs for the Red-backed Shrike is 0.52 (pairs/ha), density in the light blue transect (length 3.23 km) is 0.42 pairs/ha, density in the dark blue transect (length 2.69 km) is 0.53 pairs/ha, and the density in the white transect (length 2.37 km) is 0.32 pairs/ha. Based on the breeding survey, the density of pairs per hectar is low. Since breeding sites have been recorded around the wind turbines, it is advised to monitor the presence of breeding pairs. If the presence of a breeding pair is confirmed, following measures are advised: > construction activities within 200 m of the nest should not take place in the period of May to August, unless the Ornithologist concludes the birds will not be displaced and disturbed during construction activities. > Turbine management (shut-down on demand). Feathering the blades or shut-down on demand (i.e.stopping the rotors when a Red-backed shrike moves through the site). The shut-down can be triggered by human observers. Given the low flight frequency of the species at the site, it should not have a significant economic impact on power output. > For all breeding birds on the Project site, it is advised to have a seasonal monitoring by a qualified Ornithologist to identify the signs that indicate possible breeding by Red-backed Shrike, Wood Lark, and Eurasian Blackbird. If any breeding signs are recognized during construction, a qualified Ornithologist will be informed promptly for a thorough assessment and instructions on further measures. The BMP will be upgraded based on the necessary measures.

Scientific name	Common name	Conservation status	EIB Criteria met	CH/HVB	Comment
					EAAA below.  *Figure 19: Four EAAA for Lanius collurio (Red-backed Shrike).*

Scientific name	Common name	Conservation status	EIB Criteria met	CH/HVB	Comment
Turdus merula	Eurasian Blackbird	IUCN LC; FBIH LC; BD I	**C7a**	**HVB**	The species meets the criteria for HVB being listed in the Annnex I of the Birds Directive. The site contains potential suitable breeding habitat near wind generators. Transect dark blue is 2.69 km long and the density of pairs for the Eurasian Blackbird is 0.18 (pairs/ha), density in the red transect (length 0.99 km) is 0.16 pairs/ha. Based on the breeding survey, the density of pairs per hectar is low. Since breeding sites have been recorded around the wind turbines, a field survey should be conducted during the breeding season of the species. If the presence of a breeding pair is confirmed following activites are advised: > construction activities within 200 m of the nest should not take place in the period of March to July, unless the Ornithologist concludes the birds will not be displaced and disturbed during construction activities. Mitigation measures include active and passive measures as mentioned with other species. > Passive measures include Habitat management to decrease the bird activity within the WF. It is advised to reduce attractivness of the vegetation around the WTs.Painting of rotor balde to reduce the motion smear, this way the contrast of the blades is increased. > Turbine management (shut-down on demand). Feathering the blades or shut-down on demand (i.e.stopping the rotors when a Wood Lark moves through the site). The shut-down can be triggered by human observers. Given the low flight frequency of the speciesbat the site, it should not have a significant economic impact on power output. > For all breeding birds on the Project site, it is advised to have a seasonal monitoring by a qualified Ornithologist to identify the signs that indicate possible breeding by Red-backed Shrike, Wood Lark, and Eurasian Blackbird.

Scientific name	Common name	Conservation status	EIB Criteria met	CH/HVB	Comment
					If any breeding signs are recognized during construction, a qualified Ornithologist will be informed promptly for a thorough assessment and instructions on further measures. The BMP will be upgraded based on the necessary measures.  *Figure 20: Three EAAA for Turdus merula (Euroasian Blackbird)*

9 Biodiversity Management Plan of the WF Poklecani (BMP)

Critical Habitats have not been triggered for this project but there are a number of HVBs that will need to be safeguarded during the construction, operational and decommissioning phases to ensure no loss of these features. For all species that trigger the HVB criteria mitigation measures and monitoring for the species will be included in the Biodiversity Management Plan. Monitoring will need to be completed to ensure no loss of HVBs during all Project phases. Filed surveys during the construction and operational phase, at appropriate times of the year, will need to be completed to establish presence/absence of species. If mammals and reptiles are found to be present in the Project area additional mitigation (e.g. limited translocation to a suitable receptor site – Biodiversity Chance Find Procedure) will be required. The BMP will contain mitigation measures for bats and other species listed in Annex IV of the Habitats Directive that were confirmed during the field survey but were categorised as ‘’vagrant’’ rather than ‘’regularly occurring’’ in the Project AoI. For bat species classified as "vagrant," the BMP will outline targeted measures to minimize potential impacts that the project activities may have.

10 ANNEX

Error! Reference source not found. is the table adapted from the EBRD policy and is used as a template to define High Value Biodiversity criteria for the p urpose of creating the document. Instead of the term Priority Biodiversity Feature, the term High Value Biodiversity has been adapted to follow PBF criteria. It is important to note that species and habitats that met the basic criteria for Critical Habitat or High Value Biodiversity are additionally categorized as "regularly occurring" or "vagrant" according to IUCN. The adapted terms are shown in **bold yellow** letters in the table.

Table 24: Criteria for High Value Biodiversity and Critical Habitat

Criterion	Priority Biodiversity Feature**/ High Value Biodiversity**	**Critical Habitat**
1. Priority ecosystems		
Threatened ecosystems Habitats listed in Annex 1 of EU Habitats Directive (EU members only) or Resolution 4 of Bern Convention (signatory nations only) IUCN Red-List EN or CR ecosystems *+ National priority ecosystem*	(a) EAAA is habitat type listed in Annex 1 of EU Habitats Directive or Resolution 4 of Bern Convention (b) EAAA** < 5% of the global extent of an ecosystem type with IUCN status of CR or EN (c) EAAA is an ecosystem identified for restoration/conservation by national systematic planning (e.g., EU 2030 Biodiversity Strategy)	*(PR6 para. 14-i)* (a) EAAA is habitat type listed in Annex 1 of EU Habitats Directive marked as “priority habitat type” (b) EAAA ≥5% of global extent of an ecosystem type with IUCN status of CR or EN (c) EAAA is ecosystem determined to be of high priority for conservation by national systematic conservation planning
2. Priority Species and their Habitats		
Threatened species Species and their habitats listed in EU Habitats Directive and Birds Directive (EU members only) or Bern Convention (signatory nations only) IUCN Red List EN or CR species IUCN Red List VU species	(a) EAAA for **regularly occurring 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% of global population OR < 5 reproductive units of a CR or EN species. (c) EAAA supports **regularly occurring** VU species	(PR6 para. 14-ii) (a) EAAA for species and their habitats listed in Annex IV of the Habitats Directive (See EU restrictions) (b) EAAA supports ≥ 0.5% of the global population AND ≥ 5 reproductive units of a CR or EN species (c) EAAA supports globally significant population of VU species necessary to prevent a change of IUCN Red List status to EN or CR, and satisfies threshold (b)

Nationally or regionally (e.g., Europe) listed EN or CR species	(d) EAAA for regularly occurring nationally or regionally listed EN or CR species	(d) EAAA for important concentrations of a nationally or regionally listed EN or CR species
Range-restricted species	(a) EAAA for regularly occurring range-restricted species	(PR6 para. 14-iii) (a) EAAA regularly holds ≥ 10% of global population AND ≥ 10 reproductive units of the species***
Migratory and congregatory species	(a) EAAA identified per Birds Directive or recognized national or international process as important for migratory birds (esp. wetlands) **(b) EAAA predictably supports congregations during periods of environmental stress**	(PR6 para. 14-iv) (a) EAAA sustains, on a cyclical or otherwise regular basis, ≥ 1 percent of the global population at any point of the species' lifecycle (b) EAAA predictably supports ≥10 percent of global population during periods of environmental stress

*Quantitative thresholds derived from IUCN Key Biodiversity Area Standard and aligned with International Finance Corporation's (IFC) Guidance Note 6 (rev. 2019)
**EAAA = ecologically appropriate area of analysis, as defined above
***The IUCN Key Biodiversity Areas standard cites the following definition for reproductive unit: "the minimum number and combination of mature individuals necessary to trigger a successful reproductive event at a site. Examples of five reproductive units include five pairs, five reproducing females in one harem, and five reproductive individuals of a plant species."