



TA4.1: Ornithology Report 2023

Ben Sca Redesign Wind Farm

Ben Sca Wind Farm Limited

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SLR Project No.: 405.064982.00001

31 January 2024

Revision: 01

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Acronyms and Abbreviations

EIA	Environmental Impact Assessment
GIS	Geographical Information System
HB	Height Band
MBBS	Moorland Breeding Bird Survey
NGR	National Grid Reference
NS	NatureScot
PCH	Potential Collision Height
SLR	SLR Consulting
SNH	Scottish Natural Heritage
THC	The Highland Council
VP	Vantage Point



1.0 Introduction

1.1 Background

SLR was commissioned by Ben Sca Wind Farm Limited (the client) in January 2023 to undertake ornithological surveys at the site of the consented Ben Sca Wind Farm and the adjacent consented Ben Sca Extension Wind Farm (the 'site'). The client intends to apply to The Highland Council (THC) for planning permission to amend the consented development, including changes to the turbine dimensions of the consented seven turbines of the Ben Sca Wind Farm (20/00013/FUL) and consented two turbines of the Ben Sca Extension Wind Farm (21/05767/FUL) (the Ben Sca Wind Farm Redesign referred to as the Proposed Development).

1.2 Site Description

The site, centred on OSGB¹ National Grid Reference (NGR) 132800, 848600, is located in the northwest of the Isle of Skye, on the Coishletter Estate and within THC administrative boundary. The site is located on moorland, used for shooting game, and commercial forestry production, approximately 2.5km to the southwest of the settlement of Edinbane and approximately 7km to the east of the settlement of Dunvegan.

1.3 Scope of Work

The scope of survey work was based on existing knowledge of the area and follows current NatureScot (NS) Guidance². This document reports on survey work carried out between January and December (inclusive) 2023 and full survey scope is provided in **Table 1-1**³.

A comparison between the data collected in 2023 and from the previous survey work on site, collected in 2018/19 for the consented Ben Sca Wind Farm, are compared in this report to give an overview of changes in bird usage of the site in recent years.

Table 1-1: Scope of Ornithological Survey Work (January – December 2023)

Survey Type	Summary Methodology (see Section 2 for further details)
Vantage Point (VP) Surveys	Based on 72 hours of survey between January and December 2023 from each of three VPs. Following modelling of areas of potential visibility, three VPs were considered to provide sufficient coverage of possible turbine locations under consideration at the time of survey (i.e., the area within the site boundary), plus appropriate buffer zones.
Moorland Breeding Bird Surveys (MBBS) (within 500m)	Four visits were carried out between late April/ early May and late July in 2023 within a survey buffer of 500m of turbine

¹ Ordnance Survey Great Britain

² Scottish Natural Heritage (2017). *Recommended Bird Survey Methods to Inform Impact Assessment of Onshore Wind Farms V2*. Scottish Natural Heritage, Inverness.

³ Note that surveys are continuing to December 2023. Due to the timing of this report, survey results up to and including September 2023 are reported on. Survey results from October to December 2023 will be further reported in supplementary information to THC in early 2024.



Survey Type	Summary Methodology (see Section 2 for further details)
	locations. Surveys followed an adapted Brown and Shepherd (1993) ⁴ method.
Breeding Raptor (within 2km)	Raptor surveys were carried out within a survey buffer of 2km of the turbine locations (where accessible). Four visits to suitable habitat were carried out between April and July in 2023. Species specific methods followed Hardey <i>et al.</i> 2013 ⁵ .

1.4 Target Species

Target species for the surveys were defined by legal and/or conservation status and vulnerability to impacts caused by wind turbines, as defined in NS Guidance².

1.4.1 Primary Target Species

Bird species of high conservation importance are those which are Annex I and Schedule 1 species and other species of high conservation importance which are considered to be vulnerable to impacts from wind farm developments.

The following species are therefore considered relevant as primary target species:

- Annex I raptor and owl species, including:
 - White-tailed eagle (*Haliaeetus albicilla*);
 - Golden eagle (*Aquila chrysaetos*);
 - Hen harrier (*Circus cyaneus*);
 - Goshawk (*Accipiter gentilis*); and
 - Merlin (*Falco columbarius*).
- Breeding and migratory wildfowl; and
- Breeding and migratory waders, including
 - Golden plover (*Pluvialis apricaria*);
 - Common snipe (*Gallinago gallinago*).

1.4.2 Secondary Target Species

Non-Annex I and/ or Schedule 1 raptor and owl species, including:

- Buzzard (*Buteo buteo*);
- Sparrowhawk (*Accipiter nisus*);
- Kestrel (*Falco tinnunculus*).
- Grey heron (*Ardea cinerea*), gulls, raven (*Corvus corax*) and any other non-passerine species of conservation concern which are considered to be potentially vulnerable to

⁴ A. F. Brown & K. B. Shepherd (1993). A method for censusing upland breeding waders. *Bird Study*, 40:3, 189-195, DOI: 10.1080/00063659309477182

⁵ Hardey, J., Crick, H.Q.P., Wernham, C., Riley, H., Etheridge, B., Thompson, D. (2013). *Raptors: A field guide for surveys and monitoring* (3rd Edition).



impacts from wind farm developments (it is generally considered that passerine species are not significantly impacted by wind farms²).

1.5 Evidence of Technical Competence and Experience

This report was prepared by Cróna McMonagle (ACIEEM) who is a Senior Ecologist at SLR Consulting. She has worked in ecology and conservation for seven years and has undertaken surveying and reporting on numerous large scale wind farm and overhead cable route projects, focusing on ornithology.

The project is managed and the report reviewed by Mike Austin (MCIEEM) who is an Associate Consultant with SLR Consulting. He has over 30 years' experience within ecology and ornithology. Mike leads on ornithology in Scotland for SLR with technical expertise in a wide range of onshore survey techniques. He undertakes technical reporting and assessment, including Collision Risk Modelling, Ecological Impact Assessment and Habitats Regulations Assessment screening.



2.0 Survey Methodology

All the following survey methodologies are recommended by NS guidance (2017)² to inform the impact assessment for onshore wind farms.

2.1 Survey Areas, Dates and Personnel

All surveys were undertaken by Stephen Bentall, an experienced sub-contractor working for SLR Consulting. Stephen holds an appropriate Schedule 1 licence issued by NS. It is worth noting that Stephen Bentall also undertook the ornithology surveys for the consented development in 2018/19 and 2021.

Details of survey dates and times are provided in **Table 4A, Annex 4.1A** and a record of weather conditions during surveys is provided in **Table 4B, Annex 4.1B**.

Technical Appendix 4.2: Confidential Ornithology Report details locations of Schedule 1 birds identified during the 2023 flight activity and breeding raptor surveys, as well as nesting records identified in the desk search.

2.2 Flight Activity Surveys

Seventy-two hours of flight activity surveys were conducted from each of three VP locations between January and December 2023 (inclusive). VP numbers 1 and 2 are the same as those used in surveys for the consented development, with the addition of VP3 to provide additional coverage in the north of the site over the area occupied by the two consented extension turbines. Monthly survey effort is summarised in **Table 2-1**. The VP locations and viewsheds are shown on **Figure 4.1**.

VP watches aimed to quantify the flight activity of primary and secondary target species (as defined in **Section 1.4 Target Species**) within the study area.

The main purpose of VP watches is to collect data on primary target species that will enable estimates to be made of:

- The time spent flying over the site;
- The relative use by birds of different parts of the site; and
- The proportion of flying time spent within the provisional upper and lower risk height limits as determined by the potential rotor diameter and rotor hub height.

For each primary target species observation, the following details were recorded:

- Time of observation;
- Duration of flying bout;
- Species, age and sex (where determinable); and
- Time spent within each height band.

Height bands were selected based on the proposed turbine height:

- 1 = <20m
- 2 = 20-150m
- 3 = 150-200m
- 4 = >200m

In addition, a summary of observations of secondary target species was recorded at the end of each five-minute period during VP watches to provide an index of flight activity for secondary target species within the site, in accordance with current NS guidance.



Table 2-1: VP Surveys undertaken at the Site (January – December 2023)

VP No.	NGR	Hours of Survey Completed (hrs:mins)												Total	
		Jan	Feb	Ma	Ap	May	Jun	Ju	Aug	Sep	Oc	Nov	Dec		
1	132120 847660	6:00	6:00	6:00	6:00	6:00	6:00	6:00	6:00	6:00	6:00	6:00	6:00	6:00	72:00
2	133930 848270	6:00	6:00	6:00	6:00	6:00	6:00	6:00	6:00	6:00	6:00	6:00	6:00	6:00	72:00
3	130883 850414	6:00	6:00	6:00	6:00	6:00	6:00	6:00	6:00	6:00	6:00	6:00	6:00	6:00	72:00

2.3 Moorland Breeding Bird Surveys

Upland breeding bird surveys were undertaken on open ground within a 500m buffer (where accessible) of the turbine locations (**Figure 4.2**). The survey followed an adapted Brown & Shepherd method (1993)⁶ with four survey visits between late-April to late-July 2023, approaching all areas of the open ground to within 100m, as set out in Calladine *et al.* (2009)⁷. All wader species were recorded during each visit. Registrations were marked onto 1:25,000 scale survey maps using standard British Trust for Ornithology (BTO) species and activity codes for use in post-survey analysis.

Birds were considered to be confirmed breeding if:

- they were observed displaying or singing on one visit (with the exception of obvious passage migrants in spring);
- nests, eggs, or young were located;
- adults repeatedly alarm called;
- distraction displays were seen; and/ or
- territorial disputes were observed.

Birds were considered to be probably or possibly (i.e., unconfirmed) breeding if:

- a pair of birds was observed in suitable habitat for nesting.

Other records were considered to be of non-breeding birds, failed breeders, birds loafing, feeding or on passage to other areas.

The survey visits were carried out as follows:

- Visit 1: 21 & 26 April 2023
- Visit 2: 30 May 2023
- Visit 3: 29 June 2023
- Visit 4: 21 & 22 July 2023

⁶ A. F. Brown & K. B. Shepherd (1993). A method for censusing upland breeding waders. *Bird Study*, 40:3, 189-195, DOI: 10.1080/00063659309477182

⁷ J. Calladine et al. (2009). The influence of survey frequency on population estimates of moorland breeding birds. *Bird Study*, 56:3, 381-388. DOI: 10.1080/00063650902984604



2.4 Breeding Raptor Surveys

Species-specific surveys were undertaken for all raptors likely to occur, following methods outlined within Hardey *et al.* (2013)^{Error! Bookmark not defined.}, within 2km buffer of the proposed turbine locations (**Figure 4.2**).

During the surveys all accessible suitable raptor breeding habitat within this area, including open heath/moorland/ rough grassland, forest/ forest edge, rock crags and outcrops, was covered.

Surveys were carried out as follows:

- 14, 17, 19 & 23 March 2023
- 21, 24, 26 & 28 April 2023
- 19, 24, 29 & 30 May 2023
- 19, 20, 26, 28 & 29 June 2023
- 12, 14, 21, 22 & 23 July 2023

2.5 Survey Limitations

The validity of ornithological survey data requires that they were obtained using accepted methodologies and that surveys were carried out in suitable conditions. The field survey methodologies outlined above were all carried out using survey standards recommended by NS and were carried out during suitable times of the year.

With regard to VP survey coverage, there is a small gap apparent in the VP1 viewshed due to the terrain (**Figure 4.1**). However, it is considered that the vantage point data are representative of the site as a whole and sufficient to inform a robust impact assessment of the Proposed Development. As noted in **Section 2.2**, the locations of VP1 and VP2 remain the same as for the consented development, with the addition of VP3 providing additional coverage of the north of the Proposed Development.



3.0 Survey Results

3.1 Flight Activity Surveys

Flight activity recorded from VPs by primary target species is summarised in **Table 3-1** for the 2023 surveys. Full details of primary target species flights are provided in **Table 4, Appendix C**. Flightlines from golden eagle and white-tailed eagle are shown on **Figure 4.3.1 and Figure 4.3.2 respectively**, and all other flightlines of primary target species are shown on **Figure 4.3.3**.

Table 3-1: Number of Primary Target Species Flights from VPs 1 to 3 Combined (Jan – Dec 2023)

Species	Number of flights by month												Total number of flights Jan-Dec	Maximum count of birds Jan-Dec
	Jan	Feb	Mar	Apr	May	Jun	July	Aug	September	Oct	Nov	Dec		
White-tailed eagle	4	7	3	2	6	2	1	10	10	2	3	1	51	6
Golden eagle	1	3	-	4	1	-	-	-	-	5	-	-	14	1
Hen harrier	-	-	-	-	-	-	-	-	1	-	-	-	1	1
Goshawk	-	-	1	-	-	-	-	-	-	-	-	-	1	1
Merlin	-	-	-	1	-	-	-	-	-	-	-	-	1	1
Golden plover	-	1	2	-	-	1	-	-	-	-	-	-	4	21
Snipe	-	-	-	-	-	-	2	-	-	-	-	-	2	1
Total	5	11	6	7	7	3	3	10	11	7	3	1	74	-

3.1.1 Summary of Primary Target Species Flight Activity

3.1.1.1 White-tailed eagle

A total of 51 white-tailed eagle flight lines long with seven static records of white-tailed eagle were recorded and consisted of a mix of ages including adult, sub-adult, year 2, year 3, year 4 and immature individuals. Both female and male individuals were noted, and at least 14 separate individuals were recorded over the surveys. A range of behaviours were recorded including hunting, commuting, return to roost, display, circling and commuting to breeding site. A maximum of eleven birds were counted on the same day in August.

15% of the records were either static birds, or flightline entirely over the collision risk height band. 63% of the flightlines were fully within the collision height band, while 22% were partially within collision risk.

Flightlines were recorded across the site as well as in the surrounding area. The highest concentration of flightlines was recorded around the summit of Ben Sca in the south of the Proposed Development site.



3.1.1.2 Golden eagle

A total of 14 golden eagle flight lines were recorded during the 2023 surveys. Records were made in the first half of the survey period between January and May, as well as in October. Only one bird was recorded at a time, however, it is thought that at least five different birds were present as a female immature, a male year 2 bird, adult male and female birds, along with a juvenile female were recorded. Individuals were noted both hunting and commuting over the site. Golden eagle was mainly recorded within the site boundary and flightlines were quite evenly distributed across the site.

Twelve of the flights were fully within the collision risk height bands (HB 1 & 2), while the other two flightlines were partially within collision risk.

3.1.1.3 Hen Harrier

A single hen harrier flight was recorded in September within the collision risk height band. It consisted of a hunting male bird. This flightline was noted in the east of the site, close to proposed turbine 1.

3.1.1.4 Goshawk

One goshawk flightline was recorded in March. The individual was flying low, but within the collision risk height band. This bird was recorded to the south of the site, close to the adjacent operational Ben Aketil Wind Farm.

3.1.1.5 Merlin

One merlin flightline was recorded in April. It was recorded within the collision risk height band and was observed displaying. The flightline was noted in the western buffer, close to Allt a Choire.

3.1.1.6 Golden plover

Four flightlines of golden plover were noted. These consisted of groups of between 3-24 individuals in February and March, along with one flightline of a breeding adult in June. Flightlines were in the west of the site close to proposed turbines 1 and 2, as well as in the western survey buffer.

All flightlines were recorded within the collision risk height band.

3.1.1.7 Snipe

Two flightlines were recorded during the surveys on the same date in July, both of a displaying adult. They were recorded within the adjacent operational Ben Aketil Wind Farm site. Both flightlines were within the collision risk height band.

3.1.2 Summary of Secondary Species Flight Activity

Nine secondary species were recorded during the 2023 surveys (**Table 3-2**).



Table 3-2 Number of Secondary Target Species from VPs 1 to 3 Combined (Jan – Dec 2023)

Species	Number of 5-minute periods recorded by month													Maximum count of birds per month											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Red grouse <i>Lagopus scotica</i>	-	-	-	-	-	-	-	-	1	1	-	-	2	-	-	-	-	-	-	-	-	1	1	-	-
Grey Heron	-	-	-	1	-	-	-	-	-	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	-
Sparrowhawk	-	1	1	-	1	-	-	-	1	-	-	-	4	-	1	1	-	1	-	-	-	1	-	-	-
Buzzard	-	7	1	4	5	1	5	-	4	-	1	-	28	-	1	1	2	1	2	1	-	2	-	1	-
Kestrel	-	3	-	-	-	-	-	1	4	1	-	1	10	-	1	-	-	-	-	-	1	1	1	-	1
Lesser black-backed gull <i>Larus fuscus</i>	-	-	-	1	-	4	1	1	-	-	-	-	7	-	-	-	2	-	2	1	2	-	-	-	-
Herring gull <i>Larus argentatus</i>	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-	-	-	-	-	-	-	-	1	-	-
Great black-backed gull <i>Larus marinus</i>	-	-	1	-	-	-	1	-	-	-	-	-	2	-	-	1	-	-	-	1	-	-	-	-	-
Raven	14	28	14	5	13	9	6	18	17	8	14	12	158	4	10	2	2	2	3	5	26	5	7	2	2



3.2 Moorland Breeding Bird Surveys

One wader species, golden plover, was recorded breeding during the surveys. Two confirmed territories were recorded, one within the survey area (approximate location: NGR 33526 47659) and another just outwith of the survey area close to the summit of Ben Sca (NGR 33811 47105). **Figure 4.4** shows 2023 breeding territories alongside the results of the 2018 and 2019 breeding wader survey for comparison.

3.3 Breeding Raptor Surveys

No breeding raptor locations were identified within the survey area. The following species accounts provide summary details of the target raptor species encountered during the 2023 breeding season surveys (all surveys combined).

White-tailed eagle

Two roost locations were identified in March. Details are confidential (included in **Technical Appendix 4.2**).

In April two male birds were observed displaying territorial behaviour close to proposed turbine locations 1 and 2. Later in the month a male and female pair were observed in the middle of the survey area, flying and perching close to all the proposed turbine locations for approximately 1.5 hours. The pair were vocalising to each other, as well as perching and circling. It is understood that these birds were a failed breeding pair.

In May two white-tailed eagle pairs were observed close to Allt a Choire over the plantation forestry. Talon grappling, calling, and chasing was noted between the pairs and flight activity was generally below 80m in height.

Two records of white-tailed eagle were made in June and consisted of an adult male in flight along with the disturbance of a sub-adult from a perch in the plantation forestry close to Allt Donachaidh.

A female adult was recorded in flight and perching south of the site along the plantation's southern boundary. Later in the month a male and female pair were observed displaying over the location of proposed turbines 6 and 7, as well as hunting within the site boundary. On the final survey visit two separate adult females and a male were observed in the west of the survey area largely over the plantation forestry.

Golden Eagle

One record of a hunting female was made in June, where she flew south from Mullach Ben Sca towards the operational Ben Akteil Wind Farm.

Hen Harrier

Hen harrier was observed in April with two records of a displaying male bird. The majority of this behaviour was observed outwith of the survey area close to Coishletter, though the flightlines crossed into the survey area along the northern boundary.



4.0 Discussion

As described in the Environmental Impact Assessment (EIA) documents for the consented development⁸, the site contains suitable breeding and foraging habitat for raptor and wader species. During the 2023 surveys only one species was confirmed to be breeding within the site boundary, golden plover. However, the site forms part of breeding territories for white-tailed eagles, with two pairs recorded utilising the site for a range of purposes including display. Furthermore, a range of non-breeding white-tailed eagles were recorded during the surveys with several sub-adult (year 1-5) birds noted. They were also noted as roosting within the vicinity of the site, which can sometimes be a precursor to establishment of a breeding territory.

Golden eagles were noted on site between January and June, as well as in October with five different birds noted. Three of these birds were young, non-breeding birds, which included one juvenile sighting in October, while three sightings of adults were made in June and October, consisting of both a male and female. No breeding behaviours were noted, and golden eagle do not breed within the vicinity of the site.

A displaying hen harrier was recorded approximately 2km north of the proposed turbines in April. However, no other signs of breeding were noted during any of the surveys and hen harrier was only recorded on one other occasion within the site boundary, in September.

Single records were made of goshawk and merlin and no evidence of breeding was noted for either species.

4.1 Comparison with 2018/19 Data

4.1.1 VP Surveys

Data collected during the 2018 surveys, between the months of January and December, has been used to make a comparison with the 2023 data. It should be noted that for the purpose of this comparison, data collected from VP3 in 2023 has not been included as this vantage point was not included in the 2018 surveys.

Table 4-1 shows the 2023 data used for the comparison which includes data collected from VPs 1 and 2 only.

⁸ Comprising of Ben Sca Wind Farm EIA Report - Chapter 9: Ornithology; Technical Appendix 9.1: Ornithology Surveys 2018-2019; Technical Appendix 9.2: Avian Collision Risk Modelling; and Technical Appendix 9.1 - Annex 9.1A: Confidential Information (January 2020); Ben Sca Wind Farm SI Report - Chapter 9: Ornithology; Technical Appendix 9.2: Avian Collision Risk Modelling (August 2020); and Ben Sca Wind Farm Extension EIA Report - Chapter 3: Other Considerations; Technical Appendix B1: Ornithology Report and Collision Risk Assessment; and Technical Appendix B2; Ornithology Confidential Information (November 2021).



Table 4-1: Comparison of Number of Primary Target Species Flights from VPs 1 to 2 Combined (Jan – Dec 2018 and 2023)

Species	Number of flights by month												Total number of flights Jan-Dec	Maximum count of birds Jan-Dec
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	D e c		
White-tailed eagle 2018	1	4	2	8	4	1	1	1	-	-	2	-	24	3
White-tailed eagle 2023	4	7	2	1	2	2	1	10	4	1	3	1	38	6
Golden eagle 2018	3	-	4	2	1	1	-	3	-	-	8	-	22	1
Golden eagle 2023	1	2	-	4	1	-	-	-	-	5	-	-	13	1
Hen harrier 2018	-	-	4	16	4	6	9	3	-	-	2	-	44	1
Hen harrier 2023	-	-	-	-	-	-	-	-	1	-	-	-	1	1
Merlin 2018	-	-	-	2	-	-	-	-	-	-	-	-	2	1
Merlin 2023	-	-	-	1	-	-	-	-	-	-	-	-	1	1
Golden plover 2018	-	-	1	2	-	10	1	-	1	-	-	-	15	10
Golden plover 2023	-	1	2	-	-	1	-	-	-	-	-	-	4	21

White-tailed eagle

Activity levels of white-tailed eagle have increased since 2018, with 24 flightlines noted in 2018 and 38 in 2023. Larger groups of birds were noted during the 2023 surveys with groups of 5-6 birds observed. The maximum count of birds in 2018 was of three individuals.

Golden Eagle

Twenty-two flights were recorded in 2018 while thirteen flights were noted in 2023. In 2018 at least six different birds were noted, told apart by sex and age, which included a male and female adult pair. While in 2023 five separate individuals were noted during the surveys including a male and female adult, and a juvenile female.



Hen harrier

Forty-four flightlines were recorded in 2018 and one in 2023. The difference in these numbers is likely explained that in 2018 there was an occupied territory within the VP viewshed, while in 2023 this territory was not active.

Merlin

Two flightlines were noted in 2018 and one flightline in 2023, indicating that levels are roughly the same between the two survey periods.

Golden Plover

Fifteen flightlines were recorded in 2018 and four flightlines in 2023, indicating a slight decrease in golden plover activity within the site. However, larger groups of birds were noted in 2023 with a maximum count of 21 individuals. The maximum count in 2018 was of ten individuals.

Other Species

One red throated diver (*Gavia stellata*) flightline and one great skua (*Stercorarius skua*) flightline were recorded in 2018, these species was not recorded in the 2023 surveys. While two snipe flightlines and one goshawk flightline were recorded in 2023 and neither species were noted in 2018.

4.1.2 Breeding Wader & Raptor Surveys

Previous breeding wader surveys in 2018 identified one possible golden plover territory, 2-3 possible snipe territories and one confirmed snipe territory. In 2019 two confirmed territories of each species were identified. In 2023, no breeding snipe were noted, and two golden plover confirmed golden plover territories were recorded.

Previous surveys in 2018 identified three breeding hen harrier within the 2km survey area. These territories were occupied in 2019, though breeding was not confirmed. During the 2023 surveys a displaying male was recorded once early in the season. This territory appears to have failed as no further signs of breeding were identified. No other records of hen harrier were made during the 2023 raptor survey.

No breeding eagles were identified within the 2km survey area during the 2018/19 surveys, though one confirmed breeding white-tailed eagle was identified within 6km. In 2022, three white-tailed eagle territories have been confirmed within 6km, though no breeding territories were identified within 2km in 2023.





Annex 4.1A

Ornithology Survey Dates & Times



Table 4A: Survey Details (Survey Type: VP – Vantage Point, MBBS – Moorland Breeding Bird (Breeding Waders))

Date	Survey Type	VP	Survey Start	Survey End	Survey Time
16/01/2023	VP	3	10:20	13:20	03:00
16/01/2023	VP	3	13:50	16:50	03:00
17/01/2023	VP	1	10:20	13:20	03:00
17/01/2023	VP	1	13:50	16:50	03:00
26/01/2023	VP	2	10:00	13:00	03:00
26/01/2023	VP	2	13:30	16:30	03:00
05/02/2023	VP	3	09:45	12:45	03:00
05/02/2023	VP	3	13:15	16:15	03:00
09/02/2023	VP	1	10:35	13:35	03:00
09/02/2023	VP	1	14:05	17:05	03:00
25/02/2023	VP	2	09:00	12:00	03:00
25/02/2023	VP	2	12:30	15:30	03:00
04/03/2023	VP	1	09:30	12:30	03:00
04/03/2023	VP	1	13:00	16:00	03:00
06/03/2023	VP	3	09:10	12:10	03:00
06/03/2023	VP	3	12:40	15:40	03:00
14/03/2023	Raptor	-	09:15	15:15	06:00
17/03/2023	Raptor	-	09:50	13:50	04:00
19/03/2023	VP	2	08:15	11:15	03:00
19/03/2023	VP	2	11:45	14:45	03:00
19/03/2023	Raptor	-	14:45	16:45	02:00
23/03/2023	Raptor	-	11:40	17:40	06:00
20/04/2023	VP	3	08:05	11:05	03:00
20/04/2023	VP	1	12:00	15:00	03:00
20/04/2023	VP	3	15:35	18:35	03:00
21/04/2023	MBS	-	09:00	13:00	04:00
21/04/2023	Raptor	-	13:15	18:15	05:00
24/04/2023	VP	1	07:40	10:40	03:00
24/04/2023	Raptor	-	10:55	13:55	03:00
26/04/2023	VP	2	07:15	10:15	03:00
26/04/2023	Raptor	-	10:15	10:45	00:30
26/04/2023	VP	2	10:45	13:45	03:00
26/04/2023	MBS	-	13:45	15:15	01:30
26/04/2023	Raptor	-	15:15	15:45	00:30
28/04/2023	Raptor	-	07:45	09:15	01:30
28/04/2023	Raptor	-	13:30	21:00	07:30
14/05/2023	VP	1	13:30	16:30	03:00
14/05/2023	VP	1	17:00	20:00	03:00
15/05/2023	VP	3	09:30	12:30	03:00
15/05/2023	VP	3	13:00	16:00	03:00
19/05/2023	Raptor	-	09:35	13:20	03:45



Date	Survey Type	VP	Survey Start	Survey End	Survey Time
24/05/2023	Raptor	-	16:30	20:30	04:00
29/05/2023	Raptor	-	13:00	16:00	03:00
29/05/2023	VP	2	16:30	19:30	03:00
30/05/2023	VP	2	06:40	09:40	03:00
30/05/2023	MBS	-	09:45	11:45	02:00
30/05/2023	MBS	-	12:00	13:30	01:30
30/05/2023	Raptor	-	13:50	15:50	02:00
18/06/2023	VP	1	11:20	14:20	03:00
18/06/2023	VP	1	14:50	17:50	03:00
19/06/2023	VP	3	10:15	13:15	03:00
20/06/2023	Raptor	-	13:15	16:15	03:00
20/06/2023	VP	3	16:45	19:45	03:00
23/06/2023	Raptor	-	11:00	12:00	01:00
28/06/2023	VP	2	12:45	15:45	03:00
19/06/2023	Raptor	-	13:15	15:15	02:00
28/06/2023	VP	2	16:15	19:15	03:00
28/06/2023	Raptor	-	19:15	20:15	01:00
29/06/2023	Raptor	-	06:45	08:45	02:00
29/06/2023	MBS	-	08:45	13:15	04:30
11/07/2023	VP	1	17:00	20:00	03:00
12/07/2023	VP	3	12:50	15:50	03:00
12/07/2023	Raptor	-	16:00	19:00	03:00
14/07/2023	Raptor	-	12:45	15:45	03:00
21/07/2023	VP	2	09:30	12:30	03:00
21/07/2023	VP	2	13:00	16:00	03:00
21/07/2023	MBS	-	16:00	18:30	02:30
21/07/2023	Raptor	-	18:30	20:00	01:30
22/07/2023	Raptor	-	14:00	15:30	01:30
22/07/2023	MBS	-	15:30	18:30	03:00
23/07/2023	Raptor	-	07:00	13:00	06:00
14/07/2023	VP	3	06:15	09:15	03:00
14/07/2023	VP	1	09:45	12:45	03:00
23/08/2023	VP	1	08:00	11:00	03:00
23/08/2023	VP	1	11:30	14:30	03:00
24/08/2023	VP	3	08:40	11:10	02:30
28/08/2023	VP	3	08:25	11:25	03:00
28/08/2023	VP	3	11:25	11:55	00:30
31/08/2023	VP	2	10:55	13:55	03:00
31/08/2023	VP	2	14:25	17:25	03:00
19/09/2023	VP	1	09:25	12:25	03:00
19/09/2023	VP	1	12:55	13:55	01:00
23/09/2023	VP	3	10:10	13:10	03:00
23/09/2023	VP	1	13:40	15:40	02:00
27/09/2023	VP	3	09:10	12:10	03:00



Date	Survey Type	VP	Survey Start	Survey End	Survey Time
30/09/2023	VP	2	09:15	12:15	03:00
30/09/2023	VP	2	12:45	15:45	03:00
16/10/2023	VP	1	09.30	12.30	03:00
16/10/2023	VP	1	13.00	16.00	03:00
26/10/2023	VP	3	08.45	11.45	03:00
26/10/2023	VP	3	12.15	15.15	03:00
30/10/2023	VP	2	09.10	12.10	03:00
30/10/2023	VP	2	12.40	15.40	03:00
13/11/2023	VP	3	09.10	12.10	03:00
13/11/2023	VP	3	12.40	15.40	03:00
17/11/2023	VP	1	09.10	12.10	03:00
17/11/2023	VP	1	12.40	15.40	03:00
30/11/2023	VP	2	09.20	12.20	03:00
30/11/2023	VP	2	12.50	15.50	03:00
11/12/2023	VP	3	09.25	12.25	03:00
11/12/2023	VP	1	12.55	15.55	03:00
15/12/2023	VP	1	09.25	10.55	01.50
19/12/2023	VP	3	09.15	12.15	03:00
19/12/2023	VP	1	12.45	14.15	01.50
31/12/2023	VP	2	09.10	12.10	03:00
31/12/2023	VP	2	12.140	15.40	03:00



Annex 4.1B

Weather Data



Table 4B: Weather data collected during ornithology surveys 2023 (January-December)⁹

Survey Type	Date	Survey Start	Survey End	Hr	Wind Speed (Beaufort Scale)	Wind Direction	Rain	Cloud Cover	Cloud Height	Visibility	Snow	Frost	Temp (°c)
VP	16/01/2023	10:20	13:20	1	2	NNW	0	8	2	2	1	1	0
VP	16/01/2023	10:20	13:20	2	2	NNW	0	8	2	2	1	1	0
VP	16/01/2023	10:20	13:20	3	3	NW	3	8	2	1	1	1	1
VP	16/01/2023	13:50	16:50	1	3	NW	2	8	2	1	1	2	1
VP	16/01/2023	13:50	16:50	2	3	NW	0	8	2	2	1	2	0
VP	16/01/2023	13:50	16:50	3	3	NW	2	8	2	1	1	2	0
VP	17/01/2023	10:20	13:20	1	4	NW	3	8	2	1	1	1	0
VP	17/01/2023	10:20	13:20	2	4	WNW	0	8	2	2	1	0	1
VP	17/01/2023	10:20	13:20	3	3	NW	2	7	2	2	1	0	2
VP	17/01/2023	13:50	16:50	1	3	NW	0	5	2	2	1	0	2
VP	17/01/2023	13:50	16:50	2	3	NW	0	6	2	2	1	0	2
VP	17/01/2023	13:50	16:50	3	3	N	0	6	2	2	1	0	1
VP	26/01/2023	10:00	13:00	1	1	N	0	4	2	2	0	0	6
VP	26/01/2023	10:00	13:00	2	2	N	0	5	2	2	0	0	6
VP	26/01/2023	10:00	13:00	3	2	N	0	5	2	2	0	0	7

⁹ Key noted at end of Table



Survey Type	Date	Survey Start	Survey End	Hr	Wind Speed (Beaufort Scale)	Wind Direction	Rain	Cloud Cover	Cloud Height	Visibility	Snow	Frost	Temp (°c)
VP	26/01/2023	13:30	16:30	1	2	NE	0	6	2	2	0	0	6
VP	26/01/2023	13:30	16:30	2	2	NE	0	7	2	2	0	0	6
VP	26/01/2023	13:30	16:30	3	2	N	0	5	2	2	0	0	5
VP	05/02/2023	09:45	12:45	1	5	SSW	0	8	2	2	0	0	5
VP	05/02/2023	09:45	12:45	2	5	SSW	0	8	2	2	0	0	6
VP	05/02/2023	09:45	12:45	3	5	SW	0	8	2	2	0	0	7
VP	05/02/2023	13:15	16:15	1	5	SW	0	8	2	2	0	0	7
VP	05/02/2023	13:15	16:15	2	6	SSW	1	8	2	1	0	0	7
VP	05/02/2023	13:15	16:15	3	6	SSW	1	8	2	1	0	0	6
VP	09/02/2023	10:35	13:35	1	6	W	0	8	2	2	0	0	5
VP	09/02/2023	10:35	13:35	2	6	W	0	8	2	2	0	0	6
VP	09/02/2023	10:35	13:35	3	6	W	0	8	2	2	0	0	6
VP	09/02/2023	14:05	17:05	1	5	W	2	8	2	1	0	0	6
VP	09/02/2023	14:05	17:05	2	5	W	2	8	2	1	0	0	6
VP	09/02/2023	14:05	17:05	3	4	W	0	8	2	1	0	0	5
VP	25/02/2023	09:00	12:00	1	2	NE	0	4	2	2	0	0	6
VP	25/02/2023	09:00	12:00	2	3	NE	0	7	2	2	0	0	6
VP	25/02/2023	09:00	12:00	3	3	E	0	6	2	2	0	0	7
VP	25/02/2023	12:30	15:30	1	3	NE	0	5	2	2	0	0	7



Survey Type	Date	Survey Start	Survey End	Hr	Wind Speed (Beaufort Scale)	Wind Direction	Rain	Cloud Cover	Cloud Height	Visibility	Snow	Frost	Temp (°c)
VP	25/02/2023	12:30	15:30	2	3	NE	0	5	2	2	0	0	7
VP	25/02/2023	12:30	15:30	3	3	ENE	0	4	2	2	0	0	6
VP	04/03/2023	09:30	12:30	1	2	NW	0	8	2	2	0	0	7
VP	04/03/2023	09:30	12:30	2	2	NW	0	6	2	2	0	0	7
VP	04/03/2023	09:30	12:30	3	3	W	1	7	2	1	0	0	7
VP	04/03/2023	13:00	16:00	1	2	NW	2	8	2	1	0	0	7
VP	04/03/2023	13:00	16:00	2	3	NW	0	7	2	2	0	0	7
VP	04/03/2023	13:00	16:00	3	3	NW	0	7	2	2	0	0	6
VP	06/03/2023	09:10	12:10	1	5	NNE	1	7	2	1	0	0	3
VP	06/03/2023	09:10	12:10	2	5	ENE	1	8	2	1	0	0	3
VP	06/03/2023	09:10	12:10	3	5	NE	0	7	2	2	0	0	4
VP	06/03/2023	12:40	15:40	1	5	NE	0	6	2	2	0	0	4
VP	06/03/2023	12:40	15:40	2	4	N	0	5	2	2	0	0	5
VP	06/03/2023	12:40	15:40	3	4	NNE	0	6	2	2	0	0	5
Raptor	14/03/2023	09:15	15:15	1	3	NE	2	8	2	1	1	0	2
Raptor	14/03/2023	09:15	15:15	2	3	NE	0	7	2	2	1	0	2
Raptor	14/03/2023	09:15	15:15	3	4	NE	0	8	2	2	1	0	3
Raptor	14/03/2023	09:15	15:15	4	3	NE	0	7	2	2	1	0	3
Raptor	14/03/2023	09:15	15:15	5	3	NE	0	6	2	2	1	0	4



Survey Type	Date	Survey Start	Survey End	Hr	Wind Speed (Beaufort Scale)	Wind Direction	Rain	Cloud Cover	Cloud Height	Visibility	Snow	Frost	Temp (°c)
Raptor	14/03/2023	09:15	15:15	6	3	N	0	5	2	2	1	0	4
Raptor	17/03/2023	09:50	13:50	1	2	NE	2	8	2	1	0	0	7
Raptor	17/03/2023	09:50	13:50	2	2	NE	2	8	2	1	0	0	7
Raptor	17/03/2023	09:50	13:50	3	2	NE	0	8	2	1	0	0	7
Raptor	17/03/2023	09:50	13:50	4	3	NE	1	8	1	1	0	0	7
VP	19/03/2023	08:15	11:15	1	2	NW	0	8	2	2	0	0	6
VP	19/03/2023	08:15	11:15	2	3	W	0	8	2	2	0	0	7
VP	19/03/2023	08:15	11:15	3	3	SW	0	8	2	2	0	0	8
VP	19/03/2023	11:45	14:45	1	3	SW	0	8	2	2	0	0	8
VP	19/03/2023	11:45	14:45	2	3	SW	0	8	2	2	0	0	7
VP	19/03/2023	11:45	14:45	3	3	W	2	8	2	1	0	0	7
Raptor	19/03/2023	14:45	16:45	1	3	W	2	8	2	1	0	0	7
Raptor	19/03/2023	14:45	16:45	2	2	W	1	8	2	1	0	0	6
Raptor	23/03/2023	11:40	17:40	1	4	SW	0	6	2	2	0	0	11
Raptor	23/03/2023	11:40	17:40	2	4	SW	2	8	2	1	0	0	10
Raptor	23/03/2023	11:40	17:40	3	3	SW	0	7	2	2	0	0	11
Raptor	23/03/2023	11:40	17:40	4	3	SW	0	8	2	2	0	0	10
Raptor	23/03/2023	11:40	17:40	5	3	S	0	8	2	2	0	0	10
Raptor	23/03/2023	11:40	17:40	6	3	S	0	8	2	2	0	0	9



Survey Type	Date	Survey Start	Survey End	Hr	Wind Speed (Beaufort Scale)	Wind Direction	Rain	Cloud Cover	Cloud Height	Visibility	Snow	Frost	Temp (°c)
VP	20/04/2023	08:05	11:05	1	2	SE	0	0	-	2	0	0	11
VP	20/04/2023	08:05	11:05	2	2	SE	0	0	-	2	0	0	12
VP	20/04/2023	08:05	11:05	3	2	E	0	0	-	2	0	0	13
VP	20/04/2023	12:00	15:00	1	3	E	0	0	-	2	0	0	14
VP	20/04/2023	12:00	15:00	2	3	NE	0	0	-	2	0	0	14
VP	20/04/2023	12:00	15:00	3	3	NE	0	0	-	2	0	0	14
VP	20/04/2023	15:35	18:35	1	3	NE	0	0	-	2	0	0	14
VP	20/04/2023	15:35	18:35	2	3	NE	0	0	-	2	0	0	14
VP	20/04/2023	15:35	18:35	3	3	NE	0	0	-	2	0	0	13
MBBS	21/04/2023	09:00	13:00	1	2	E	0	0	-	2	0	0	11
MBBS	21/04/2023	09:00	13:00	2	3	NE	0	0	-	2	0	0	13
MBBS	21/04/2023	09:00	13:00	3	3	NE	0	0	-	2	0	0	15
MBBS	21/04/2023	09:00	13:00	4	3	NE	0	0	-	2	0	0	15
Raptor	21/04/2023	13:15	18:15	1	3	NW	0	0	-	2	0	0	16
Raptor	21/04/2023	13:15	18:15	2	3	N	0	0	-	2	0	0	15
Raptor	21/04/2023	13:15	18:15	3	3	NE	0	0	-	2	0	0	14
Raptor	21/04/2023	13:15	18:15	4	3	NE	0	0	-	2	0	0	14
Raptor	21/04/2023	13:15	18:15	5	3	N	0	0	-	2	0	0	13
VP	24/04/2023	07:40	10:40	1	4	N	3	8	2	1	0	0	1



Survey Type	Date	Survey Start	Survey End	Hr	Wind Speed (Beaufort Scale)	Wind Direction	Rain	Cloud Cover	Cloud Height	Visibility	Snow	Frost	Temp (°c)
VP	24/04/2023	07:40	10:40	2	4	N	3	8	2	2	0	0	4
VP	24/04/2023	07:40	10:40	3	4	NE	0	6	2	2	0	0	6
Raptor	24/04/2023	10:55	13:55	1	4	NE	0	6	2	2	0	0	6
Raptor	24/04/2023	10:55	13:55	2	4	NE	0	4	2	2	0	0	6
Raptor	24/04/2023	10:55	13:55	3	3	NE	0	4	2	2	0	0	7
VP	26/04/2023	07:15	10:15	1	2	E	0	0	-	2	0	0	1
VP	26/04/2023	07:15	10:15	2	3	NE	0	0	-	2	0	0	3
VP	26/04/2023	07:15	10:15	3	3	NE	0	0	-	2	0	0	6
VP	26/04/2023	10:15	10:45	1	3	E	0	5	2	2	0	0	7
VP	26/04/2023	10:45	13:45	1	3	NE	0	7	2	2	0	0	8
VP	26/04/2023	10:45	13:45	2	3	NE	0	5	2	2	0	0	8
VP	26/04/2023	10:45	13:45	3	3	N	0	4	2	2	0	0	9
MBBS	26/04/2023	13:45	15:15	1	3	NW	0	3	2	2	0	0	9
MBBS	26/04/2023	13:45	15:15	2	3	NW	0	2	2	2	0	0	8
Raptor	26/04/2023	15:15	15:45	1	3	NW	0	2	2	2	0	0	8
Raptor	28/04/2023	07:45	09:15	1	2	N	0	8	2	2	0	0	7
Raptor	28/04/2023	07:45	09:15	2	3	N	1	8	1	1	0	0	8
Raptor	28/04/2023	13:30	21:00	1	3	NE	0	8	2	2	0	0	10
Raptor	28/04/2023	13:30	21:00	2	3	NE	0	8	2	2	0	0	10



Survey Type	Date	Survey Start	Survey End	Hr	Wind Speed (Beaufort Scale)	Wind Direction	Rain	Cloud Cover	Cloud Height	Visibility	Snow	Frost	Temp (°c)
Raptor	28/04/2023	13:30	21:00	3	3	NE	0	7	2	2	0	0	10
Raptor	28/04/2023	13:30	21:00	4	3	NE	0	6	2	2	0	0	10
Raptor	28/04/2023	13:30	21:00	5	3	NE	0	7	2	2	0	0	9
Raptor	28/04/2023	13:30	21:00	6	3	NE	0	7	2	2	0	0	8
Raptor	28/04/2023	13:30	21:00	7	4	N	0	8	2	2	0	0	8
Raptor	28/04/2023	13:30	21:00	8	4	N	0	8	2	2	0	0	7
VP	14/05/2023	13:30	16:30	1	4	W	0	6	2	2	0	0	12
VP	14/05/2023	13:30	16:30	2	4	W	0	8	2	2	0	0	13
VP	14/05/2023	13:30	16:30	3	3	NW	0	7	2	2	0	0	13
VP	14/05/2023	17:00	20:00	1	3	W	0	7	2	2	0	0	12
VP	14/05/2023	17:00	20:00	2	3	W	2	8	2	1	0	0	12
VP	14/05/2023	17:00	20:00	3	3	W	0	3	2	2	0	0	10
VP	15/05/2023	09:30	12:30	1	2	W	0	6	2	2	0	0	11
VP	15/05/2023	09:30	12:30	2	3	W	0	5	2	2	0	0	12
VP	15/05/2023	09:30	12:30	3	3	W	0	6	2	2	0	0	12
VP	15/05/2023	13:00	16:00	1	3	W	0	8	2	2	0	0	12
VP	15/05/2023	13:00	16:00	2	2	NW	2	8	1	1	0	0	13
VP	15/05/2023	13:00	16:00	3	2	NW	0	6	2	2	0	0	13
Raptor	19/05/2023	09:35	13:20	1	2	SW	0	8	1	2	0	0	13



Survey Type	Date	Survey Start	Survey End	Hr	Wind Speed (Beaufort Scale)	Wind Direction	Rain	Cloud Cover	Cloud Height	Visibility	Snow	Frost	Temp (°c)
Raptor	19/05/2023	09:35	13:20	2	3	SW	0	8	1	2	0	0	14
Raptor	19/05/2023	09:35	13:20	3	3	SW	0	8	1	2	0	0	15
Raptor	19/05/2023	09:35	13:20	4	3	W	0	7	2	2	0	0	15
Raptor	24/05/2023	16:30	20:30	1	3	W	0	5	2	1	0	0	14
Raptor	24/05/2023	16:30	20:30	2	3	W	0	7	2	1	0	0	13
Raptor	24/05/2023	16:30	20:30	3	3	NW	0	8	2	2	0	0	13
Raptor	24/05/2023	16:30	20:30	4	2	NW	0	8	2	2	0	0	12
Raptor	29/05/2023	13:00	16:00	1	3	N	0	2	2	2	0	0	15
Raptor	29/05/2023	13:00	16:00	2	3	N	0	1	2	2	0	0	15
Raptor	29/05/2023	13:00	16:00	3	3	NW	0	0	-	2	0	0	16
VP	29/05/2023	16:30	19:30	1	3	NW	0	0	-	2	0	0	16
VP	29/05/2023	16:30	19:30	2	3	NW	0	0	-	2	0	0	15
VP	29/05/2023	16:30	19:30	3	3	NW	-	0	-	2	0	0	15
MBBS	30/05/2023	06:40	09:40	1	0	N	0	6	2	1	0	0	10
MBBS	30/05/2023	06:40	09:40	2	1	N	0	7	2	1	0	0	11
MBBS	30/05/2023	06:40	09:40	3	1	N	0	5	2	2	0	0	12
MBBS	30/05/2023	09:45	11:45	1	2	N	0	4	2	2	0	0	12
MBBS	30/05/2023	09:45	11:45	2	3	N	0	2	2	2	0	0	13
MBBS	30/05/2023	12:00	13:30	1	3	N	0	0	-	2	0	0	14



Survey Type	Date	Survey Start	Survey End	Hr	Wind Speed (Beaufort Scale)	Wind Direction	Rain	Cloud Cover	Cloud Height	Visibility	Snow	Frost	Temp (°c)
MBBS	30/05/2023	12:00	13:30	2	3	N	0	0	-	2	0	0	15
Raptor	30/05/2023	13:50	15:50	1	3	NW	0	0	-	2	0	0	15
Raptor	30/05/2023	13:50	15:50	2	3	NW	0	0	-	2	0	0	16
VP	18/06/2023	11:20	14:20	1	2	W	0	8	2	2	0	0	20
VP	18/06/2023	11:20	14:20	2	2	W	0	8	2	2	0	0	19
VP	18/06/2023	11:20	14:20	3	3	NW	0	8	2	2	0	0	19
VP	18/06/2023	14:50	17:50	1	2	NE	0	5	2	2	0	0	21
VP	18/06/2023	14:50	17:50	2	2	SE	0	6	2	2	0	0	20
VP	18/06/2023	14:50	17:50	3	2	SW	0	7	2	2	0	0	22
VP	19/06/2023	10:15	13:15	1	1	SW	2	8	1	1	0	0	15
VP	19/06/2023	10:15	13:15	2	2	SW	2	8	1	1	0	0	15
VP	19/06/2023	10:15	13:15	3	2	SW	0	8	2	2	0	0	16
Raptor	20/06/2023	13:15	16:15	1	4	SW	0	8	2	2	0	0	22
Raptor	20/06/2023	13:15	16:15	2	4	SW	0	8	2	2	0	0	23
Raptor	20/06/2023	13:15	16:15	3	3	SW	0	8	2	2	0	0	22
VP	20/06/2023	16:45	19:45	1	3	SW	0	4	2	2	0	0	22
VP	20/06/2023	16:45	19:45	2	2	SW	0	1	2	2	0	0	21
VP	20/06/2023	16:45	19:45	3	2	SW	0	0	-	2	0	0	21
Raptor	23/06/2023	11:00	12:00	1	3	S	0	8	1	2	0	0	15



Survey Type	Date	Survey Start	Survey End	Hr	Wind Speed (Beaufort Scale)	Wind Direction	Rain	Cloud Cover	Cloud Height	Visibility	Snow	Frost	Temp (°c)
Raptor	23/06/2023	11:00	12:00	2	4	S	1	8	1	1	0	0	14
VP	28/06/2023	12:45	15:45	1	3	SW	0	6	2	1	0	0	18
VP	28/06/2023	12:45	15:45	2	4	SW	0	7	2	1	0	0	18
VP	28/06/2023	12:45	15:45	3	4	W	0	5	2	1	0	0	18
Raptor	19/06/2023	13:15	15:15	1	3	SW	0	8	1	2	0	0	16
Raptor	19/06/2023	13:15	15:15	2	3	SW	1	8	1	1	0	0	16
VP	28/06/2023	16:15	19:15	1	4	W	0	5	2	1	0	0	18
VP	28/06/2023	16:15	19:15	2	4	SW	0	6	2	1	0	0	17
VP	28/06/2023	16:15	19:15	3	4	SW	0	7	2	2	0	0	16
Raptor	28/06/2023	19:15	20:15	1	3	SW	0	8	2	2	0	0	16
Raptor	29/06/2023	06:45	08:45	1	2	SW	0	5	2	2	0	0	12
Raptor	29/06/2023	06:45	08:45	2	3	SW	0	6	2	2	0	0	13
MBBS	29/06/2023	08:45	13:15	1	3	SW	0	6	2	2	0	0	14
MBBS	29/06/2023	08:45	13:15	2	3	SW	0	7	2	2	0	0	14
MBBS	29/06/2023	08:45	13:15	3	4	SW	0	8	2	2	0	0	16
MBBS	29/06/2023	08:45	13:15	4	4	SW	0	8	2	2	0	0	16
MBBS	29/06/2023	08:45	13:15	5	4	SW	0	8	2	2	0	0	17
VP	11/07/2023	17:00	20:00	1	2	NW	1	8	2	1	0	0	15
VP	11/07/2023	17:00	20:00	2	3	NW	0	8	2	1	0	0	14



Survey Type	Date	Survey Start	Survey End	Hr	Wind Speed (Beaufort Scale)	Wind Direction	Rain	Cloud Cover	Cloud Height	Visibility	Snow	Frost	Temp (°c)
VP	11/07/2023	17:00	20:00	3	3	NNW	0	8	2	1	0	0	14
VP	12/07/2023	12:50	15:50	1	2	N	0	6	2	2	0	0	18
VP	12/07/2023	12:50	15:50	2	2	N	0	8	2	2	0	0	17
VP	12/07/2023	12:50	15:50	3	3	NNW	0	8	2	2	0	0	18
Raptor	12/07/2023	16:00	19:00	1	3	NNW	0	8	2	2	0	0	17
Raptor	12/07/2023	16:00	19:00	2	3	NNW	0	8	2	2	0	0	17
Raptor	12/07/2023	16:00	19:00	3	3	NNW	0	6	2	1	0	0	16
Raptor	14/07/2023	12:45	15:45	1	3	NE	1	8	2	1	0	0	16
Raptor	14/07/2023	12:45	15:45	2	3	E	0	8	2	2	0	0	17
Raptor	14/07/2023	12:45	15:45	3	3	E	0	8	2	2	0	0	17
VP	21/07/2023	09:30	12:30	1	2	W	0	7	2	2	0	0	15
VP	21/07/2023	09:30	12:30	2	3	W	0	7	2	2	0	0	15
VP	21/07/2023	09:30	12:30	3	3	SW	0	6	2	2	0	0	15
VP	21/07/2023	13:00	16:00	1	3	W	0	5	2	2	0	0	16
VP	21/07/2023	13:00	16:00	2	3	W	0	2	2	2	0	0	18
VP	21/07/2023	13:00	16:00	3	3	W	0	0	-	2	0	0	18
MBBS	21/07/2023	16:00	18:30	1	3	W	0	0	-	2	0	0	18
MBBS	21/07/2023	16:00	18:30	2	3	SW	0	0	-	2	0	0	17
MBBS	21/07/2023	16:00	18:30	3	3	SW	0	0	-	2	0	0	17



Survey Type	Date	Survey Start	Survey End	Hr	Wind Speed (Beaufort Scale)	Wind Direction	Rain	Cloud Cover	Cloud Height	Visibility	Snow	Frost	Temp (°c)
Raptor	21/07/2023	18:30	20:00	1	3	SW	0	0	-	2	0	0	16
Raptor	21/07/2023	18:30	20:00	2	3	SW	0	0	-	1	0	0	16
Raptor	22/07/2023	14:00	15:30	1	4	NE	0	6	2	2	0	0	17
Raptor	22/07/2023	14:00	15:30	2	4	NE	0	7	2	2	0	0	17
MBBS	22/07/2023	15:30	18:30	1	3	NE	0	5	2	2	0	0	18
MBBS	22/07/2023	15:30	18:30	2	3	NE	0	4	2	2	0	0	17
MBBS	22/07/2023	15:30	18:30	3	3	NE	0	4	2	2	0	0	17
Raptor	23/07/2023	07:00	13:00	1	4	NE	0	6	2	2	0	0	14
Raptor	23/07/2023	07:00	13:00	2	4	NE	0	4	2	2	0	0	14
Raptor	23/07/2023	07:00	13:00	3	4	NE	0	3	2	2	0	0	15
Raptor	23/07/2023	07:00	13:00	4	4	NE	0	1	2	2	0	0	16
Raptor	23/07/2023	07:00	13:00	5	4	NE	0	1	2	2	0	0	17
Raptor	23/07/2023	07:00	13:00	6	4	NE	0	0	-	2	0	0	17
VP	14/07/2023	06:15	09:15	1	2	SE	0	4	2	2	0	0	12
VP	14/07/2023	06:15	09:15	2	2	NE	0	6	2	2	0	0	13
VP	14/07/2023	06:15	09:15	3	2	NE	0	7	2	2	0	0	14
VP	14/07/2023	09:45	12:45	1	3	NE	0	8	2	2	0	0	15
VP	14/07/2023	09:45	12:45	2	3	NE	0	8	2	2	0	0	15
VP	14/07/2023	09:45	12:45	3	3	NE	0	8	2	2	0	0	16



Survey Type	Date	Survey Start	Survey End	Hr	Wind Speed (Beaufort Scale)	Wind Direction	Rain	Cloud Cover	Cloud Height	Visibility	Snow	Frost	Temp (°c)
VP	23/08/2023	08:00	11:00	1	4	S	0	8	2	2	0	0	13
VP	23/08/2023	08:00	11:00	2	4	S	0	8	2	2	0	0	14
VP	23/08/2023	08:00	11:00	3	4	S	0	8	2	2	0	0	14
VP	23/08/2023	11:30	14:30	1	4	SSW	1	8	2	1	0	0	15
VP	23/08/2023	11:30	14:30	2	4	SSW	0	8	2	1	0	0	15
VP	23/08/2023	11:30	14:30	3	4	SW	0	8	2	1	0	0	15
VP	24/08/2023	08:40	11:10	1	3	SW	2	8	2	2	0	0	13
VP	24/08/2023	08:40	11:10	2	4	SW	2	8	1	1	0	0	13
VP	24/08/2023	08:40	11:10	3	4	SW	1	8	1	0	0	0	13
VP	28/08/2023	08:25	11:25	1	1	NW	0	8	2	2	0	0	13
VP	28/08/2023	08:25	11:25	2	1	NW	0	8	2	2	0	0	14
VP	28/08/2023	08:25	11:25	3	2	W	0	8	2	2	0	0	15
VP	28/08/2023	11:25	11:55	1	3	W	0	8	2	2	0	0	15
VP	31/08/2023	10:55	13:55	1	3	S	0	4	2	2	0	0	15
VP	31/08/2023	10:55	13:55	2	3	S	0	5	2	2	0	0	15
VP	31/08/2023	10:55	13:55	3	3	S	0	5	2	2	0	0	16
VP	31/08/2023	14:25	17:25	1	3	S	0	7	2	2	0	0	16
VP	31/08/2023	14:25	17:25	2	2	S	0	7	2	2	0	0	17
VP	31/08/2023	14:25	17:25	3	2	S	0	6	2	2	0	0	16



Survey Type	Date	Survey Start	Survey End	Hr	Wind Speed (Beaufort Scale)	Wind Direction	Rain	Cloud Cover	Cloud Height	Visibility	Snow	Frost	Temp (°c)
VP	19/09/2023	09:25	12:25	1	4	SW	2	8	2	2	0	0	13
VP	19/09/2023	09:25	12:25	2	4	SW	2	8	2	1	0	0	13
VP	19/09/2023	09:25	12:25	3	4	W	3	8	2	1	0	0	13
VP	19/09/2023	12:55	13:55	1	4	W	0	8	2	2	0	0	13
VP	23/09/2023	10:10	13:10	1	2	S	0	8	2	2	0	0	11
VP	23/09/2023	10:10	13:10	2	2	SE	0	8	2	2	0	0	12
VP	23/09/2023	10:10	13:10	3	3	SE	0	8	2	2	0	0	12
VP	23/09/2023	13:40	15:40	1	3	SE	0	7	2	2	0	0	12
VP	23/09/2023	13:40	15:40	2	3	SE	0	7	2	2	0	0	13
VP	27/09/2023	09:10	12:10	1	3	SE	0	8	2	2	0	0	12
VP	27/09/2023	09:10	12:10	2	4	SE	0	8	2	2	0	0	13
VP	27/09/2023	09:10	12:10	3	4	SE	0	8	2	2	0	0	13
VP	30/09/2023	09:15	12:15	1	2	S	0	8	2	2	0	0	12
VP	30/09/2023	09:15	12:15	2	3	S	0	8	2	2	0	0	13
VP	30/09/2023	09:15	12:15	3	3	SE	0	8	2	2	0	0	14
VP	30/09/2023	12:45	15:45	1	3	SE	0	8	2	2	0	0	14
VP	30/09/2023	12:45	15:45	2	3	SE	0	8	2	2	0	0	15
VP	30/09/2023	12:45	15:45	3	3	SE	0	8	2	2	0	0	15
VP	16/10/2023	09:30	12:30	1	2	S	0	6	2	2	0	0	7



Survey Type	Date	Survey Start	Survey End	Hr	Wind Speed (Beaufort Scale)	Wind Direction	Rain	Cloud Cover	Cloud Height	Visibility	Snow	Frost	Temp (°c)
VP	16/10/2023	09:30	12:30	2	2	SW	3	8	2	1	0	0	9
VP	16/10/2023	09:30	12:30	3	2	SW	0	7	2	2	0	0	10
VP	16/10/2023	13:00	16:00	1	3	SW	0	6	2	2	0	0	11
VP	16/10/2023	13:00	16:00	2	3	SW	0	6	2	2	0	0	11
VP	16/10/2023	13:00	16:00	3	3	SW	0	7	2	2	0	0	12
VP	26/10/2023	08:45	11:45	1	3	E	0	7	2	2	0	0	8
VP	26/10/2023	08:45	11:45	2	3	E	0	7	2	2	0	0	9
VP	26/10/2023	08:45	11:45	3	2	SE	0	7	2	2	0	0	10
VP	26/10/2023	12:15	15:15	1	2	SE	0	6	2	2	0	0	11
VP	26/10/2023	12:15	15:15	2	3	SE	0	7	2	2	0	0	12
VP	26/10/2023	12:15	15:15	3	3	SE	0	8	2	2	0	0	12
VP	30/10/2023	09:10	12:10	1	4	NE	0	0	-	2	0	0	8
VP	30/10/2023	09:10	12:10	2	4	NE	0	0	-	2	0	0	9
VP	30/10/2023	09:10	12:10	3	5	NE	0	0	-	2	0	0	9
VP	30/10/2023	12:40	15:40	1	5	NE	0	1	2	2	0	0	9
VP	30/10/2023	12:40	15:40	2	4	NE	0	1	2	2	0	0	9
VP	30/10/2023	12:40	15:40	3	4	E	0	2	2	2	0	0	9
VP	13/11/2023	09:10	12:10	1	2	NE	0	8	2	2	0	0	7
VP	13/11/2023	09:10	12:10	2	3	NE	0	8	2	2	0	0	8



Survey Type	Date	Survey Start	Survey End	Hr	Wind Speed (Beaufort Scale)	Wind Direction	Rain	Cloud Cover	Cloud Height	Visibility	Snow	Frost	Temp (°c)
VP	13/11/2023	09:10	12:10	3	3	NE	0	8	2	2	0	0	9
VP	13/11/2023	12:40	15:40	1	2	NE	0	8	2	2	0	0	9
VP	13/11/2023	12:40	15:40	2	2	N	0	8	2	2	0	0	10
VP	13/11/2023	12:40	15:40	3	2	N	2	8	2	1	0	0	9
VP	17/11/2023	09:10	12:10	1	1	NE	0	0	-	2	0	0	4
VP	17/11/2023	09:10	12:10	2	1	SE	0	0	-	2	0	0	5
VP	17/11/2023	09:10	12:10	3	1	SE	0	1	2	2	0	0	7
VP	17/11/2023	12:40	15:40	1	2	SE	0	3	2	2	0	0	8
VP	17/11/2023	12:40	15:40	2	2	E	0	5	2	2	0	0	7
VP	17/11/2023	12:40	15:40	3	1	E	0	7	2	2	0	0	7
VP	30/11/2023	09:20	12:20	1	1	NE	0	8	2	2	0	1	1
VP	30/11/2023	09:20	12:20	2	1	N	0	6	2	2	0	0	3
VP	30/11/2023	09:20	12:20	3	2	N	0	2	2	2	0	0	4
VP	30/11/2023	12:50	15:50	1	2	N	0	1	2	2	0	0	5
VP	30/11/2023	12:50	15:50	2	1	N	0	3	2	2	0	0	6
VP	30/11/2023	12:50	15:50	3	1	N	0	4	2	2	0	0	5
VP	11/12/2023	09:25	12:25	1	1	NE	0	5	2	2	0	0	4
VP	11/12/2023	09:25	12:25	2	2	NE	0	4	2	2	0	0	5
VP	11/12/2023	09:25	12:25	3	3	NE	0	1	2	2	0	0	7



Survey Type	Date	Survey Start	Survey End	Hr	Wind Speed (Beaufort Scale)	Wind Direction	Rain	Cloud Cover	Cloud Height	Visibility	Snow	Frost	Temp (°c)	
VP	11/12/2023	12:55	15:55	1	3	NE	0	3	2	2	0	0	7	
VP	11/12/2023	12:55	15:55	2	4	NE	0	4	2	2	0	0	7	
VP	11/12/2023	12:55	15:55	3	4	NE	0	4	2	2	0	0	6	
VP	15/12/2023	09:25	10:55	1	5	SW	2	8	2	1	0	0	8	
VP	15/12/2023	09:25	10:55	2	5	SW	3	8	1	0	0	0	9	
VP	19/12/2023	09:15	12:15	1	3	NW	2	7	2	1	0	0	4	
VP	19/12/2023	09:15	12:15	2	4	NW	2	6	2	1	0	0	5	
VP	19/12/2023	09:15	12:15	3	5	NW	0	8	2	1	0	0	5	
VP	19/12/2023	12:45	14:15	1	5	SW	0	8	2	2	0	0	7	
VP	19/12/2023	12:45	14:15	2	5	SW	0	8	2	2	0	0	7	
VP	31/12/2023	09:10	12:10	1	1	E	0	4	2	2	0	0	6	
VP	31/12/2023	09:10	12:10	2	2	E	0	2	2	2	0	0	7	
VP	31/12/2023	09:10	12:10	3	2	E	0	7	2	2	0	0	7	
VP	31/12/2023	12:40	15:40	1	2	E	0	6	2	2	0	0	7	
VP	31/12/2023	12:40	15:40	2	2	NE	0	8	2	2	0	0	7	
VP	31/12/2023	12:40	15:40	3	1	NE	0	8	2	2	0	0	6	
Wind Speed (Beaufort scale) Calm: 0 Light air: 1		Rain/ Precipitation None: 0		Cloud Cover Expressed in oktas (n/8)				Visibility Poor (<1km): 0		Lying Snow None: 0 On site: 1			Frost None: 0 Ground: 1	



Survey Type	Date	Survey Start	Survey End	Hr	Wind Speed (Beaufort Scale)	Wind Direction	Rain	Cloud Cover	Cloud Height	Visibility	Snow	Frost	Temp (°c)
Light breeze: 2 Gentle breeze: 3 Moderate breeze: 4 Fresh breeze: 5 Strong breeze: 6 Moderate gale: 7 Gale: 8		Drizzle: 1 Light showers / snow: 2 Heavy showers / snow: 3 Heavy rain / snow: 4			Cloud Height Height of cloud above average height of viewshed <150m: 0 150-500m: 1 >500m: 2		Moderate (1-3km): 1 Good (>3km): 2	On higher ground: 2				All day: 2	



Annex 4.1C

VP Survey Target Species Data



Table 4C: 2023 Data (January- December) Flight Data recorded at VP1-VP3¹⁰

Date	VP code	Surveyor	Flight ID	Species	No. Birds	Age	M/F/U	StartTime (hr:min)	Av Flight Heightband*	Flight behaviour	Flight duration (s)
26/01/2023	2	SB	1	EA	1	Imm	U	12:09	1	1 - Foraging/ hunting	25
26/01/2023	2	SB	2	WE	1	3rd CY	M	12:12	1	1 - Foraging/ hunting	45
26/01/2023	2	SB	3	WE	1	3rd CY	M	12:17	2	1 - Foraging/ hunting	61
26/01/2023	2	SB	4	WE	1	3rd CY	M	12:20	1	1 - Foraging/ hunting	12
26/01/2023	2	SB	5	WE	1	3rd CY	M	12:25	1	1 - Foraging/ hunting	25
05/02/2023	3	SB	1	EA	1	Imm	U	11:01	1	1 - Foraging/ hunting	146
05/02/2023	3	SB	-	WE	1	Ad	U	15:04	0	9 - Not flying	0
09/02/2023	1	SB	1	WE	2	Ad	M+F	11:37	1	3 - On passage/ commuting	280
09/02/2023	1	SB	2	WE	1	Ad	F	11:52	2	1 - Foraging/ hunting	707
25/02/2023	2	SB	1	GP	21	U	U	09:51	1	1 - Foraging/ hunting	43

¹⁰ Key noted at end of Table



Date	VP code	Surveyor	Flight ID	Species	No. Birds	Age	M/F/U	StartTime (hr:min)	Av Flight Heightband*	Flight behaviour	Flight duration (s)
25/02/2023	2	SB	2	WE	1	Ad	M	10:29	1	1 - Foraging/hunting	107
25/02/2023	2	SB	3	WE	1	Ad	F	10:57	3	3 - On passage/commuting	155
25/02/2023	2	SB	1	EA	1	Yr2	M	12:32	1	1 - Foraging/hunting	153
25/02/2023	2	SB	2	EA	1	Yr2	M	12:50	1	1 - Foraging/hunting	43
25/02/2023	2	SB	3	WE	1	Ad	M	12:57	4	2 - Display	726
25/02/2023	2	SB	4	WE	1	Ad	F	13:16	2	3 - On passage/commuting	219
25/02/2023	2	SB	5	WE	2	Ad	M+F	13:22	2	2 - Display	147
04/03/2023	1	SB	1	WE	1	Ad	F	14:31	2	3 - On passage/commuting	465
04/03/2023	1	SB	2	WE	1	Yr3	F	15:37	4	3 - On passage/commuting	468
04/03/2023	1	SB	3	GI	1	U	U	15:38	2	3 - On passage/commuting	15
06/03/2023	3	SB	1	WE	2	Ad	M+F	11:39	2	2 - Display	746
19/03/2023	2	SB	1	GP	3	Ad	U	09:23	2	4 - To/from breeding site	53
19/03/2023	2	SB	1	GP	13	Mixed	U	11:42	2	10 - Other	117



Date	VP code	Surveyor	Flight ID	Species	No. Birds	Age	M/F/U	StartTime (hr:min)	Av Flight Heightband*	Flight behaviour	Flight duration (s)
20/04/2023	1	SB	1	EA	1	U	F	14:57	2	3 - On passage/ commuting	120
20/04/2023	3	SB	1	WE	1	Ad	M	16:37	2	3 - On passage/ commuting	
24/04/2023	1	SB	1	WE	1	Imm	F	10:33	1	1 - Foraging/ hunting	133
26/04/2023	2	SB	1	EA	1	Imm	F	09:53	4	3 - On passage/ commuting	644
26/04/2023	2	SB	1	ML	1	U	U	10:59	2	2 - Display	135
26/04/2023	2	SB	2	EA	1	Yr2	M	12:23	1	1 - Foraging/ hunting	27
26/04/2023	2	SB	3	EA	1	Yr2	M	12:25	1	1 - Foraging/ hunting	122
14/05/2023	1	SB	1	EA	1	Imm	F	17:01	1	1 - Foraging/ hunting	350
14/05/2023	1	SB	2	WE	1	Imm	U	17:07	1	10 - Other	5
14/05/2023	1	SB	3	WE	1	Sub- ad	M	18:57	2	3 - On passage/ commuting	275
15/05/2023	3	SB	1	WE	1	Ad	M	13:09		9 - Not flying	
15/05/2023	3	SB	2	WE	2	Imm + Ad	F + M	13:34	2	10 - Other	99
15/05/2023	3	SB	3	WE	1	Ad	F	13:35	4	6 - Circling	598



Date	VP code	Surveyor	Flight ID	Species	No. Birds	Age	M/F/U	StartTime (hr:min)	Av Flight Heightband*	Flight behaviour	Flight duration (s)
15/05/2023	3	SB	4	WE	1	Ad	M	13:40	4	6 - Circling	277
15/05/2023	3	SB	5	WE	1	Ad	F	14:02			286
18/06/2023	1	SB	1	WE	1	Imm	F	12:17	2	6 - Circling	230
28/06/2023	2	SB	1	WE	3	Ad	1F 2M	14:19	2	10 - Other	85
28/06/2023	2	SB	1	GP	1	Ad	U	19:01	1	4 - To/from breeding site	6
11/07/2023	1	SB	1	SN	1	Ad	U	17:39	2	2 - Display	31
11/07/2023	1	SB	2	SN	1	Ad	U	17:43	2	2 - Display	46
21/07/2023	2	SB	1	WE	1	Ad	U	13:46	2	4 - To/from breeding site	257
31/08/2023	2	SB	1	WE	2	Ad	M + F	12:24	2	2 - Display	570
31/08/2023	2	SB	2	WE	2	Ad	M + F	12:30		2 - Display	180
31/08/2023	2	SB	3	WE	2	Ad	M + F	12:52	2	3 - On passage/ commuting	134
31/08/2023	2	SB	4	WE	2	Ad	M + F	12:53	2	10 - Other	
31/08/2023	2	SB	5	WE	1	Ad	M	12:57	1	1 - Foraging/ hunting	111
31/08/2023	2	SB	6	WE	5	2x Yr2, 2x	2x M, 3x F	13:53	2	6 - Circling	153



Date	VP code	Surveyor	Flight ID	Species	No. Birds	Age	M/F/U	StartTime (hr:min)	Av Flight Heightband*	Flight behaviour	Flight duration (s)
						Yr3, 1x Yr4					
31/08/2023	2	SB	1	WE	1	Ad	M	15:16	1	1 - Foraging/ hunting	45
31/08/2023	2	SB	2	WE	1	Ad	F	15:17	1	1 - Foraging/ hunting	58
31/08/2023	2	SB	3	WE	1	Imm	U	15:43		9 - Not flying	0
31/08/2023	2	SB	4	WE	2	Ad	M + F	16:32	2	6 - Circling	123
31/08/2023	2	SB	5	WE	6	Ad	3M, 3F	17:01		10 - Other	324
19/09/2023	1	SB	1	WE	1	Ad	F	10:55	1	3 - On passage/ commuting	43
19/09/2023	1	SB	2	WE	2	Ad	M + F	11:57	2	10 - Other	138
19/09/2023	1	SB	3	WE	1	Ad	F	12:14	2	5 - To/from roost	110
19/09/2023	1	SB	4	WE	1	Ad	M	12:14	2	5 - To/from roost	110
23/09/2023	3	SB	1	WE	1	Ad	M	10:10		9 - Not flying	0
23/09/2023	3	SB	2	WE	1	Ad	F	12:38	4	6 - Circling	246
27/09/2023	3	SB	1	WE	1	Ad	F	09:10	0	9 - Not flying	0
27/09/2023	3	SB	2	WE	1	Ad	F	10:11	1	5 - To/from roost	8
27/09/2023	3	SB	3	WE	1	Ad	F	10:20	1	5 - To/from roost	6



Date	VP code	Surveyor	Flight ID	Species	No. Birds	Age	M/F/U	StartTime (hr:min)	Av Flight Heightband*	Flight behaviour	Flight duration (s)
27/09/2023	3	SB	4	WE	1	Ad	F	10:23		9 - Not flying	0
27/09/2023	3	SB	5	WE	1	Ad	M	10:25	1	5 - To/from roost	8
27/09/2023	3	SB	6	WE	1	Ad	F	10:27	1	5 - To/from roost	6
27/09/2023	3	SB	7	WE	1	Ad	F	10:32	1	3 - On passage/ commuting	168
30/09/2023	2	SB	1	HH	1	Ad	M	10:33	1	1 - Foraging/ hunting	36
16/10/2023	1	SB	1	EA	1	Ad	F	14:44	2	1 - Foraging/ hunting	61
16/10/2023	1	SB	2	EA	1	Ad	F	14:47	2	1 - Foraging/ hunting	112
26/10/2023	3	SB	1	EA	1	Ad	M	12:29	2	3 - On passage/ commuting	76
30/10/2023	2	SB	1	WE	1	Juv	M	09:11	1	1 - Foraging/ hunting	227
30/10/2023	2	SB	1	EA	1	Juv	F	13:47	1	1 - Foraging/ hunting	34
30/10/2023	2	SB	2	EA	1	Juv	F	13:50	2	1 - Foraging/ hunting	322
30/10/2023	2	SB	3	WE	1	Juv	M	14:13	2	1 - Foraging/ hunting	854



Date	VP code	Surveyor	Flight ID	Species	No. Birds	Age	M/F/U	StartTime (hr:min)	Av Flight Heightband*	Flight behaviour	Flight duration (s)
13/11/2023	3	SB	1	WE	1	Ad	F	10:59	1	1 - Foraging/hunting	34
13/11/2023	3	SB	2	WE	1	Ad	M	10:59	1	1 - Foraging/hunting	116
30/11/2023	2	SB	1	WE	1	Ad	F	12:50	0	9 - Not flying	0
30/11/2023	2	SB	2	WE	1	Ad	F	13:54	1	5 - To/from roost	9
19/12/2023	1	SB	1	WE	1	Ad	F	13:46	2	1 - Foraging/hunting	363
*Av Flight Heightband; 1 = <20m; 2 = 20-150m; 3 = 150-200m; 4 = >200m.											



