APPENDIX 8.1 - ORNITHOLOGY TECHNICAL REPORT

STRATHY WOOD WIND FARM GRID CONNECTION: EIA REPORT

Appendix 8.1: Ornithology Technical Report

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1 INTRODUCTION

1.1 Background and Scope of the Report

1.1.1 Scottish and Southern Electricity Networks (SSEN) Transmission is applying under section 37 of the Electricity Act 1989 for consent to construct and operate a new 132 kV overhead line (OHL) to connect the consented Strathy Wood Wind Farm (and eventually the consented Strathy South Wind Farm) to the electricity transmission network at Connagill 275/132 kV substation, via a 'T' onto the existing Strathy North 132 kV trident wood pole OHL ("the Proposed Development").

1.1.2 The Proposed Development would comprise approximately 4.5 km in length of 132 kV double circuit OHL supported predominately by steel lattice towers from a new cable sealing end (CSE) compound near the consented Strathy Wood Wind Farm on-site substation at Braerathy Lodge (grid ref NC 82293 56184) to a 'T' onto the existing Strathy North 132 kV trident 'H' wood pole OHL near Dallangwell. Two trident wood pole structures would be constructed to facilitate the 'T' onto the existing 132 kV OHL.

1.1.3 This Technical Appendix (TA) to **Chapter 8: Ornithology** within Volume 1 of the Environmental Impact Assessment (EIA) Report was prepared by RPS Group (RPS) on behalf of SSEN Transmission and details the methods and results of the ornithology desk study and field surveys completed within and around the Proposed Development.

1.1.4 This TA pertains to the results and methods only; the ornithological impact assessment is presented in **Chapter 8**. It includes details of the following:

- A desk study to identify designated sites of ornithological importance and records of protected and sensitive bird species;
- A review of recent and historic ornithology survey data obtained for other developments in the surrounding area with survey areas overlapping or in close proximity to the Proposed Development (completed as part of the desk study); and
- Baseline ornithology field surveys completed for the Proposed Development.

1.2 Bird Species Names and Conservation Status

1.2.1 All bird species names used in this TA follow the British List, which is maintained by the British Ornithologists' Union (BOU, 2022), with all species referred to by their British (English) vernacular name. A list of scientific names, as well as details of relevant legislation and conservation status, of all bird species referred to in this TA is provided in Table 17, **Annex A**.

1.2.2 The term "bird species of conservation concern" is used in this TA to refer to species listed on one or more of the following:

- Schedule 1 of the Wildlife and Countryside Act (1981) as amended;
- Annex I of Directive 2009/147/EC on the conservation of wild birds ("the Birds Directive");
- The UK Birds of Conservation Concern (BoCC) Red and Amber lists (Stanbury *et al*., 2021); and
- The Scottish Biodiversity List (SBL).

1.3 Confidential Appendix

1.3.1 In accordance with NatureScot (2016) guidance, some environmentally sensitive bird information has been withheld from this TA and is presented separately in **Appendix 8.2: Ornithology Confidential Annex**.

2 METHODS

2.1 Desk Study

2.1.1 Designated Sites of Ornithological Importance

2.1.1 A search for the following statutory sites of ornithological importance was completed, using Geographic Information System (GIS) data available via the NatureScot Spatial Data Hub[1], with details of these sites obtained via the NatureScot SiteLink website[2]:

- Sites of international ornithological importance, i.e., Special Protection Areas (SPAs) and Ramsar sites within 10 km of the Proposed Development;
- Sites of international ornithological importance designated for geese within 20 km of the Proposed Development; and
- Sites of Special Scientific Interest (SSSIs) and National Nature Reserves (NNRs) designated for ornithological features within 2 km of the Proposed Development.

2.1.2 Data Requests

2.1.1 The following records of protected and sensitive bird species, recorded from 2014 onwards, were requested as part of the desk study:

- Breeding or roosting eagle species within 6 km of the Proposed Development, and other raptor species listed on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended) and / or Annex I of the Birds Directive within 2 km of the Proposed Development, held by the Highland Raptor Study Group (HRSG); and
- Breeding or roosting eagle species within 6 km of the Proposed Development, and other bird species of conservation concern (as defined in section 1.2) within 2 km of the Proposed Development, held by the Royal Society for the Protection of Birds (RSPB).

2.1.3 Review of Existing Data

Overview

2.1.1 The following datasets obtained for surrounding developments were reviewed as part of the desk-based study:

- Operational monitoring data from the neighbouring Strathy North Wind Farm, collected by RPS in 2016-19 (inclusive) and 2021;
- Baseline ornithology survey data for the consented Strathy Wood Wind Farm to the south of the Proposed Development, collected by Atmos during the 2018 and 2019 breeding seasons; and
- Flight activity survey data collected for the proposed Strathy South Wind Farm 'Northern Section' Grid Connection, collected by Blairbeg Consulting Ltd between May and August 2022.

[1] https://opendata.nature.scot/ [Accessed May 2024]

[2] https://sitelink.nature.scot/home [Accessed May 2024]

2.1.2 An overview of the ornithology surveys completed at each of these developments is presented below.

Strathy North Wind Farm

2.1.3 The following ornithology surveys of Strathy North Wind Farm, which was granted planning consent in 2011 and became operational in 2015, have taken place:

- 2003-09: baseline surveys;
- 2012 breeding season: pre-commencement surveys;
- 2013-15 breeding seasons: construction phase surveys; and
- 2016-19 and 2021 breeding seasons: operational monitoring (note that no monitoring took place in 2020 due to wind farm access restrictions associated with the COVID-19 pandemic).

2.1.4 Baseline ornithology surveys were used to inform the ornithological impact assessment (OIA) completed for Strathy North Wind Farm and presented in the Strathy North Wind Farm Further Environmental Information (FEI) Report (Environ, 2010).

2.1.5 Results of the pre-commencement and construction phase monitoring (completed in 2012 and 2013-15 respectively), were reported in RPS *Strathy North Wind Farm – Detailed Habitat Management Plan Phase 3* (2015), while results of the 2016-19 operational monitoring were presented in RPS *Strathy North Wind Farm – Bird Monitoring Results during Wind Farm Construction (2013 to 2015) and Early Operation (2016 to 2019)*; incorporating previously collected data from surveys completed for Strathy North, Strathy Wood and Strathy South (2020), which also makes reference to Strathy North data collected prior to 2010 to identify long-standing breeding sites and comment on longer term trends where applicable.

2.1.6 Additionally, the latter report incorporates 2010-12, 2014, 2018 and 2019 data collected for the consented Strathy South Wind Farm (which borders Strathy North to the south) and 2010, 2011, and 2014-18 data (as well as 2019 hen harrier data) from the consented Strathy Wood Wind Farm (where survey buffers overlapped with Strathy North and for key species).

2.1.7 As RPS (2020) includes extensive details of the most recent Strathy North surveys (with the exception of the 2021 surveys, which are summarised in this TA), as well as key results from surveys of neighbouring developments (i.e., the Strathy Wood and Strathy South wind farms), it is included as **Appendix 8.3: Strathy North Wind Farm Ornithology Summary Report (Confidential).**

2.1.8 Given the age of the baseline, pre-commencement and construction ornithology data, they are not considered further in this TA, and the review of Strathy North data focussed on the operational monitoring completed between 2016 and 2021. This was primarily based on RPS (2020), supplemented by a review of raw data where relevant (e.g., 2021 monitoring data).

2.1.9 A summary of the Strathy North operational monitoring surveys is presented in **Table 1** and the survey areas and Vantage Point (VP) locations are shown in **Figures 8.1a** and **8.1b**, within Volume 2 of this EIA Report.

2.1.10 Details of the 2016-19 survey dates and effort, including survey methods, are included in **Appendix 8.3**. A summary of the VP locations and annual flight activity survey effort is provided in Table 18, **Annex B** for reference. Details of the 2021 surveys are presented in Table 19 to Table 22, **Annex B**.

Table 1: Summary of operational monitoring ornithology surveys completed at Strathy North Wind Farm in 2016-19 and 2021

Survey type	2016	2017	2018	2019	2021
Flight activity surveys	Jan-Aug	Apr-Aug	Apr-Aug	Apr-Aug	Apr-Aug

Survey type	2016	2017	2018	2019	2021
Breeding diver surveys	May-Aug	May-Aug	May-Aug	Jun-Aug	May-Aug
Diver focal watches	Jul-Aug	Jul	Jul-Aug	Jul	Aug
Breeding raptor surveys	Apr-Aug	Apr-Aug	Apr-Aug	Apr-Aug	Mar-Aug
Greenshank VP surveys	Jun	-	-	-	-
Breeding greenshank and wood sandpiper surveys	-	-	-	-	Apr-Jul
Moorland breeding bird surveys (MBBS)	Apr-Jul	Apr-Jul	Apr-Jul	Apr-Jul	Apr-Jul

Strathy Wood Wind Farm

2.1.11 A range of ornithology surveys for Strathy Wood Wind Farm, which was consented in 2021, were carried out between 2008 and 2019. The review of Strathy Wood Wind Farm data focussed on the most recent surveys, which were completed during the 2018 and 2019 breeding seasons and comprised flight activity surveys as well as surveys for breeding raptors and waders. This was primarily based on a review of available raw data, supplemented by the Further Environmental Information (FEI) Reports where relevant (Atmos, 2015; 2019).

2.1.12 For reference, a summary of the survey methods detailed in the 2019 FEI (Atmos, 2019) is included in the following sections. Note that the 2019 FEI only includes details of the 2018 surveys, but based on the available raw data, it is assumed that the 2019 surveys followed the same methods as the 2018 surveys, which are all standard and in line with NatureScot (2017) guidance.

Flight Activity (Vantage Point) Survey Methodology

2.1.13 Vantage point surveys were carried out to record flight activity of birds and their distribution over the Strathy Wood Wind Farm site (Atmos, 2019). Data was collected during timed watches from two VP locations to the south of the Proposed Development. A summary of flight activity survey effort is included in **Table 2.**

Table 2: Summary of flight activity survey effort completed for Strathy Wood Wind Farm in 2018 and 2019 (hrs)

VP	Purpose of VP	2018 (hrs)	2019 (hrs)
8	Used to monitor diver activity	81	39
9	Used to monitor western portion of wind farm	51	39

Raptor Surveys

2.1.14 Breeding raptor surveys were carried out, aimed primarily at hen harrier, but taking into account other breeding raptors potentially present within the survey area. Four visits were carried out between the months of April and July in 2018 and 2019. The survey area comprised the Strathy Wood Wind Farm site and a surrounding 2 km buffer (Atmos, 2019).

Breeding Wader Surveys

2.1.15 Breeding wader surveys were completed following a modified version of the Brown & Shepherd (1993) method. In line with NatureScot (2017) guidance, four visits were carried out between April and July in 2018 and 2019. The survey buffer was not stated.

Strathy South Wind Farm 'Northern Section' Grid Connection

2.1.16 Flight activity surveys were completed for the proposed Strathy South Wind Farm 'Northern Section' Grid Connection (between Bowside Lodge to the north of the Proposed Development and Connagill substation to the east) between May and August 2022 (inclusive). The viewsheds of the two westernmost vantage point (VP) locations (VPs 1 and 2), which are shown in **Figure 8.1c** within Volume 2 of this EIA Report, cover an area to the northwest, north and northeast of the Proposed Development. Surveys completed from these two VP locations were included in the data review.

2.1.17 Flight activity surveys were completed in line with standard methods detailed in NatureScot (2017a) guidance.

2.1.18 A summary of monthly survey effort completed from VPs 1 and 2 is presented in **Table 3**. Survey times were spread throughout the day. Further details of the surveys including weather data are presented in Table 23, **Annex B**.

Table 3: Summary of 2022 monthly flight activity survey effort completed for the proposed Strathy South Grid Connection from relevant VPs (1 and 2)

Month	VP1 (hrs)	VP2 (hrs)
May	6	6
June	6	6
July	6	10
August	6	6
Total	**24**	**28**

2.2 Field Surveys

2.2.1 Overview

2.1 Ornithology field surveys for the Proposed Development were carried out by Stagfire Ecological Surveys Ltd and WSP between October 2018 and August 2019 and comprised the following:

- Flight activity surveys (Oct 2018 to Aug 2019 inclusive);
- Black grouse lekking survey (Apr to May 2019);
- Moorland Breeding Bird Survey (MBBS) (Apr to Jul 2019); and
- Scarce breeding bird survey (SBBS) (Apr to Jul 2019) which included breeding diver surveys.

2.2.1 The survey areas, which are shown in **Figure 8.2a** within Volume 2 of this EIA Report, were based on the optimal route option at that time, which was similar to the Proposed Development, with survey-specific buffers (500 m for breeding birds, 1.5 km for black grouse and breeding divers and 2 km for scarce breeding birds).

2.2.2 Additionally, a SBBS covering the Proposed Development were completed by Blairbeg Consulting Ltd between May and August 2022. The survey area, which is shown on **Figure 8.2b** within Volume 2 of the EIA Report, was based on the optimal route at the time, which was similar to the Proposed Development (but differed to that used for the 2018-19 surveys).

2.2.3 Further details of the survey methods are presented in the following sections.

2.2.2 2018-19 Ornithology Surveys

Flight Activity Surveys

2.2.1 Flight activity surveys were carried out to record the flight activity of birds and their distribution over the Proposed Development, following standard methods detailed in NatureScot (2017a) guidance.

2.2.2 During the surveys, data was collected during timed watches from two strategic vantage point (VP) locations, selected to provide full coverage of the Proposed Development[3] and a surrounding 500 m buffer (see **Figure 8.2a** within Volume 2).

2.2.3 Each survey was carried out over a maximum three-hour time frame by a single observer with a minimum 30-minute break between any two consecutive surveys. Surveys from the two VP locations were not carried out simultaneously. Similarly, surveys were scheduled to avoid periods when other ecological or ornithological survey work was being undertaken on site.

2.2.4 Survey effort was spread throughout the daytime period to ensure temporal flight activity patterns would be captured. Each survey was undertaken by a single observer in good conditions (i.e., good visibility of at least 2 km, avoiding heavy downpours / bad weather conditions).

2.2.5 During the surveys the airspace within the 2 km, 180° viewshed arc from the VP was scanned continuously for target species using the naked eye as well as binoculars. Once a target species was observed it was recorded and mapped until it had flown out of sight or landed.

2.2.6 Although a viewshed radius of 2 km was used to record all species, observations of birds located outside this radius (e.g., flocks of large, easily detectable birds) were also recorded to provide additional context.

2.2.7 Flight lines of all observed target species were then drawn directly onto 1:10,00 OS maps. The following associated flight data was also recorded and cross-referenced to the mapped flight;

- Flight start time;
- Species (where identification was uncertain observations were identified to species group);
- Number of birds / flock size;
- Flight duration;
- Flight height band relative to the height of the proposed OHL wires:
  - 1) 0-10m;
  - 2) 10-40m;
  - 3) >40m;
- Duration (in seconds) within each height band;
- Time changes between height bands; and
- Behaviour (including territorial or nesting behaviour).

2.2.8 In addition to flights by target species, the presence and behaviour of any other notable species which could potentially be vulnerable to the effects of the Proposed Development ('secondary species') were also recorded.

2.2.9 All flight activity data was entered into ArcView GIS.

2.2.10 NatureScot (2017a) guidance requires that a minimum of 36 hours of survey effort is carried out at each VP in each survey season (breeding and non-breeding). Surveys during the non-breeding

[3] Based on the optimal route at the time; see Figure 8.2a, Volume 2 of the EIA Report

season were carried out from October 2018 to February 2019 (inclusive), and from March to August 2019 (inclusive) during the breeding season.

2.2.11 A summary of the monthly survey effort is presented in **Table 4** (non-breeding season) and

2.2.12 **Table** 5 (breeding season). A detailed breakdown of the survey effort and timings is presented in Table 24, **Annex B**.

Table 4: Summary of 2018-19 non-breeding season flight activity survey effort (hours) for the Proposed Development

VP	October 2018	November 2018	December 2018	January 2019	February 2019	Total
1	12	6	6	6	6	**36**
2	12	6	6	6	6	**36**

Table 5: Summary of the 2019 breeding season flight activity survey effort (hours) for the Proposed Development

VP	March 2019	April 2019	May 2019	June 2019	July 2019	August 2019	Total
1	6	6	6	6	6	6	**36**
2	6	6	3	9	6	6	**36**

Black Grouse Lekking Survey

2.2.13 Black grouse surveys were carried out in 2019 to determine the presence or likely absence of lekking black grouse plus a surrounding buffer of 1.5 km of the Proposed Development[3]. Surveys followed the method detailed in Gilbert *et al*. (1998).

2.2.14 Two survey visits were carried out in April, which involved a walkover of the survey area to check for suitable habitat (e.g., areas of short grassland such as in-bye pastures or moorland particularly near young or sparse forest edges). Details of survey dates and times are presented in Table 25, **Annex B**.

2.2.15 Surveys were undertaken within approximately two hours of dawn, during optimal weather (i.e., dry, and calm conditions with good visibility) to allow lekking males to be heard and seen. Surveyors sought to cover all areas to within 500 m in search of lekking male black grouse and any attending females. Previously identified leks were observed from suitable vantage points to avoid disturbance. Males and females seen in the lekking area were recorded during each visit. Any birds within 200 m of each other were considered to be part of a separate lek site.

Moorland Breeding Bird Survey (MBBS)

2.2.16 A MBBS was carried out between April and July 2019, following a modified version of the Brown & Shepherd (1993) method for censusing upland breeding waders, as summarised in Gilbert *et al.* (1998). The surveys included recording of lowland wader species and involved four survey visits undertaken between mid-April and early July as recommended in NatureScot (2017a) guidance. Details of survey dates and times are presented in Table 26, **Annex B**.

2.2.17 Surveys were carried out on areas of open moorland, lowland grassland and agricultural land within a 500 m buffer of the Proposed Development[3] and targeted wader and waterbird species.

2.2.18 The survey area was covered on foot during each visit to within at least 100 m of all relevant parts. Birds seen or heard where recorded along with their behaviour, using British Trust for Ornithology (BTO) coding and notation, on large-scale field maps. Surveys were undertaken during optimal weather conditions (clear weather with good visibility and wind less than force 5 on the Beaufort scale).

2.2.19 Survey records were entered into ArcView GIS software and then analysed to identify the minimum number of probable / confirmed breeding territories for all wader and wildfowl species recorded.

2.2.20 Following the methods in Brown & Shepherd (1993), breeding wader territories were identified on the basis of at least one registration of birds engaging in territorial behaviour, which included displaying, singing or alarm calling, distraction displays, territorial disputes or the detection of eggs, nests or young.

2.2.21 Simultaneous registrations of birds of the same species displaying such behaviours were used to identify different territories. Where this was not possible to record, registrations from the same survey visit and within 500 m of each other were assumed to be associated with the same territory, while registrations greater than 500 m apart were considered to be separate, neighbouring territories. The only exception was dunlin, for which a 200 m separation distance was used to identify different territories.

2.2.22 For registrations of the same species from different survey visits, birds within 1 km of each other (or 500 m for dunlin) were assumed to be from the same territory.

2.2.23 Confirmed or probable wildfowl territories were identified in a similar manner to that for waders. Breeding pairs were identified using relevant behaviours identified above (e.g., alarm calling, incubating adults and presence of young) and by the presence of male/female birds in suitable habitat based on the method in Gilbert *et al.* (1998) for interpreting the results of diving and dabbling duck breeding surveys.

2.2.24 As nest sites were not identified, each breeding territory location was digitised as the centre point of a cluster of relevant registrations.

Scarce Breeding Bird Survey (SBBS)

2.2.25 A SBBS was carried out between early April and mid-August 2019. Species defined as scarce breeding birds included raptors, waders, divers and waterbirds listed on Annex I of the EU Birds Directive and / or Schedule 1 of the Wildlife and Countryside Act 1981 (as amended).

2.2.26 Surveys were based on relevant methodologies in Hardey *et al*. (2013) and Gilbert *et al*. (1998). Four survey visits were carried out to determine presence, territory occupation and breeding success. Details of survey dates and times are presented in Table 27, **Annex B**.

2.2.27 The survey area included the Proposed Development[4] and a surrounding 2 km buffer area. Surveys involved a combination of targeted VP watches over potentially suitable habitats and walkovers of areas identified during earlier flight activity surveys as having concentrations of bird activity. Other areas of suitable nesting and foraging habitat such as heather moorland, waterbodies, craggy rock faces, cliffs and steep-sided burns were also surveyed.

2.2.28 Locations of any nest sites and nesting / territorial activity by scarce breeding birds was recorded as were sightings and notable signs of activity (e.g., prey remains, faecal splashing, plucking posts and pellets). All observations of scarce breeding birds, including flight lines, were mapped using standard BTO codes and symbology.

2.2.3 2022 Scarce Breeding Bird Survey

2.2.1 Four SBBS visits were completed between May and July 2022. Surveys were based on relevant methodologies in Gilbert *et al*. (1998) and involved a walkover-style survey completed during the early mornings. All bird species seen or heard were mapped using standard BTO codes and symbology.

2.2.2 Following completion of the surveys, territories of non-passerine species were analysed, following the same method as the 2019 MBBS.

2.2.3 Details of the survey visit details (including hourly weather conditions) are presented in Table 28, **Annex B**.

[4] Based on the optimal route at the time; see Figure 8.2b, Volume 2 of the EIA Report

2.3 Limitations

2.3.1 Desk Study

2.3.1 It is assumed that records received from third party organisations (RSPB) were correct at the time of provision.

2.3.2 It is noted that the breeding season flight activity survey effort completed from VPs 1 and 2 for the proposed Strathy South Wind Farm Grid Connection, and which are considered relevant to the Proposed Development, was less than the minimum recommendation in NatureScot (2017a) guidance of 36 hours per VP.

2.3.3 The reasons for this shortfall are unknown but could potentially be due to late commissioning of surveys. As these surveys are considered to be supplementary to the 2018-19 flight activity surveys of the Proposed Development, and additional datasets were available from the Strathy North Wind Farm flight activity surveys (for which the VP viewsheds overlap the Proposed Development), this is not considered to represent a constraint to the overall robustness of the data.

2.3.2 Field Surveys for the Proposed Development

2.3.1 It is assumed that field surveys for the Proposed Development, which were managed by WSP and Blairbeg Consulting Ltd, were completed in line with relevant guidance and that data received from them, including the results of breeding bird territory analysis, were correct at the time of provision.

2.3.2 It is noted that the 2022 SBBS of the Proposed Development commenced in May rather than April due to late commissioning. As these surveys are considered to be supplementary to the 2019 SBBS of the Proposed Development, and additional datasets were available from the Strathy North Wind Farm MBBS (for which the survey area overlaps the Proposed Development), this is not considered to represent a constraint to the overall robustness of the data.

2.3.3 Although the 2018-19 and 2022 surveys for the Proposed Development were based on earlier iterations of the OHL alignment, this was very similar to the current Proposed OHL alignment. Additional data from the neighbouring Strathy North Wind Farm, the survey areas for which include the Proposed Development, was also reviewed, with relevant recent records used to inform the OIA. As such, the survey data are considered to be sufficiently robust.

2.3.4 A moorland fire occurred in the Strathy area on 13/05/2019 and burned for approximately five days; this directly affected the eastern half of the 2018-19 ornithology survey area. Due to this, surveys scheduled for May 2019 were postponed until later in the month and only three hours of surveys were undertaken at VP2. However, additional survey effort was completed in June 2019 (nine hours of surveys per VP in total) to compensate for this.

2.3.5 Additionally, there was evidence to suggest that the wildfire influenced the number and distribution of at least one target species present in the area in 2019; further details are presented in **Appendix 8.2**. However, datasets for the Proposed Development and relevant neighbouring developments cover a number of years. Additionally, periodic muirburn and wildfires form part of the environmental conditions experienced by birds in the local and wider landscape. As such, the data are considered to be sufficient to inform a robust OIA.

3 RESULTS

3.1 Desk Study

3.1.1 Designated Sites of Ornithological Importance

3.1.1 There are six statutory sites designated for ornithological importance within the search areas specified in section 2.1.1. The closest of these are the Caithness and Sutherland Peatlands SPA and Ramsar site, and West Halladale SSSI, all of which overlap the Proposed Development.

3.1.2 A summary of these sites is provided in **Table 3.1** below and the location of each site is shown in **Figure 8.3** within Volume 2 of this EIA Report.

3.1.3 It is also noted that the Proposed Development is located within the proposed Flow Country World Heritage Site (WHS).

Table 6: Designated sites of ornithological importance within desk study search areas, listed in order of proximity to the Proposed Development

Site name and designation(s)	Approx. area (ha)	Qualifying features	Distance from site (km) at closest point
Caithness and Sutherland Peatlands SPA	147,726.54	Qualifies under Article 4.1 of the Birds Directive by regularly supporting breeding populations of European importance of the following Annex I species: • Golden plover; • Dunlin; • Wood sandpiper; • Red-throated diver; • Black-throated diver; • Golden eagle; • Hen harrier; • Short-eared owl; and • Merlin. Further qualifies under Article 4.2 of the Birds Directive by regularly supporting populations of European importance of the following migratory species: • Wigeon; • Common scoter; and • Greenshank. Source: NatureScot (2023a)	0 km (overlaps the Proposed Development)
Caithness and Sutherland Peatlands Ramsar site	145,960.53	The site qualifies under Ramsar criterion 2 by supporting (breeding) populations of the following species: • Golden plover; • Dunlin (subspecies *schinzii*). • Wood sandpiper; • Red-throated diver; and • Black-throated diver; The site also qualifies under Ramsar criterion 4 by supporting the following waterbird species at a critical stage in their life cycle: • Wigeon (breeding); • Common scoter (breeding); and • Greenshank (breeding). Source*: NatureScot (2023b)	0 km (overlaps the Proposed Development)
West Halladale SSSI**	8,658.85	Ornithological qualifying features: • Breeding black-throated diver; • Breeding common scoter; and	0 km (overlaps the Proposed Development)

Site name and designation(s)	Approx. area (ha)	Qualifying features	Distance from site (km) at closest point
		• Breeding bird assemblage Source: NatureScot (undated a)	
Lochan Buidhe Mires SSSI**	4,122.76	Ornithological qualifying features: • Breeding bird assemblage. Source: SSSI Citation NatureScot (undated b)	1.88 km to the west
North Caithness Cliffs SPA	14,628.79	Qualifies under Article 4.1 of the Birds Directive by regularly supporting a breeding population of European importance of the following Annex I species: • Peregrine. Further qualifies under Article 4.2 of the Birds Directive by regularly supporting populations of European importance of the following migratory species: • Kittiwake; • Common guillemot; • Razorbill; • Puffin; • Fulmar; and • Breeding seabird assemblage. Source: NatureScot (2017b)	7.18 km to the northeast
North Sutherland Coastal Islands SPA	223.46	Qualifies under Article 4.1 of the Birds Directive by regularly supporting, in winter, populations of European importance of the following Annex I species: • Barnacle goose. Source: NatureScot (1999a)	18.83 km to the northwest
Caithness Lochs SPA and Ramsar site***	1,381.65 (SPA) 1,381.19 (Ramsar site)	Qualifies as an SPA under Article 4.1 of the Birds Directive by regularly supporting, in winter, populations of European importance of the following Annex I species: • Whooper swan; and • Greenland white-fronted goose. Further qualifies as an SPA under Article 4.2 of the Birds Directive by regularly supporting, in winter, a population of European importance of the following species: • Greylag goose. Source: NatureScot (1999b; 2021)	19.76 km to the east

*The NatureScot SiteLink website (https://sitelink.nature.scot/site/8412), Ramsar site information sheet (Joint Nature Conservation Committee, 2005) and (amended) Ramsar site citation (NatureScot, 2023b) all contain different information regarding qualifying features of the Caithness and Sutherland Peatlands Ramsar site; the latter document is assumed to be contain the most up-to-date information

**Forms part of the Caithness and Sutherland Peatlands SPA

***The boundaries of the Caithness Lochs SPA and Ramsar site are virtually contiguous, and the qualifying features are the same.

3.1.2 Non-Statutory Sites of Ornithological Importance

3.1.1 No non-statutory sites of ornithological importance were identified within 2 km of the Proposed Development. However, it is noted that the Forsinard Flows RSPB nature reserve, which overlaps the Caithness and Sutherland Peatlands SPA, is located approximately 3.0 km to the south (at the closest point).

3.1.3 Data Requests

3.1.1 A total of five records of two species were received from the HRSG in July 2024. A summary of these records is provided in **Table 7** below.

3.1.2 Further details of Schedule 1 and Annex I species records and their locations are included in **Appendix 8.2.**

Table 7: Summary of HRSG data request records (supplied in July 2024)

Species	Number of records	Year of most recent record
Osprey	1	2013
Golden eagle	4*	2018
*Note that these records are considered to relate to a single territory and included a null record (i.e., no birds present)		

3.1.3 A total of 122 records of 40 bird species were received from the RSPB in May 2024. A summary of these records is provided in **Table 8** below. It should be noted, however, that species included buzzard, which is not considered to be of conservation concern. Additionally, all of these records were outside the requested search areas, with many records supplied as part of a single large polygon corresponding with the RSPB Forsinard Flows nature reserve (approximately 3 km from the Proposed Development at the closest point), with no details of individual record locations.

3.1.4 Further details of Schedule 1 and Annex I species records and their distances from the Proposed Development are included in **Appendix 8.2**.

Table 8: Summary of RSPB data request records from the last 10 years (supplied in May 2024)

Species	Number of records	Year of most recent record
Arctic Skua	2	2023
Barn owl	4	2023
Black-headed gull	2	2023
Black-throated diver	2	2023
Buzzard	4	2023
Common gull	2	2023
Common sandpiper	3	2023
Common scoter	18	2013
Cuckoo	1	2022
Curlew	3	2023
Dunlin	3	2023
Golden eagle	4	2023
Golden plover	3	2023
Greenshank	3	2023
Greylag goose	2	2023
Hen harrier	5	2023
Kestrel	3	2023
Lapwing	3	2023
Mallard	2	2023
Meadow pipit	2	2023
Merlin	5	2023
Moorhen	1	2023
Oystercatcher	1	2022
Peregrine	5	2023
Redshank	2	2023
Red-throated diver	2	2023
Reed bunting	2	2023
Ringed plover	2	2023
Sedge warbler	2	2023

Species	Number of records	Year of most recent record
Short-eared owl	5	2023
Skylark	2	2023
Snipe	3	2023
Sparrowhawk	4	2023
Tawny owl	2	2022
Teal	3	2023
Wood sandpiper	2	2016
Wheatear	1	2022
White-tailed eagle	2	2022
Wigeon	3	2023
Willow warbler	1	2022

3.1.4 Review of Existing Data

Strathy North Wind Farm

3.1.1 Details of the 2016-19 survey results are included in **Appendix 8.3**. Summaries of key results (i.e., target species flights recorded during flight activity surveys and numbers of breeding territories of divers, Schedule 1 / Annex I raptors and waders) from the 2016-2019 and 2021 breeding season operational monitoring completed for Strathy North Wind Farm are presented in the following sections.

Flight Activity (Vantage Point) Surveys

3.1.2 A total of 420 flights by 25 identified target species plus a further three flights by unidentified goose and diver species, were recorded during breeding season (April to August) flight activity surveys in 2016–2019 and 2021. Overall flight activity and the suite of species recorded were relatively consistent between survey years.

3.1.3 Greenshank and hen harrier, followed by greylag goose, were the most frequently recorded species, although there was considerable variation in levels of flight activity between survey years.

3.1.4 A summary of annual breeding season flight activity by all target species is presented in **Table 9**. Details of the 2021 flights are included in Table 29, **Annex C** (results of the earlier surveys are included in **Appendix 8.3**).

3.1.5 Note that, in addition to the breeding season (April to August) flight activity surveys presented in **Table 9**, the 2016 surveys also included surveys between January and March. During this period, a total of six flights by four target species was recorded: three mallard flights (1-4 birds) and single flights by greylag goose (three birds), golden plover (seven birds) and golden eagle (one bird).

3.1.6 Figures showing flight lines of target species listed on Schedule 1 of the Wildlife and countryside Act 1981 (as amended) and / or Annex I of the Birds Directive results recorded during the 2016-19 surveys are included within **Appendix 8.3**. Target species flights recorded during the 2021 flight activity surveys are presented in **Figures 8.4a** to **8.4c** within Volume 2 of the EIA Report, with the exception of species listed on Schedule 1 and / or Annex I, which are included in **Figures CA8.1** to **CA8.3** of **Appendix 8.2**.

Table 9: Summary of target species flights recorded during breeding season operational monitoring at Strathy North Wind Farm in 2016-19 and 2021

Target species	Total no. of flights (and no. of birds per flight)				
	2016	2017	2018	2019	2021
Greylag goose	11 (2-9)	2 (2-3)	13 (1-89)	4 (1-7)	6 (2-8)

Target species	Total no. of flights (and no. of birds per flight)				
	2016	2017	2018	2019	2021
Pink footed goose	1 (54)	-	7 (1-100)	1 (75)	2 (27-130)
Whooper swan	-	-	1 (12)	-	-
Unidentified goose species*	-	-	-	2 (8-12)	-
Mallard	5 (1-9)	1 (1)	5 (1-2)	2 (1-4)	2 (2-3)
Teal	3 (2-14)	-	1 (3)	2 (1-2)	1 (2)
Oystercatcher	-	-	-	1 (9)	-
Golden plover	2 (1)	1 (1)	-	1 (1)	-
Curlew	1 (1)	-	-	3 (1)	1 (1)
Dunlin	1 (2)	1 (2)	-	2 (1)	3 (1)
Snipe	-	18 (1-5)	13 (1)	8 (1-2)	12 (1)
Greenshank	28 (1-2)	33 (1-2)	12 (1)	11 (1-2)	27 (1-2)
Great skua	-	1 (1)			
Red-throated diver	9 (1-3)	-	1 (1)	4 (1-2)	6 (1-2)
Black-throated diver	1 (1)	-	-	-	1 (1)
Grey heron	1 (1)	-	-	-	-
Unidentified diver species	-	-	-	1 (1)	-
Osprey	1 (1)	2 (1)	-	-	3 (1)
Golden eagle	3 (1)	-	-	1 (2)	-
Hen harrier	4 (1)	5 (1)	29 (1-2)	54 (1-2)	7 (1)
Red kite	-	-	1 (1)	-	-
White tailed eagle	1 (1)	-	2 (1)	1 (1)	6 (1)
Short-eared owl	-	-	1 (1)	-	-
Kestrel	1 (1)	-	-	-	-
Merlin	5 (1)	1 (1)	2 (1)	4 (1)	10 (1)
Hobby	-	-	-	2 (1)	-
Peregrine	1 (1)	-	-	-	-
Total	**79**	**65**	**88**	**104**	**87**

*It was considered likely that one flight (8 birds) was pink-footed goose and the other (12 birds) was likely greylag goose

Breeding Bird Territories

3.1.7 A number of wildfowl, wader, diver and raptor species were found to be breeding within the relevant survey area (diver, raptor and MBBS).

3.1.8 Numbers of non-passerine breeding territories are summarised **Table 10**. Note that this combines results from all breeding bird surveys (breeding diver, breeding raptor, breeding greenshank and MBBS).

3.1.9 Figures showing breeding territories of species listed on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended) and / or Annex I of the Birds Directive results recorded during the 2016-19 surveys are included within **Appendix 8.3**. Breeding territories recorded during the 2021 surveys are presented in **Figures 8.4a** to **8.4c** within Volume 2 of this EIA Report, with the exception of species listed on Schedule 1 and/or Annex I, which are included in **Figures CA8.1** to **CA8.3** of **Appendix 8.2**.

Table 10: Numbers of non-passerine breeding territories recorded during operational monitoring at Strathy North Wind Farm in 2016-19 and 2021

Species	No. of breeding territories*				
	2016	2017	2018	2019	2021
Teal	-	-	-	-	4

Species	No. of breeding territories*				
	2016	2017	2018	2019	2021
Red grouse	8	2	2	-	12
Cuckoo	2	1	-	2	2
Little grebe	4	-	-	-	1
Golden plover	2	3	4	3	10
Ringed plover	1	-	-	1	-
Curlew	-	1	-	-	-
Dunlin	1	1	-	4	3
Snipe	4	4	-	-	5
Common sandpiper	3	2	1	2	3
Greenshank	7	7	4	6	10
Red-throated diver	1 (C)	1 (C)	1 (P)	1 (C)	2 (C) 1 (P)
Black-throated diver	1 (C)	2 (P)	1 (C)	1 (C)	2 (C) 1 (P)
Sparrowhawk	1	-	-	-	-
Hen harrier	-	1	2	1	-
Merlin	1	1	1	2	-

*For diver species, breeding was categorised as 'C' for confirmed and 'P' for probable

Strathy Wood Wind Farm

3.1.10 Details of the 2018 survey results are included in the 2019 FEI report (Atmos, 2019). Summaries of key results (i.e., target species flights recorded during flight activity surveys and numbers of breeding territories of wildfowl, waders, divers and Schedule 1 / Annex I raptors) from the 2018 and 2019 breeding season surveys for Strathy Wood Wind Farm are presented in the following sections.

Flight Activity Surveys

3.1.11 During the breeding season flight activity surveys for Strathy Wood Wind Farm 78 flight lines by eight target species were recorded in 2018, and 40 flight lines by six target species were recorded in 2019. A summary of the results is presented in **Table 11** and flights of target species listed on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended) and / or Annex I of the Birds Directive are included on the Figures within **Appendix 8.3**.

Table 11: Numbers of wildfowl, wader, diver and Schedule 1 / Annex I raptor breeding territories recorded during 2018 and 2019 baseline surveys for Strathy Wood Wind Farm

Species	Total no. of flights (and no. of birds per flight)		
	2018	2019	Total
Greylag goose	5 (2-11)	3 (2)	**8 (2-11)**
Teal	5 (1-2)	3 (2)	**8 (1-2)**
Golden plover	12 (1-4)	3 (1-7)	**15 (1-7)**
Dunlin	15 (1-3)	-	**15 (1-3)**
Snipe	1 (1)	-	**1 (1)**
Greenshank	14 (1-2)	11 (1-2)	**25 (1-2)**
Red-throated diver	9 (1-2)	9 (1-2)	**18 (1-2)**
Hen harrier	17 (1)	11 (1)	**28 (1)**
Total	**78**	**40**	**118**

Breeding Bird Territories

3.1.12 Numbers of wildfowl, wader, diver and raptor breeding territories identified during the 2018 and 2019 breeding season surveys for Strathy Wood Wind Farm are summarised in **Table 12**.

Table 12: Target species recorded during the breeding raptor surveys in 2018 and 2019

Target Species	2018	2019
Teal	1 (confirmed)*	1 (confirmed)*
Golden plover	7 (1 probable; 6 possible)	1 (possible)
Marc	4 (1 probable; 4 possible)	-
Common sandpiper	-	1 (possible)
Greenshank	6 (1 confirmed; 1 probable; 4 possible)	2 (1 confirmed; 1 possible)
Red-throated diver	1 (confirmed)	1 (confirmed)**
Sparrowhawk	-	1 (possible)
Hen harrier	1 (confirmed)	2 (1 confirmed; 1 possible)
Buzzard	-	1 (probable)

*Based on incidental records during flight activity surveys; no territory analysis was completed

Strathy South Wind Farm 'Northern Section' Grid Connection

3.1.13 During the flight activity surveys carried out for the proposed Strathy South Wind Farm 'Northern Section' Grid Connection between May and August 2022, very low levels of flight activity were recorded from VPs 1 and 2. Six flight lines by five species were recorded, details of which are summarised in **Table 13** below. However, only two of these (osprey and hen harrier) are considered to be target species. Flight lines are shown in **Figure 8.4d** within Volume 2 of this EIA Report, and further details of target species flight lines are presented in Table 23, **Annex C**.

Table 13: Summary of flights recorded during the 2022 breeding season flight activity surveys from relevant VPs (1 and 2)

Species	Total number of flights	No. of birds	Cumulative flight duration (secs)
Black-headed gull	1	2	165
Great black-backed gull	1	1	30
Herring gull	1	1	180
Osprey	1	1	150
Hen harrier	1	1	255

3.2 Field Surveys for the Proposed Development

3.2.1 2018-19 Ornithology Surveys

Flight Activity (Vantage Point) Surveys

Non-breeding season

3.2.1 Overall, very low levels of flight activity were recorded during the 2018-19 non-breeding season flight activity surveys for the Proposed Development. A total of five flights by golden eagle, hen harrier and merlin were recorded from October 2018 to February 2019.

3.2.2 Both golden eagle flights were to the east of the Proposed Development, and both were at heights over 40 m above ground level. Hen harrier and merlin were both recorded to the southeast of the site and were observed for a very short period of time.

3.2.3 A summary of all non-breeding season flights is presented in **Table 14** and further details of individual flights are included in Table 31 in **Annex C**. Flight lines are shown in **Figures 8.5a** within Volume 2 of this EIA Report.

Table 14: Summary of target species flights recorded during the 2018-19 non-breeding season flight activity surveys for the Proposed Development

Date	Time	VP	Species	Total number of flights	No. of birds	Flight duration (secs)
24/10/2018	13:53	1	Golden eagle	2	1	185
24/10/2018	14:04	1	Golden eagle	1	1	165
16/11/2018	09:45	2	Hen harrier	1	1	14
16/11/2018	16:10	2	Merlin	1	1	12

Breeding Season

3.2.4 A total of 55 flights by eight target species were observed during the breeding season (March to August) 2019. A summary of breeding season flights is presented in **Table 15**.

3.2.5 Hen harrier was the most frequently recorded species with 45 flights recorded. Eleven of these occurred at Potential Collision (PCH)[5]. Both male and females were recorded displaying and hunting. Fledged juveniles were recorded commuting in August. Flight lines are shown on **Figure CA8.3** within **Appendix 8.2**.

3.2.6 In addition to the hen harrier flights, four flights of pink footed goose were recorded along with single flights of peregrine, merlin, greenshank, black-throated diver, snipe and red grouse. All of these flight lines occurred outside PCH. Flight lines of these species are shown on **Figure 8.5b** within Volume 2 of this EIA Report and further details of individual flights are included in Table 31 in **Annex C**.

Table 15: Summary of target species flights recorded during the 2019 breeding season flight activity surveys for the Proposed Development

Species	Total number of flights	No. of birds	Cumulative flight duration (secs)
Pink footed goose	4	335	160
Red grouse	1	1	3
Snipe	1	1	6
Greenshank	1	2	18
Black-throated diver	1	2	28
Hen harrier	45	46	2360
Merlin	1	1	6
Peregrine	1	1	18

Black Grouse Lekking Surveys

3.2.7 No black grouse were recorded during the 2019 lekking surveys or observed during any other surveys.

[5] Flights recorded at 10-40 m above the ground (height band 2)

Moorland Breeding Bird Surveys

3.2.8 During the MBBS, a limited number and diversity of breeding waders and wildfowl were recorded. Five breeding territories of three species were recorded. These included:

- Two common sandpiper, which were recorded adjacent to the River Strathy,
- Two snipe territories; and
- One single calling greenshank (which was assessed as a possible breeding territory as a precautionary approach) recorded on and adjacent to the Proposed Development. Nesting by greenshank within the MBBS area was not confirmed.

3.2.9 The location of the greenshank territory is included in **Figure CA8.4** of **Appendix 8.2**, while locations of the snipe and common sandpiper territories are shown in **Figure 8.5c** within Volume 2 of this EIA Report.

Scarce Breeding Bird Surveys

3.2.10 During the SBBS, four breeding territories were recorded, as summarised in **Table 16**. Single merlin and hen harrier territories were recorded, with three chicks successfully fledged from each nest. Single black-throated diver and greenshank territories were also recorded. It was assumed that the black-throated diver pair failed at the egg stage, while the outcome of the breeding greenshank territory is unknown. Locations of all four territories are restricted to **Appendix 8.2**.

Table 16: Summary of breeding territories recorded during the 2019 scarce breeding bird surveys for the Proposed Development

Species	No. of breeding territories	Notes
Greenshank	1	Unknown. Breeding confirmed by alarming pair
Black-throated diver	1	Presumed failed at incubation stage as no chicks observed following observations of incubating adult
Hen harrier	1	Three fledged chicks
Merlin	1	Three fledged chicks

3.2.11 A further three scarce birds were recorded during the survey but were not considered to be breeding within the SBBS area. These included:

- A single adult golden eagle was recorded in April 2019 flying low across the site; behaviour; soaring in response to a mobbing buzzard.
- Two separate flights of commuting osprey were recorded over the site in April and June 2010; and
- One recording of a peregrine commuting in January 2019.

3.2.2 2022 Scarce Breeding Bird Survey

3.2.1 During the SBBS carried out from May to July 2022, two snipe breeding territories, a single golden plover and common sandpiper territory were observed within 500 m of the Proposed Development. A possible oystercatcher breeding territory was also observed within 500 m of the Proposed Development. Territories are shown in **Figure 8.5d** within Volume 2 of tis EIA Report.

3.2.2 Mallard, curlew, dunlin and red-throated diver were also recorded during the surveys, but no breeding territories were identified.

3.2.3 Other species recorded included bullfinch, buzzard, chaffinch, common gull, common sandpiper, dunnock, goldfinch, great black backed gull, great tit, herring gull, hooded crow, kestrel, lapwing, lesser redpoll, long-tailed tit, meadow pipit, mistle thrush, pied wagtail, raven, reed bunting, robin,

sand martin, sedge warbler, skylark, song thrush, stonechat, swallow, wheatear, willow warbler, woodpigeon, wren and yellowhammer.

2023 Incidental Records

3.2.4 During 2023 pre-felling checks by an Ecological Clerk of Works (ECoW), an osprey nest and roosting white-tailed eagle were recorded in the surrounding area. Further details, including the locations, are included in **Appendix 8.2**.

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ANNEXES

Annex A
Scientific Names of Bird Species

3.2.5 A list of scientific names, as well as details of relevant legislation and conservation status, of all bird species referred to in this TA is provided in **Table 17.**

Table 17: List of scientific names and conservation listings of bird species included in this Report

Species*		Schedule 1 / Annex I listings	Conservation listings**
English (British) vernacular name	Scientific name		
Barnacle goose	*Branta leucopsis*	Annex I	Amber; SBL
Greylag goose	*Anser anser*	Sch. 1.2	Amber
Pink-footed goose	*Anser brachyrhynchus*	-	Amber
Greenland white-fronted goose	*Anser albifrons flavirostris*	Annex I	Red; SBL
Whooper swan	*Cygnus cygnus*	Annex I; Sch. 1.1	Amber; SBL
Wigeon	*Mareca penelope*	-	Amber
Mallard	*Anas platyrhynchos*	-	Amber
Teal	*Anas crecca*	-	Amber
Common scoter	*Melanitta nigra*	Sch. 1.1	Red; SBL
Red grouse	*Lagopus lagopus scotica*	-	Amber; SBL***
Black grouse	*Lyrurus tetrix*	-	Red; SBL
Cuckoo	*Cuculus canorus*	-	Red; SBL
Woodpigeon	*Columba palumbus*	-	Amber
Moorhen	*Gallinula chloropus*	-	Amber
Little grebe	*Tachybaptus ruficollis*	-	Green
Oystercatcher	*Haematopus ostralegus*	-	Amber
Lapwing	*Vanellus vanellus*	-	Red; SBL
Golden plover	*Pluvialis apricaria*	Annex I	Green; SBL
Ringed plover	*Charadrius hiaticula*	-	Red
Curlew	*Numenius arquata*	-	Red; SBL
Dunlin	*Calidris alpina*	-	Red; SBL
Snipe	*Gallinago gallinago*	-	Amber
Common sandpiper	*Actitis hypoleucos*	-	Amber
Redshank	*Tringa tetanus*	-	Amber
Wood sandpiper	*Tringa glareola*	Annex I; Sch.1.1	Amber; SBL
Greenshank	*Tringa nebularia*	Sch. 1.1	Amber
Kittiwake	*Rissa tridactyla*	-	Red
Black-headed gull	*Chroicocephalus ridibundus*	-	Amber; SBL
Common gull	*Larus canus*	-	Amber
Great black backed gull	*Larus marinus*	-	Amber
Herring gull	*Larus argentatus*	-	Red; SBL
Arctic skua	*Stercorarius parasiticus*	-	Red; SBL
Great skua	*Stercorarius skua*	-	Amber
Common guillemot	*Uria aalge*	-	Amber
Razorbill	*Alca torda*	-	Amber
Puffin	*Fratercula arctica*	-	Red
Red-throated diver	*Gavia stellata*	Annex I; Sch. 1.1	Green; SBL
Black-throated diver	*Gavia arctica*	Annex I; Sch. 1.1	Amber; SBL

Species* English (British) vernacular name	Scientific name	Schedule 1 / Annex I listings	Conservation listings**
Fulmar	*Fulmarus glacialis*	-	Amber
Grey heron	*Ardea cinerea*	-	Green
Osprey	*Pandion haliaetus*	Annex I; Sch. 1.1	Amber
Golden eagle	*Aquila chrysaetos*	Annex I; Sch. 1.1/1A/A1	Green; SBL
Sparrowhawk	*Accipiter nisus*	-	Amber
Hen harrier	*Circus cyaneus*	Annex I; Sch.1.1 & 1A	Red; SBL
Red kite	*Milvus milvus*	Annex I; Sch. 1.1 & 1A	Green; SBL
White-tailed eagle	*Haliaeetus albicilla*	Sch. 1.1, 1A & A1; Annex I	Amber; SBL;
Buzzard	*Buteo buteo*	-	Green
Barn owl	*Tyto alba*	-	Green; SBL
Short-eared owl	*Asio flammeus*	Annex I	Amber; SBL
Tawny owl	*Strix aluco*	-	Amber
Kestrel	*Falco tinnunculus*	-	Amber; SBL
Merlin	*Falco columbarius*	Annex I; Sch. 1.1	Red; SBL
Hobby	*Falco subbuteo*	Sch. 1.1	Green; SBL
Peregrine	*Falco peregrinus*	Annex I; Sch. 1.1	Green; SBL
Hooded crow	*Corvus cornix*	-	Green; SBL
Raven	*Corvus corax*	-	Green
Great tit	*Parus major*	-	Green
Skylark	*Alauda arvensis*	-	Red; SBL
Sand martin	*Riparia riparia*	-	Green
Swallow	*Hirundo rustica*	-	Green
Long-tailed tit	*Aegithalos caudatus*	-	Green
Willow warbler	*Phylloscopus trochilus*	-	Amber
Sedge warbler	*Acrocephalus schoenobaenus*	-	Amber
Wren	*Troglodytes troglodytes*	-	Amber
Song thrush	*Turdus philomelos*	-	Amber; SBL
Mistle thrush	*Turdus viscivorus*	-	Red
Robin	*Erithacus rubecula*	-	Green
Stonechat	*Saxicola rubicola*	-	Green
Wheatear	*Oenanthe oenanthe*	-	Amber
Dunnock	*Prunella modularis*	-	Amber; SBL
Pied wagtail	*Motacilla alba*	-	Green
Meadow pipit	*Anthus pratensis*	-	Amber
Chaffinch	*Fringilla coelebs*	-	Green
Bullfinch	*Pyrrhula pyrrhula*	-	Amber; SBL
Lesser redpoll	*Acanthis cabaret*	-	Red; SBL
Goldfinch	*Carduelis carduelis*	-	Green
Yellowhammer	*Emberiza citronella*	-	Red; SBL
Reed bunting	*Emberiza schoeniclus*	-	Amber; SBL

*Species names and order follow the British List maintained by the BOU (2022); **Red and Amber = UK BoCC Red and Amber lists respectively (Stanbury *et al*., 2021); SBL = included on the SBL, Sch1.2 (Outer Hebrides, Caithness, Sutherland and Wester Ross only); applies to the race-level (*scotica*) only (not the species-level)

Annex B
Survey Details

A.1.1 Desk Study Data Review

A.1.1.1 Strathy North Wind Farm 2016-2019 and 2021 Ornithology Surveys

3.2.6 A summary of the VPs used and total survey effort for the 2016-19 and 2021 flight activity surveys at Strathy North Wind Farm is presented in **Table 18**.

Table 18: Strathy North Wind Farm 2016-2019 and 2021 VP locations and flight activity survey effort (hrs)

VP	Easting	Northing	View bearing	2016	2017	2018	2019	2021
1	281156	959686	135°	-	48:00	60:00	50:00	45:00
2	279990	958207	105°	69:50	-	-	-	
3	283228	956855	270°	63:00	-	-	-	-
4	278810	956306	45°	63:00	-	-	-	-
5	281136	959709	15°	66:00	-	-	-	-
6	283020	957707	270°	-	48:00	54:00	43:30	48:00
7	280191	955854	30°	3:00	48:00	51:00	48:00	48:00
22	280936	959727	135°	66:00	-	-	-	-
36	280738	957822	80°	-	-	-	48:00	45:00

3.2.7 Details of the 2021 ornithology surveys completed for Strathy North Wind Farm are presented in **Table 19** to **Table 22**.

Table 19: Details of the 2021 flight activity surveys completed for Strathy North Wind Farm

Date	VP	Start time	End time	Wind speed	Wind direction (compass degrees)	Rain	Cloud cover	Cloud height	Visibility	Frost	Snow	Notes
01/04/2021	1	15:10	18:10	2	315	0	4	2	2	0	0	
01/04/2021	1	15:10	18:10	3	315	0	4	2	2	0	0	
01/04/2021	6	11:35	14:35	2	315	0	3	2	2	0	0	Some glare to south
01/04/2021	6	11:35	14:35	1	315	0	2	2	2	0	0	Some glare to south
01/04/2021	6	11:35	14:35	2	315	0	2	2	2	0	0	Some glare to south
01/04/2021	1	15:10	18:10	2	315	0	5	2	2	0	0	
04/04/2021	36	12:00	15:00	4	225	3	8	2	2	0	0	
04/04/2021	36	12:00	15:00	5	225	0	8	2	2	0	0	
04/04/2021	36	12:00	15:00	4	225	3	8	2	2	0	0	
05/04/2021	7	06:30	09:30	3	315	2	8	1	2	1	1	
05/04/2021	7	06:30	09:30	4	0	0	8	2	2	0	1	
05/04/2021	7	06:30	09:30	4	0	0	7	2	2	0	1	
12/04/2021	6	17:00	20:00	4	315	2	8	2	2	0	0	
12/04/2021	6	17:00	20:00	3	270	0	8	2	2	0	0	
12/04/2021	6	17:00	20:00	4	315	2	8	2	2	0	0	
18/04/2021	1	15:40	18:40	2	225	0	4	2	2	0	0	
18/04/2021	1	15:40	18:40	2	225	0	5	2	2	0	0	
18/04/2021	1	15:40	18:40	2	225	0	3	2	2	0	0	
23/04/2021	7	18:00	21:00	3	90	0	4	2	2	0	0	
23/04/2021	7	18:00	21:00	3	135	0	4	2	2	0	0	
23/04/2021	7	18:00	21:00	2	135	0	4	2	2	0	0	
09/05/2021	1	18:40	21:40	3	135	2	8	1	2	0	0	
09/05/2021	1	18:40	21:40	3	135	0	8	1	2	0	0	
09/05/2021	1	18:40	21:40	2	135	0	8	2	2	0	0	
10/05/2021	36	12:50	15:50	4	315	0	4	2	2	0	0	
10/05/2021	36	12:50	15:50	4	315	0	4	2	2	0	0	Wind then swinging round to easterlies
10/05/2021	36	12:50	15:50	3	45	0	5	2	2	0	0	Sunny
16/05/2021	1	15:30	18:30	1	45	0	6	2	2	0	0	WS F1 gusting F2
16/05/2021	1	15:30	18:30	2	45	0	6	2	2	0	0	
16/05/2021	1	15:30	18:30	2	0	0	5	2	2	0	0	W2 F2 starting to gust F3 towards end of hour

Date	VP	Start time	End time	Wind speed	Wind direction (compass degrees)	Rain	Cloud cover	Cloud height	Visibility	Frost	Snow	Notes
16/05/2021	7	19:00	22:00	2	0	0	7	2	2	0	0	
16/05/2021	7	19:00	22:00	1	0	0	7	2	2	0	0	
16/05/2021	7	19:00	22:00	2	0	0	7	2	2	0	0	Wind dropping to calm at times. Some brief and light drizzle
17/05/2021	36	04:20	07:20	0		0	8	0	0	0	0	
17/05/2021	36	04:20	07:20	1	0	0	8	1	2	0	0	
17/05/2021	36	04:20	07:20	1	0	0	6	1	2	0	0	Cloud higher than 200m in places, clearing elsewhere; visibility good
18/05/2021	7	11:25	14:25	3	0	2	7	2	2	0	0	
18/05/2021	36	17:50	20:50	2	315	3	8	1	2	0	0	20-minute downpour
18/05/2021	36	17:50	20:50	2	270	0	6	1	2	0	0	
18/05/2021	7	11:25	14:25	2	315	0	6	2	2	0	0	
18/05/2021	7	11:25	14:25	2	315	0	6	2	2	0	0	
18/05/2021	36	17:50	20:50	2	315	0	7	2	2	0	0	Gusting F3, occasionally F4
19/05/2021	6	09:50	12:50	2	45	0	6	2	2	0	0	
19/05/2021	6	09:50	12:50	3	45	2	6	2	2	0	0	
19/05/2021	6	09:50	12:50	3	45	0	6	2	2	0	0	
21/05/2021	7	08:55	11:55	3	0	2	6	2	2	0	0	
21/05/2021	7	08:55	11:55	3	0	2	7	1	2	0	0	
21/05/2021	7	08:55	11:55	3	45	4	8	0	2	0	0	
24/05/2021	36	09:15	12:15	4	45	2	8	1	1	0	0	Viewshed visible
24/05/2021	36	09:15	12:15	5	45	4	8	0	1	0	0	Viewshed visible but tops of turbines cloud covered
24/05/2021	36	09:15	12:15	5	45	3	8	1	2	0	0	
26/05/2021	6	03:45	06:45	2	0	0	8	0	1	0	0	
26/05/2021	6	03:45	06:45	1	45	0	8	0	2	0	0	
26/05/2021	6	03:45	06:45	2	0	1	8	1	2	0	0	
27/05/2021	6	19:05	22:05	1	45	0	8	2	2	0	0	
27/05/2021	6	19:05	22:05	1	45	0	7	2	2	0	0	Wind dropping to calm at times
27/05/2021	1	04:30	07:30	0	-	0	8	2	2	0	0	
27/05/2021	1	04:30	07:30	0	-	0	8	2	2	0	0	
27/05/2021	1	04:30	07:30	0	-	0	8	2	2	0	0	
27/05/2021	6	19:05	22:05	2	90	0	7	2	2	0	0	Wind dropping to calm at times
28/05/2021	7	03:50	06:50	1	45	0	2	2	2	0	0	
28/05/2021	7	03:50	06:50	2	45	0	3	2	2	0	0	

Date	VP	Start time	End time	Wind speed	Wind direction (compass degrees)	Rain	Cloud cover	Cloud height	Visibility	Frost	Snow	Notes
28/05/2021	7	03:50	06:50	1	45	0	2	2	2	0	0	
30/05/2021	1	16:20	19:20	3	315	0	2	2	2	0	0	
30/05/2021	1	16:20	19:20	5	315	0	2	2	2	0	0	
30/05/2021	1	16:20	19:20	4	315	0	2	2	2	0	0	
30/05/2021	6	19:50	22:50	2	0	0	3	2	2	0	0	Sunny evening
30/05/2021	6	19:50	22:50	1	45	0	3	2	2	0	0	Sunny evening
30/05/2021	6	19:50	22:50	1	45	0	3	2	2	0	0	Sunny evening
13/06/2021	7	16:00	19:00	3	315	0	6	2	2	0	0	
13/06/2021	1	19:30	22:30	2	225	0	7	2	2	0	0	Windspeed F2 gusting F4
13/06/2021	1	19:30	22:30	4	225	0	8	1	2	0	0	
13/06/2021	1	19:30	22:30	3	225	1	8	1	2	0	0	
13/06/2021	7	16:00	19:00	3	225	0	8	2	2	0	0	
13/06/2021	7	16:00	19:00	3	270	3	8	0	2	0	0	
14/06/2021	36	09:10	12:10	5	225	0	7	2	2	0	0	
14/06/2021	1	12:40	15:40	5	225	0	6	2	2	0	0	
14/06/2021	1	12:40	15:40	5	225	2	7	2	2	0	0	
14/06/2021	1	12:40	15:40	5	225	0	6	2	2	0	0	
14/06/2021	36	09:10	12:10	4	225	0	5	2	2	0	0	
14/06/2021	36	09:10	12:10	4	225	0	5	2	2	0	0	
16/06/2021	6	09:40	12:40	2	225	0	4	2	2	0	0	
16/06/2021	6	09:40	12:40	2	225	0	4	2	2	0	0	
16/06/2021	6	09:40	12:40	2	225	0	4	2	2	0	0	
18/06/2021	1	12:00	15:00	2	45	0	3	2	2	0	0	
18/06/2021	1	12:00	15:00	1	45	0	4	2	2	0	0	
18/06/2021	1	12:00	15:00	2	0	0	7	2	2	0	0	
19/06/2021	7	09:35	12:35	3	135	0	2	2	2	0	0	
19/06/2021	7	09:35	12:35	3	135	0	4	2	2	0	0	
19/06/2021	7	09:35	12:35	3	135	0	2	2	2	0	0	
20/06/2021	7	19:45	22:45	4	270	0	4	2	2	0	0	
20/06/2021	7	19:45	22:45	5	315	0	2	2	2	0	0	
20/06/2021	7	19:45	22:45	5	315	0	1	2	2	0	0	
21/06/2021	6	09:25	12:25	3	315	2	6	2	2	0	0	
21/06/2021	6	09:25	12:25	4	315	0	5	2	2	0	0	F4 gusting F6 and dropping to F3
21/06/2021	6	09:25	12:25	4	315	2	7	2	2	0	0	F4 gusting F5
22/06/2021	36	03:45	05:45	2	225	0	1	2	2	1	0	Cold; 0ºc when survey started

Date	VP	Start time	End time	Wind speed	Wind direction (compass degrees)	Rain	Cloud cover	Cloud height	Visibility	Frost	Snow	Notes
22/06/2021	36	03:45	05:45	2	225	0	1	2	2	1	0	
24/06/2021	1	11:05	14:05	2	225	2	7	2	0	0	0	17ºC
24/06/2021	1	11:05	14:05	3	270	1	8	1	2	0	0	18ºC
24/06/2021	1	11:05	14:05	3	225	3	8	1	2	0	0	
28/06/2021	36	18:40	19:40	3	45	2	8	2	2	0	0	
29/06/2021	36	13:00	16:00	3	315	4	8	1	2	0	0	
29/06/2021	36	13:00	16:00	3	315	2	8	1	2	0	0	
29/06/2021	36	13:00	16:00	2	315	0	8	2	2	0	0	
30/06/2021	6	04:00	07:00	1	0	0	8	0	2	0	0	
30/06/2021	6	04:00	07:00	2	45	0	8	1	2	0	0	
30/06/2021	6	04:00	07:00	2	315	1	8	1	2	0	0	
30/06/2021	6	19:10	22:10	1	45	0	2	2	2	0	0	F1, gusting F2/F3.
30/06/2021	6	19:10	22:10	2	45	0	1	2	2	0	0	
30/06/2021	6	19:10	22:10	2	45	0	1	2	2	0	0	
01/07/2021	36	19:15	22:15	2	45	0	1	2	2	0	0	
01/07/2021	36	19:15	22:15	2	45	0	0	-	2	0	0	
01/07/2021	36	19:15	22:15	1	0	0	0	-	2	0	0	
02/07/2021	7	03:50	06:50	2	45	0	8	1	1	0	0	Misty
02/07/2021	7	03:50	06:50	2	45	0	8	1	1	0	0	
02/07/2021	7	03:50	06:50	2	45	0	5	2	2	0	0	Mist lifted
03/07/2021	6	08:30	11:30	3	135	0	2	2	2	0	0	
03/07/2021	6	08:30	11:30	3	135	0	3	2	2	0	0	
03/07/2021	6	08:30	11:30	2	180	0	3	2	2	0	0	
08/07/2021	6	19:30	22:30	1	315	0	8	2	2	0	0	
08/07/2021	6	19:30	22:30	2	315	1	8	1	2	0	0	
08/07/2021	6	19:30	22:30	2	315	1	8	1	2	0	0	
09/07/2021	6	13:40	16:40	2	135	0	8	2	2	0	0	
09/07/2021	6	13:40	16:40	2	135	3	8	1	2	0	0	
09/07/2021	6	13:40	16:40	2	135	0	8	2	2	0	0	
10/07/2021	36	16:15	19:15	3	135	0	8	2	2	0	0	
10/07/2021	1	12:40	15:40	3	135	0	8	2	2	0	0	
10/07/2021	36	16:15	19:15	3	90	0	7	2	2	0	0	
10/07/2021	1	12:40	15:40	3	135	0	8	2	2	0	0	
10/07/2021	1	12:40	15:40	3	135	0	8	2	2	0	0	
10/07/2021	36	16:15	19:15	2	90	0	8	2	2	0	0	
12/07/2021	36	15:50	18:50	0	-	0	8	1	1	0	0	

Date	VP	Start time	End time	Wind speed	Wind direction (compass degrees)	Rain	Cloud cover	Cloud height	Visibility	Frost	Snow	Notes
12/07/2021	7	19:20	22:20	1	315	0	8	0	2	0	0	
12/07/2021	7	19:20	22:20	1	315	1	8	0	1	0	0	
12/07/2021	7	19:20	22:20	1	315	0	8	0	2	0	0	
12/07/2021	36	15:50	18:50	0	-	0	8	1	1	0	0	
12/07/2021	36	15:50	18:50	1	0	0	8	0	1	0	0	
14/07/2021	7	14:00	17:00	5	225	0	6	2	2	0	0	
14/07/2021	7	14:00	17:00	4	225	0	7	2	2	0	0	
14/07/2021	7	14:00	17:00	4	270	0	8	2	2	0	0	
16/07/2021	1	13:45	16:45	3	225	0	5	2	2	0	0	
16/07/2021	1	13:45	16:45	2	225	0	6	2	2	0	0	
16/07/2021	1	13:45	16:45	2	225	0	5	2	2	0	0	
22/07/2021	7	04:45	07:45	1	315	0	8	0	2	0	0	Cloud height c.130m on average; higher in places
22/07/2021	7	04:45	07:45	1	315	0	8	1	2	0	0	
22/07/2021	7	04:45	07:45	1	315	0	8	1	2	0	0	Cloud heigh c200m; visibility fine
27/07/2021	7	17:00	20:00	3	0	0	8	1	2	0	0	
27/07/2021	7	17:00	20:00	4	0	0	8	1	2	0	0	
27/07/2021	7	17:00	20:00	5	0	0	8	1	2	0	0	
29/07/2021	36	18:55	21:55	3	315	0	8	1	2	0	0	
29/07/2021	36	18:55	21:55	3	315	0	8	1	2	0	0	Cloud height c,200m but coast visible
29/07/2021	6	11:45	14:45	2	315	0	8	1	2	0	0	
29/07/2021	6	11:45	14:45	3	315	1	8	0	2	0	0	
29/07/2021	36	18:55	21:55	2	315	0	8	1	2	0	0	
29/07/2021	6	11:45	14:45	2	315	0	8	1	2	0	0	
30/07/2021	36	13:45	16:45	2	315	0	8	0	2	0	0	Visibility variable
30/07/2021	36	13:45	16:45	2	315	0	8	0	1	0	0	Visibility variable
30/07/2021	36	13:45	16:45	3	315	0	8	0	1	0	0	Visibility variable
30/07/2021	1	17:30	20:30	3	315	0	8	1	2	0	0	
30/07/2021	1	17:30	20:30	2	315	0	8	1	2	0	0	
30/07/2021	1	17:30	20:30	2	315	4	8	1	1	0	0	
09/08/2021	36	11:15	14:15	2	225	0	8	0	0	0	0	
09/08/2021	36	11:15	14:15	2	225	0	8	0	1	0	0	
09/08/2021	36	11:15	14:15	2	225	0	8	0	1	0	0	Visibility ranging from 0 to 2 as fog inland
10/08/2021	1	11:10	14:10	2	225	0	6	2	2	0	0	

Date	VP	Start time	End time	Wind speed	Wind direction (compass degrees)	Rain	Cloud cover	Cloud height	Visibility	Frost	Snow	Notes
10/08/2021	1	11:10	14:10	1	225	0	7	2	2	0	0	Wind swinging to NE later in hour
10/08/2021	36	14:40	17:40	3	315	0	8	2	2	0	0	
10/08/2021	36	14:40	17:40	3	315	0	8	2	2	0	0	
10/08/2021	36	14:40	17:40	3	315	0	8	2	2	0	0	
10/08/2021	1	11:10	14:10	1	225	0	8	2	2	0	0	Wind swinging NW at times
23/08/2021	6	12:05	15:05	2	0	0	5	2	2	0	0	Wind speed varying F0-F3
23/08/2021	6	12:05	15:05	1	0	0	6	2	2	0	0	Calm at times; midges!
23/08/2021	6	12:05	15:05	1	45	0	6	2	2	0	0	Midges!
24/08/2021	6	14:25	17:25	4	315	0	3	2	2	0	0	
24/08/2021	6	14:25	17:25	3	315	0	4	2	2	0	0	
24/08/2021	6	14:25	17:25	3	315	0	2	2	2	0	0	
25/08/2021	7	12:40	15:40	4	315	0	8	1	1	0	0	
25/08/2021	7	12:40	15:40	3	315	1	8	0	1	0	0	
25/08/2021	7	12:40	15:40	4	315	0	8	1	1	0	0	
27/08/2021	1	16:00	19:00	2	90	0	0	-	2	0	0	
27/08/2021	1	16:00	19:00	1	90	0	0	-	2	0	0	
27/08/2021	1	16:00	19:00	2	45	0	0	-	2	0	0	
28/08/2021	7	09:30	11:00	1	315	0	8	1	1	0	0	2km visibility
28/08/2021	7	09:30	11:00	2	270	0	8	0	0	0	0	Top of turbines disappearing into clouds
29/08/2021	7	13:10	14:40	2	0	2	8	0	1	0	0	Brief 10min shower; visibility mostly 2-3km
29/08/2021	7	13:10	14:40	1	45	0	7	1	2	0	0	Some blue-sky patches; some banks of cloud at c.100m but mostly c.150m

Table 20: Details of the 2021 breeding diver focal watches completed for Strathy North Wind Farm

Month	Date	Start time	End time
May	19/05/2021	16:30	19:40
	20/05/2021	15:30	19:00
	21/05/2021	11:55	13:45
	31/05/2021	14:30	18:00
June	01/06/2021	07:07	16:00
	02/06/2021	10:30	18:00
	03/06/2021	09:00	16:00
	04/06/2021	07:00	10:30
	15/06/2021	15:30	18:41
	16/06/2021	08:19	13:30
	19/06/2021	13:00	14:00
	28/06/2021	11:45	16:45
	29/06/2021	06:30	11:30
	30/06/2021	08:33	11:39
July	01/07/2021	08:50	11:00
	14/07/2021	17:00	20:00
	15/07/2021	14:00	19:00
	27/07/2021	08:45	17:40
	29/07/2021	11:45	15:30
	30/07/2021	16:50	17:10
	12/08/2021	09:00	14:30
	13/08/2021	08:10	10:35
August	15/08/2021	14:30 18:00	17:30 21:00
	16/08/2021	13:30	16:00
	17/08/2021	11:50	14:40
	20/08/2021	12:50	15:50
	22/08/2021	18:10	21:10
	24/08/2021	12:30	13:30

Table 21: Details of the 2021 moorland breeding bird surveys completed for Strathy North Wind Farm

Visit	Date	Start time	End time
1	17/04/2021	11:06	17:35
	19/04/2021	14:20	17:35
	20/04/2021	09:06	11:46
	22/04/2021	13:40	17:48
	23/04/2021	16:10	17:50
	24/04/2021	15:10	18:00
	25/04/2021	08:20	11:30
2	20/05/2021	08:45	09:50
	25/05/2021	09:30	16:00
	27/05/2021	09:17	10:30
	28/05/2021	10:00	14:25
	29/05/2021	14:25	18:15

Visit	Date	Start time	End time
	31/05/2021	08:25	15:55
3	22/06/2021	09:15	14:00
	27/06/2021	12:15	15:15
	28/06/2021	12:00	18:30
	29/06/2021	16:20	17:35
	30/06/2021	14:15	18:00
4	01/07/2021	16:00	18:00
	20/07/2021	09:35	15:25
	22/07/2021	07:55	12:55
	23/07/2021	12:20	16:50
	27/07/2021	11:08	16:42
	28/07/2021	14:00	18:00
	29/07/2021	15:30	17:50

Table 22: Details of the 2021 breeding greenshank surveys completed for Strathy North Wind Farm

Month	Date	Start time	End time
April	18/04/2021	09:40	15:40
	24/04/2021	08:53	14:53
May	26/05/2021	10:00	15:55
June	27/06/2021	09:15	12:15
	29/06/2021	08:00	13:00
July	21/07/2021	11:20	17:20

A.1.1.2 Strathy South Wind Farm 'Northern Section' Grid Connection 2022 Flight Activity Surveys

3.2.8 Details of the 2022 flight activity surveys completed from VP1 and VP2 for the proposed Strathy South Wind Farm 'Northern Section' Grid Connection are presented in **Table 23**.

Table 23: Details of 2022 flight activity surveys completed from VPs 1 and 2 for the proposed Strathy South Wind Farm 'Northern Section' Grid Connection

Date	VP	Start time	End time	Wind speed	Wind direction (compass degrees)	Rain	Cloud cover	Cloud height	Visibility
16/05/2022	2	06:12:00	09:12:00	4	90	0	3	1	2
28/05/2022	1	10:23:00	13:23:00	4	315	0	6	1	2
31/05/2022	1	18:03:00	21:03:00	3	90	0	5	1	2
02/06/2022	2	15:10:00	18:10:00	2	0	0	7	1	2
02/06/2022	2	11:40:00	14:40:00	2	0	0	1	2	2
07/06/2022	1	09:20:00	12:20:00	2	135	0	7	1	2
07/06/2022	1	12:50:00	15:50:00	4	45	0	4	1	2
03/07/2022	2	04:42:00	11:42:00	3	225	0	8	1	2
16/07/2022	1	09:35:00	12:35:00	3	270	1	8	1	2
16/07/2022	1	06:05:00	09:05:00	2	180	2	8	1	2
31/07/2022	2	05:55:00	08:55:00	2	225	0	6	1	2

Date	VP	Start time	End time	Wind speed	Wind direction (compass degrees)	Rain	Cloud cover	Cloud height	Visibility
08/08/2022	1	09:50:00	12:50:00	3	180	2	8	1	2
08/08/2022	2	06:12:00	09:12:00	3	225	0	6	1	2
10/08/2022	2	09:51:00	12:51:00	3	225	0	2	1	2
13/08/2022	1	05:47:00	08:47:00	1	180	0	8	1	1

A.1.2 Field Surveys for the Proposed Development

A.1.2.1 2018-19 Ornithology Surveys

3.2.9 Details of the 2029-19 ornithology surveys completed for the Proposed Development are presented in **Table 24** to **Table 27**.

Table 24: Details of the 2018-19 flight activity surveys completed for the Proposed Development

Month	Date	Surveyor*	VP	Start time	End time	Duration (hrs)
October	22/10/2018	PS	1	10:15	13:15	3
October	24/10/2018	PS	1	13:30	16:30	3
October	22/10/2018	PS	2	14:10	17:10	3
October	24/10/2018	PS	2	09:55	12:55	3
October	26/10/2018	PS	1	10:00	13:00	3
October	29/10/2018	PS	1	12:30	15:30	3
October	26/10/2018	PS	2	13:40	16:40	3
October	29/10/2018	PS	2	09:00	13:00	3
November	14/11/2018	RW	1	13:10	16:10	3
November	15/11/2018	RW	1	09:05	12:05	3
November	15/11/2018	RW	2	12:50	15:50	3
November	16/11/2018	RW	2	08:35	11:35	3
December	11/12/2018	RW	1	08:45	11:45	3
December	11/12/2018	RW	2	12:25	15:25	3
December	12/12/2018	RW	1	12:25	15:25	3
December	12/12/2018	RW	2	08:45	11:45	3
January	09/01/2019	RW	1	08:45	11:45	3
January	09/01/2019	RW	2	12:30	15:30	3
January	10/01/2019	RW	1	12:45	15:45	3
January	10/01/2019	RW	2	08:45	11:45	3
February	05/02/2019	RW	1	08:15	11:15	3
February	05/02/2019	RW	2	12:15	15:15	3
February	06/02/2019	RW	1	14:00	17:00	3
February	06/02/2019	RW	2	10:05	13:05	3
March	25/03/2019	RW	1	15:55	18:55	3
March	26/03/2019	RW	1	06:00	09:00	3
March	26/03/2019	RW	2	10:00	13:00	3
March	27/03/2019	RW	2	06:00	09:00	3
April	08/04/2019	RW	1	16:30	18:30	3
April	09/04/2019	RW	1	06:45	09:45	3

Month	Date	Surveyor*	VP	Start time	End time	Duration (hrs)
April	09/04/2019	RW	2	10:40	13:40	3
April	12/04/2019	RW	2	07:35	09:35	2
April	22/04/2019	RW	2	16:45	17:45	1
May	20/05/2019	RW	1	18:55	21:55	3
May	21/05/2019	RW	1	11:10	14:10	3
May	21/05/2019	RW	2	15:15	18:15	3
June	11/06/2019	RW	1	09:50	11:50	3
June	11/06/2019	RW	2	04:05	07:05	3
June	12/06/2019	RW	1	04:00	07:00	3
June	12/06/2019	RW	2	09:15	12:15	3
June	18/06/2019	RW	2	07:15	10:15	3
July	17/07/2019	RW	1	12:25	15:25	3
July	15/07/2019	RW	2	08:45	11:45	3
July	29/07/2019	RW	1	08:45	11:45	3
July	31/07/2019	RW	2	12:30	15:30	3
August	20/08/2019	RW	1	12:45	15:45	3
August	19/08/2019	RW	2	08:45	11:45	3
August	21/08/2019	RW	1	08:15	11:15	3
August	20/08/2019	RW	2	12:15	15:15	3

*PS – Paul Stagg, RW – Robbie Watt

Table 25: Details of the 2019 lekking black grouse surveys completed for the Proposed Development

Month	Date	Surveyor	Start time	End time	Duration (hrs)
April	23/04/2019	Robbie Watt	05:30	07:30	2
April	23/04/2019	Robbie Watt	05:30	07:30	2
April	23/04/2019	Robbie Watt	05:30	07:30	2
April	25/04/2019	Robbie Watt	05:30	07:30	2
April	25/04/2019	Robbie Watt	05:30	07:30	2
April	25/04/2019	Robbie Watt	05:30	07:30	2

Table 26: Details of the 2019 moorland breeding bird surveys completed for the Proposed Development

Visit	Date	Surveyor	Start time	End time	Duration (hrs)
1	23/04/2019	Robbie Watt	05:30	12:30	7
	24/04/2019	Robbie Watt	05:30	12:30	7
2	22/05/2019	Robbie Watt	05:00	12:00	7
3	19/06/2019	Robbie Watt	08:00	14:00	6
	20/06/2019	Robbie Watt	06:00	12:00	7
4	16/07/2019	Robbie Watt	08:00	16:00	8
	17/07/2019	Robbie Watt	08:30	12:00	3.5

Table 27: Details of the 2019 scarce breeding bird surveys completed for the Proposed Development

Month	Date	Surveyor	Start time	End time	Duration (hrs)
April	04/10/2019	Robbie Watt	06:45	14:45	8

Month	Date	Surveyor	Start time	End time	Duration (hrs)
April	04/11/2019	Robbie Watt	06:30	14:30	8
May	25/04/2019	Robbie Watt	05:30	12:30	7
May	22/05/2019	Robbie Watt	08:00	12:00	4
June	13/06/2019	Robbie Watt	06:00	13:00	7
June	18/06/2019	Robbie Watt	11:00	15:00	4
June	19/06/2019	Robbie Watt	06:00	14:00	8
June	20/06/2019	Robbie Watt	06:00	12:00	4
July	18/07/2019	Robbie Watt	06:00	12:00	6
July	30/07/2019	Robbie Watt	10:00	15:00	7
July	31/07/2019	Robbie Watt	14:00	18:00	4
August	08/01/2019	Robbie Watt	10:00	16:00	6

A.1.2.2 2022 Scarce Breeding Bird Surveys

3.2.10 Details of the 2022 SBBS completed for the Proposed Development are presented in **Table 28**.

Table 28: Details of the 2022 scarce breeding bird surveys completed for the Proposed Development

Visit	Date	Start time	End time	Hour	Wind speed	Wind direction	Rain	Cloud cover	Cloud height	Visibility
1	18/05/2022	05:20	10:15	1	4	NE	2	7	2	2
				2	4	NE	2	7	2	2
				3	4	NE	2	7	2	2
				4	4	NE	0	7	2	2
				5	4	NE	2	7	2	2
	19/05/2022	05:10	09:00	1	3	E	2	7	2	2
				2	3	E	2	6	2	2
				3	4	E	2	6	2	2
				4	4	E	2	6	2	2
	23/05/2022	05:00	09:30	1	2	N	2	8	2	2
				2	2	NE	2	8	2	2
				3	2	NE	0	6	2	2
				4	2	NE	0	4	2	2
				5	2	NE	0	4	2	2
2	13/06/2022	04:00	08:00	1	4	S	1	7	1	1
				2	5	S	1	7	1	1
				3	3	S	0	8	2	2
				4	3	S	1	8	2	2
	15/06/2022	04:30	08:20	1	3	E	1	8	1	1
				2	4	E	1	8	1	1
				3	4	E	1	8	1	2
				4	3	E	0	8	2	2
	16/06/2022	04:30	08:20	1	4	S	1	7	1	1
				2	4	S	1	7	2	2
				3	3	S	1	5	2	2

Visit	Date	Start time	End time	Hour	Wind speed	Wind direction	Rain	Cloud cover	Cloud height	Visibility
				4	3	S	1	5	2	2
3	08/07/2022	04:40	08:30	1	5	S	0	1	2	2
				2	3	S	0	4	2	2
				3	3	S	0	7	2	2
				4	3	S	0	7	2	2
	09/07/2022	04:40	08:15	1	4	S	1	7	1	1
				2	4	S	1	8	2	2
				3	4	S	0	7	2	2
				4	4	S	0	8	2	2
	10/07/2022	04:45	08:30	1	3	S	0	0	-	2
				2	3	S	0	0	-	2
				3	4	S	0	1	2	2
				4	4	S	0	1	2	2
4	23/07/2022	05:00	08:45	1	3	N	0	3	2	2
				2	4	N	0	6	2	2
				3	4	NE	0	6	2	2
				4	4	N	0	6	2	2
	27/07/2022	05:30	08:50	1	3	S	1	6	2	2
				2	3	S	2	8	2	2
				3	3	S	2	8	2	2
				4	3	S	2	8	2	2
	28/07/2022	05:20	09:05	1	3	NE	0	4	2	2
				2	2	NE	0	5	2	2
				3	2	NE	0	5	2	2
				4	3	NE	0	5	2	2

A.1.3 Desk Study Data Review

A.1.3.1 Strathy North Wind Farm 2021 Ornithology Surveys

3.2.11 Details of the target species flights recorded during the 2021 Strathy North Wind Farm flight activity surveys are presented in **Table 29**.

Table 29: Details of target species flights recorded during the 2021 flight activity surveys for Strathy North Wind Farm

					Height band						
Month	Date	VP	Species	Time	Band 1	Band 2	Band 3	Band 4	Band 5	Flight time (secs)	Gender
April	01/04/2021	6	Hen Harrier	12:37	0	15	0	0	0	360	F
April	04/04/2021	36	Pink footed goose	12:44	0	30	0	0	0	240	-
April	04/04/2021	36	Pink footed goose	12:08	0	30	30	0	0	30	-
April	05/04/2021	7	Whit tailed eagle	9:02	0	0	0	30	0	75	-
April	05/04/2021	7	Greenshank	7:50	0	15	0	0	0	15	-
April	23/04/2021	7	Snipe	20:46	15	15	0	0	0	60	-
April	23/04/2021	7	Greenshank	19:18	0	15	0	0	0	15	-
April	23/04/2021	7	Greenshank	18:33	45	0	0	0	0	30	Pair
May	09/05/2021	1	Red-throated diver	20:16	30	0	0	0	0	30	Pair
May	16/05/2021	7	Teal	21:16	0	15	30	45	30	15	-
May	16/05/2021	1	Mallard	17:18	15	15	30	0	0	15	Pair
May	16/05/2021	1	Greenshank	17:42	0	0	0	60	0	15	-
May	16/05/2021	7	Greenshank	19:35	30	0	0	0	0	15	-
May	16/05/2021	7	Snipe	19:37	0	15	0	0	0	15	-
May	16/05/2021	7	Greenshank	19:42	0	15	15	30	0	15	-
May	16/05/2021	7	Snipe	19:53	0	0	30	0	0	15	-
May	17/05/2021	36	Red-throated diver	6:40	0	0	15	15	0	15	-

					Height band						
Month	Date	VP	Species	Time	Band 1	Band 2	Band 3	Band 4	Band 5	Flight time (secs)	Gender
May	17/05/2021	36	Greenshank	6:53	0	15	0	0	0	15	-
May	18/05/2021	7	Greenshank	12:40	15	0	0	0	0	30	-
May	18/05/2021	7	Dunlin	12:15	45	60	0	0	0	15	-
May	19/05/2021	6	Greylag goose	12:20	0	15	0	0	0	30	M
May	19/05/2021	6	Hen harrier	10:34	15	15	0	0	0	75	M
May	21/05/2021	7	Hen harrier	11:52	15	30	30	0	0	60	M
May	21/05/2021	7	Greenshank	11:17	0	0	15	0	0	15	-
May	21/05/2021	7	Dunlin	10:44	0	0	0	0	0	30	-
May	27/05/2021	1	Merlin	6:55	0	15	0	0	0	15	M
May	28/05/2021	7	Greylag goose	4:25	15	30	0	0	0	45	-
May	28/05/2021	7	Greenshank	5:59	15	0	0	0	0	30	-
May	28/05/2021	7	Greylag goose	4:25	15	15	0	0	0	60	-
May	28/05/2021	7	Greylag goose	4:26	0	30	0	0	0	15	-
May	28/05/2021	7	Greenshank	4:32	0	30	0	0	0	30	-
May	28/05/2021	7	Greenshank	4:50	15	15	0	0	0	30	-
May	28/05/2021	7	Greenshank	4:50	15	0	0	0	0	30	-
May	28/05/2021	7	Greylag goose	4:26	0	30	45	0	0	15	-
May	28/05/2021	7	Snipe	5:37	0	45	45	0	0	45	-
May	28/05/2021	7	Greenshank	6:30	0	15	75	30	0	30	-
May	28/05/2021	7	Greenshank	4:52	0	0	30	0	0	15	-
June	13/06/2021	7	Greenshank	16:34	0	0	30	30	225	15	-
June	13/06/2021	7	Black-throated diver	16:49	0	30	15	0	0	15	-
June	13/06/2021	7	Snipe	17:20	0	0	30	0	0	15	-
June	13/06/2021	7	Snipe	17:55	0	15	0	0	0	45	-
June	14/06/2021	1	Merlin	15:11	0	30	0	0	0	15	-

					Height band						
Month	Date	VP	Species	Time	Band 1	Band 2	Band 3	Band 4	Band 5	Flight time (secs)	Gender
June	14/06/2021	1	Merlin	15:07	0	30	30	0	0	30	-
June	16/06/2021	6	Snipe	10:25	0	0	0	30	0	60	-
June	16/06/2021	6	White tailed eagle	10:41	0	15	0	0	0	15	-
June	16/06/2021	6	Mallard	11:57	15	15	0	0	0	30	-
June	16/06/2021	6	Snipe	10:44	0	15	0	0	0	15	-
June	18/06/2021	1	Merlin	14:17	45	0	0	0	0	15	-
June	18/06/2021	1	Greylag goose	14:32	30	0	0	0	0	30	-
June	19/06/2021	7	Greenshank	11:30	0	15	30	45	30	60	-
June	19/06/2021	7	Greenshank	12:07	15	15	30	0	0	30	-
June	19/06/2021	7	Dunlin	10:49	0	0	0	60	0	15	-
June	19/06/2021	7	Greenshank	10:49	30	0	0	0	0	30	-
June	19/06/2021	7	Greenshank	10:28	0	15	0	0	0	15	-
June	19/06/2021	7	Greenshank	9:56	0	15	15	30	0	45	-
June	22/06/2021	36	Red-throated diver	5:24	0	0	30	0	0	30	-
June	22/06/2021	36	Greenshank	5:25	0	0	15	15	0	120	-
June	22/06/2021	36	Red-throated diver	5:32	0	15	0	0	0	60	-
June	22/06/2021	36	Snipe	4:47	15	0	0	0	0	60	-
June	24/06/2021	1	Merlin	11:26	45	60	0	0	0	30	M
June	24/06/2021	1	Greenshank	12:10	0	15	0	0	0	15	-
June	30/06/2021	6	Snipe	5:10	15	15	0	0	0	60	-
June	30/06/2021	6	Snipe	5:27	15	30	30	0	0	30	-
June	30/06/2021	6	Snipe	5:45	0	0	15	0	0	30	-
July	02/07/2021	7	Greenshank	5:53	0	0	0	0	0	15	-
July	02/07/2021	7	Greenshank	5:53	0	15	0	0	0	15	-
July	03/07/2021	6	White tailed eagle	10:55	15	30	0	0	0	105	-
July	10/07/2021	1	Merlin	14:04	15	0	0	0	0	15	-

Month	Date	VP	Species	Time	Height band					Flight time (secs)	Gender
					Band 1	Band 2	Band 3	Band 4	Band 5		
July	10/07/2021	36	Red-throated diver	18:40	15	15	0	0	0	30	-
July	10/07/2021	36	Red-throated diver	18:52	0	30	0	0	0	75	-
July	10/07/2021	36	Greenshank	19:13	0	30	0	0	0	15	-
July	16/07/2021	1	Merlin	14:27	15	15	0	0	0		-
July	16/07/2021	1	Merlin	14:54	15	0	0	0	0	15	-
July	16/07/2021	1	Merlin	16:02	0	30	45	0	0	45	F
July	22/07/2021	7	Greenshank	6:32	0	45	45	0	0	15	-
July	27/07/2021	7	Curlew	18:21	0	15	75	30	0	30	-
August	10/08/2021	1	Osprey	13:20	0	0	30	0	0	30	-
August	10/08/2021	36	Hen harrier	17:39	0	0	30	30	225	30	-
August	23/08/2021	6	Hen harrier	13:03	0	30	15	0	0	30	M
August	23/08/2021	6	Hen harrier	13:04	0	0	30	0	0	15	M
August	24/08/2021	6	Hen harrier	15:26	0	15	0	0	0	75	-
August	27/08/2021	1	White tailed eagle	18:04	0	30	0	0	0	90	-
August	27/08/2021	1	White tailed eagle	18:10	0	30	30	0	0	120	-
August	27/08/2021	1	Merlin	18:27	0	0	0	30	0	30	-
August	27/08/2021	1	White tailed eagle	18:49	0	15	0	0	0	285	-
August	29/08/2021	7	Osprey	14:24	15	15	0	0	0	45	-
August	29/08/2021	7	Osprey	14:22	0	15	0	0	0	30	-

A.1.3.2 Strathy South Grid Connection 2022 Flight Activity Surveys

3.2.12 Details of the target species flights recorded during the 2022 flight activity surveys from VP1 and VP2 for the proposed Strathy South Grid Connection are presented in **Table 30.**

Table 30: Details of target species flights recorded during the 2022 Strathy South Grid Connection flight activity surveys from VP 1 and VP 2

Date	VP	Species	No. of birds	Time	Height band						Flight time (secs)	Gender
					Band 1	Band 2	Band 3	Band 4	Band 5	Band 6		
16/05/2022	2	Herring gull	2	09:08	0	135	0	0	0	0	135	-
02/06/2022	2	Black-headed gull	2	17:44	0	60	75	30	0	0	165	-
07/06/2022	1	Herring gull	1	15:05	0	120	60	0	0	0	180	-
08/08/2022	2	Great Black-backed gull	1	06:12	0	30	0	0	0	0	30	-
08/08/2022	2	Hen harrier	1	06:53	240	15	0	0	0	0	255	Male
08/08/2022	2	Osprey	1	09:04	0	0	150	0	0	0	150	-

A.1.4 Field Surveys for the Proposed Development

A.1.4.1 2018-2019 Ornithology Surveys

3.2.13 Details of the target species flights recorded during the 2018-19 flight activity surveys for the Proposed Development are presented in **Table 31**.

Table 31: Details of target species flights recorded during the 2018-19 flight activity surveys for the Proposed Development

Month	Date	VP	Species	Observation time	No. of birds	Time height 1	Time height 2	Time height 3	Time height 4	Time height 5	Time height 6	Flight duration (secs)
October	24/10/2018	1	Golden eagle	13:53	1	0	0	180	0	0	0	180
October	24/10/2018	1	Golden eagle	14:04	1	0	0	165	0	0	0	165
November	16/11/2018	2	Hen harrier	09:45	1	15	0	0	0	0	0	15
November	16/11/2018	2	Merlin	10:52	1	15	0	0	0	0	0	15
March	26/03/2019	1	Pink-footed goose	07:18	40	0	0	45	0	0	0	45
March	26/03/2019	1	Peregrine	08:18	1	0	0	15	0	0	0	15
March	26/03/2019	2	Hen harrier	10:02	1	30	0	0	0	0	0	30
March	26/03/2019	2	Hen harrier	11:00	1	135	0	0	0	0	0	135
March	26/03/2019	2	Hen harrier	12:05	1	60	15	0	0	0	0	75
March	26/03/2019	2	Hen harrier	12:35	1	15	0	0	0	0	0	15
March	26/03/2019	2	Hen harrier	12:53	1	30	0	0	0	0	0	30

Month	Date	VP	Species	Observation time	No. of birds	Time height 1	Time height 2	Time height 3	Time height 4	Time height 5	Time height 6	Flight duration (secs)
March	27/03/2019	2	Hen harrier	07:32	1	30	0	0	0	0	0	30
March	27/03/2019	2	Hen harrier	08:20	1	45	0	0	0	0	0	45
March	27/03/2019	2	Hen harrier	08:52	1	75	15	0	0	0	0	90
March	27/03/2019	2	Hen harrier	08:55	1	0	90	150	0	0	0	240
March	27/03/2019	2	Hen harrier	09:00	1	165	0	0	0	0	0	165
April	08/04/2019	1	Hen harrier	17:00	1	0	15	15	0	0	0	30
April	08/04/2019	1	Hen harrier	17:04	1	0	0	30	0	0	0	30
April	08/04/2019	1	Hen harrier	17:16	1	0	0	225	0	0	0	225
April	08/04/2019	1	Black-throated diver	19:08	2	0	0	30	0	0	0	30
April	09/04/2019	1	Pink-footed goose	07:03	18	0	0	30	0	0	0	30
April	09/04/2019	1	Pink-footed goose	07:05	55	0	0	45	0	0	0	45
April	09/04/2019	1	Pink-footed goose	07:20	220	0	0	60	0	0	0	60
April	12/04/2019	2	Hen harrier	08:22	1	0	15	30	0	0	0	45
April	12/04/2019	2	Hen harrier	08:29	1	0	0	15	0	0	0	15
April	12/04/2019	2	Hen harrier	08:34	1	0	0	45	0	0	0	45
April	12/04/2019	2	Hen harrier	08:35	1	0	15	15	0	0	0	30
April	22/04/2019	2	Hen harrier	17:12	1	0	15	0	0	0	0	15
May	20/05/2019	1	Hen harrier	19:05	1	30	0	0	0	0	0	30
May	21/05/2019	1	Hen harrier	14:01	1	0	30	15	0	0	0	45
May	21/05/2019	2	Hen harrier	18:08	1	15	90	0	0	0	0	105
June	11/06/2019	2	Greenshank	06:22	2	0	0	30	0	0	0	30
June	12/06/2019	2	Hen harrier	09:41	1	15	0	0	0	0	0	15
June	12/06/2019	2	Hen harrier	09:42	1	30	0	0	0	0	0	30
June	12/06/2019	2	Hen harrier	09:49	1	0	45	15	0	0	0	60
June	12/06/2019	2	Snipe	10:42	1	15	0	0	0	0	0	15
July	15/07/2019	2	Hen harrier	15:48	1	0	15	0	0	0	0	15
July	15/07/2019	2	Hen harrier	15:48	1	0	0	15	0	0	0	15
July	15/07/2019	2	Hen harrier	16:49	1	15	15	150	0	0	0	180
July	15/07/2019	2	Hen harrier	16:49	1	0	15	0	0	0	0	15
July	15/07/2019	2	Hen harrier	18:25	1	0	0	45	0	0	0	45

Month	Date	VP	Species	Observation time	No. of birds	Time height 1	Time height 2	Time height 3	Time height 4	Time height 5	Time height 6	Flight duration (secs)
July	29/07/2019	1	Merlin	17:41	1	0	15	0	0	0	0	15
July	29/07/2019	1	Hen harrier	17:58	1	60	60	0	0	0	0	120
July	31/07/2019	2	Hen harrier	07:01	1	15	15	0	0	0	0	30
July	31/07/2020	2	Hen harrier	07:06	1	15	15	0	0	0	0	30
August	19/08/2019	2	Hen harrier	19:32	1	15	15	0	0	0	0	30
August	19/08/2019	2	Hen harrier	19:33	1	30	0	0	0	0	0	30
August	20/08/2019	2	Hen harrier	15:32	1	30	0	0	0	0	0	30
August	20/08/2019	2	Hen harrier	16:16	1	30	0	0	0	0	0	30
August	20/08/2019	2	Hen harrier	16:34	1	15	15	0	0	0	0	30
August	20/08/2019	2	Hen harrier	16:36	1	0	15	0	0	0	0	15
August	20/08/2019	2	Hen harrier	16:39	1	15	0	0	0	0	0	15
August	20/08/2019	2	Hen harrier	16:52	1	0	15	30	0	0	0	45
August	20/08/2019	2	Hen harrier	16:58	2	15	0	0	0	0	0	15
August	20/08/2019	2	Hen harrier	17:04	1	15	0	0	0	0	0	15
August	20/08/2019	2	Hen harrier	18:02	1	0	15	195	0	0	0	210
August	20/08/2019	2	Hen harrier	18:08	1	15	0	0	0	0	0	15
August	20/08/2019	2	Hen harrier	17:52	1	15	0	0	0	0	0	15