

Appendix 7.1: Birds Technical Report



Alba Ecology Ltd.

Fergus Massey

March 2026

Registered Office: Coilntra House, High Street, Grantown on Spey, Moray, PH26 3EN. Tel: 01479 870238

Table 1: Geographical Area Definitions

Term	Definition
Site	This refers to all the land within the Proposed Development Site boundary (as was advised in 2022 when ornithological surveys were planned and commenced).
Development Footprint	This refers to the footprint of the Proposed Development infrastructure within the Site. It includes the turbines and associated infrastructure.
Turbine Area	This equates to all the land within 500m of the proposed turbine array.
Study Area	This equates to all the land within the Site which was considered to have potential for development, plus an appropriate survey buffer (Figure 7.1). This buffer can be variable depending on the ornithological receptor e.g. 500m for all breeding bird species, except 1km for divers, 1.5km, 2km for general raptors and 6km for eagles (as per SNH, 2017).

The ornithological surveys described, and the data collected, within this Technical Appendix were all undertaken by Alba Ecology Ltd.

Reconnaissance

A preliminary site visit by Dr Peter Cosgrove in 2022 determined that the Study Area was predominantly upland open habitat characterised blanket bog. Potential bird interest in the Study Area was likely to comprise upland waders, divers and potentially raptors. An initial desk-based review of the main bird sensitivities associated within the Study Area was conducted. This (along with SNH/NatureScot guidance) was used to identify a range of field survey requirements with the following aims:

- Determine the distribution and abundance of upland breeding birds as a proportion of the Study Area covers open, upland habitats;
- Investigate the level of bird flight activity across the Study Area throughout the year;
- Investigate the use of the Study Area (and adjacent areas) for nesting red-throated divers;
- Identify if any freshwater bodies in the Study Area (and suitable buffers) are used by important breeding waterfowl, particularly red-throated divers;
- Identify any raptor nest sites within relevant buffer distances of the Proposed Development (2km for all raptors that breed in Shetland; and
- Investigate if the Study Area lies underneath an important migratory flyway for waterfowl (particularly geese and swans).

Field surveyors

The ornithological licensed surveyors used by Alba Ecology between 2022 and 2024 were Dr Peter Cosgrove and David Cooper.

The surveyors had extensive ornithological field experience of upland areas in Shetland. They attended regular training events led by experts, covering areas such as breeding bird survey techniques, estimating distances and heights, recording data concisely and correctly, navigation techniques and health and safety. Surveyors were trained to carry out surveys in a

systematic manner, following recognised standardised survey methods, relevant at the times the surveys were conducted.

SURVEY METHODS

Moorland breeding birds survey

The modified Brown and Shepherd (1993) Moorland Breeding Bird survey is the standard survey technique for moorland/upland breeding birds (Gilbert *et al.*, 1998) and is described in the SNH/NS online guidance (SNH, 2017). The Brown and Shepherd methodology is based on a constant search method involving spending 25 minutes in each 500m × 500m quadrant, within the Study Area. This equates to spending 100 minutes for every km². Each quadrant was walked to ensure that all parts were approached to within 100m. At regular intervals, the surveyor paused, scanned the area for species and listened out for calls and songs. All registrations were marked on a 1:25,000 scale map using British Trust for Ornithology (BTO) symbols with a note of the species activity. These surveys were undertaken at least four times each breeding season during the breeding season in 2022 and 2023 (approximately monthly between April and July). The habitat in the Study Area was defined as open upland habitats and so this survey technique was used across all parts of the Study Area (aside from private gardens and the high security compound area at Sullom Voe).

It should also be noted that there are potential limitations to this survey method. For example, SNH/NS recommend that this survey should not be used to assess the collision risk of raptors or waterfowl, which are more suited to being surveyed using other methods; however, the methodology can be useful in adding to territory distribution data for these species and in locating breeding sites.

Population estimates of birds in the Study Area were derived by comparing the summary maps for each of the main seasonal survey periods. Registrations/territories plotted during each period were considered to be separate from one another if more than approximately 500m apart for larger species, 300m in the case of dunlin. If there was any doubt about whether more than one pair of birds was present, surveyors would sit quietly nearby and observe the behaviour, gender and number of birds present as per Brown and Shepherd's 1993 survey methodology. When compiling figures of breeding birds, the approximate central location of all registrations recorded from different visits is used to identify a notional territory centre (the species 'dot' on the relevant Environmental Statement figures).

Breeding raptor surveys

SNH/NS provided clear guidance in relation to raptor sensitivities and survey effort (SNH, 2017). Surveys were undertaken to determine the location of breeding raptors listed on Annex 1 of the Birds Directive or Schedule 1 of the Wildlife and Countryside Act 1981 (as amended). Priority was given to detecting Annex 1/Schedule 1 species most likely to occur given the desk study, habitats present and within SNH/NS recommended survey distances. In the case of Shetland, this was considered likely to be merlin.

Priority was given to detecting species most likely to occur given the desk study: merlin (2km distance). Breeding raptor surveys were conducted during the breeding season in 2022 and 2023. Survey methods followed best practice guidance (e.g. Hardey *et al.*, 2013).

Breeding diver surveys

Searches were made for protected breeding waterfowl within the Study Area. Following SNH/NS guidance, searches for nesting red-throated divers were undertaken on all potentially suitable water bodies within the Study Area, plus a c. 1km buffer and correspondingly, these water bodies were also searched for nesting whooper swans too. The water bodies were visited at least twice during the breeding season if nothing was present. However, if the Study Area water body was occupied, they were revisited later in the breeding season to determine nest locations, breeding success and productivity. Targeted breeding diver focal watches were also undertaken on occupied waterbodies within the Study Area.

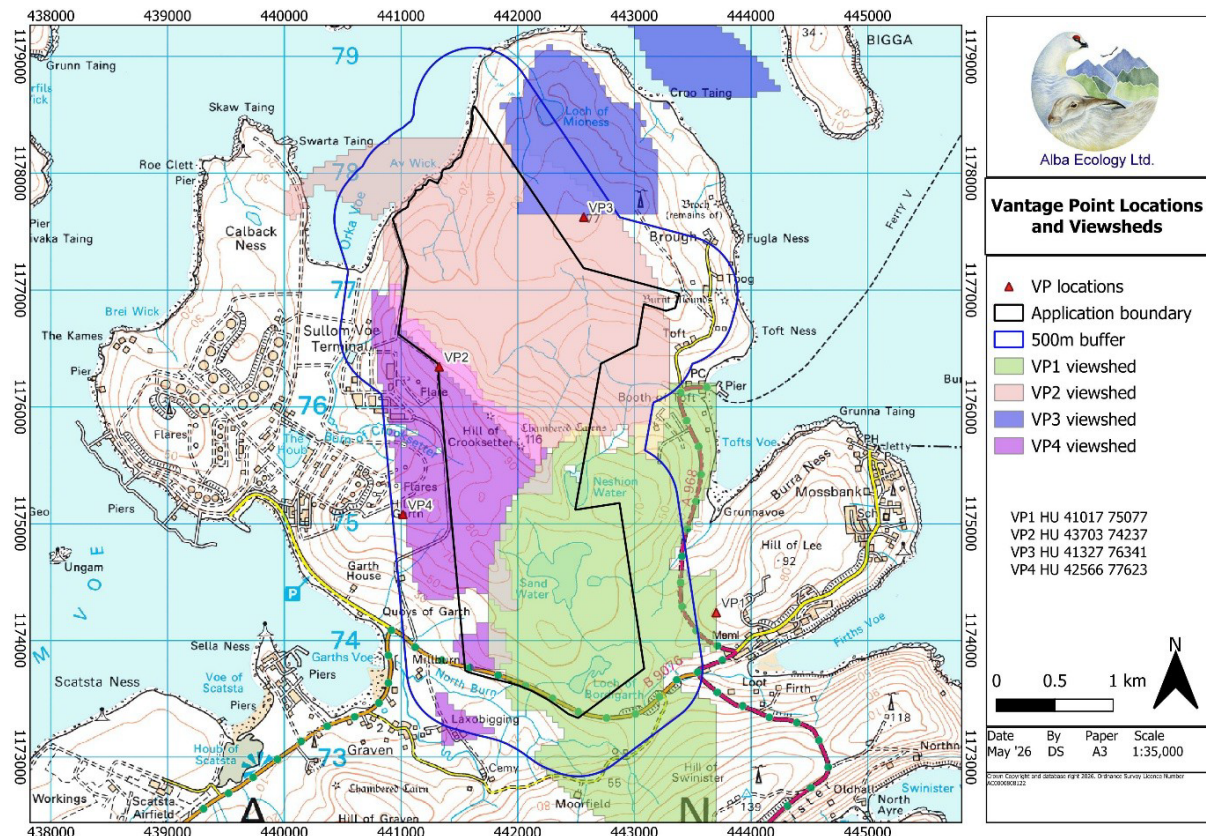
Vantage Point Watches

Vantage Point (VP) watches were used to record flight activity and the use of the Study Area, during the breeding and non-breeding season, for selected target species from April 2022 until March 2024. Care was taken to ensure that flight activity survey methods and the level and type of survey effort was consistent with guidance available at the time surveys commenced (SNH, 2005; revised 2010, 2014 and 2017).

VP watches are designed to record larger birds using the Study Area but not necessarily breeding there; they include the collection of data of the flight paths of these birds, including height from the ground, duration of sighting, and activities of the birds. Birds recorded by this method include raptors, wildfowl and waders. Methods are outlined by Madders (unpublished; given as appendix in Whitfield, 2002, Whitfield and Bullman, 2004, and SNH, 2005; revised 2010, 2014 and 2017) and ultimately result in an analysis of collision risk (Band *et al.*, 2005) and flightline distribution.

This method involves selecting VP locations that provide a good view of the proposed initial site and surrounding land, but do not make the observer too conspicuous. For the purpose of this survey, four VPs were selected to cover the majority of the proposed turbine area plus a 500m buffer, aiming at a maximum viewing distance (viewshed) of 2km (Figure 2). The selected VPs had exceptionally good close coverage for much of the Study Area. A number of alternative VP locations were considered, but no others provided the comprehensive viewshed coverage required.

Figure 2. Vantage Point Locations and Viewsheds.



The number of hours spent at the selected VPs is cumulative, and a minimum of 36 survey hours per season per VP were conducted. Best practice recommends not spending longer than three hours VP watching at any one time, as the attention of the observer is known to become less efficient after this period. An effort was made to vary the timing of surveys, although properly stratifying this was impractical with only two visits per month. VP surveys were conducted in daylight hours, when visibility allowed a clear view of the surrounding area (i.e. VP surveys were not undertaken during thick low cloud/foggy conditions when viewsheds were obscured).

The viewsheds were calculated using QGIS and then ground-truthed in the field to ensure suitable viewshed coverage. The VPs and viewsheds are shown in Figure 2 and the locations and number of hours spent at each VP is provided in Table 2.

From the pre-selected VPs (Figure 2), the visible area within an 180° arc was scanned for target species (typically) over a three-hour period. Flights of target species seen from VPs were recorded within four height bands: below turbine height; approx. turbine 'at-risk' height (two bands); and above turbine height. While these heights may not match the dimensions of turbines exactly, there is a certain amount of error on the part of the fieldworker in estimating heights of birds from a distance, and fieldworkers are practised in estimating heights, and this is reinforced by using a hand-held clinometer on objects of known height. In practice, birds

vary their flight height all the time, but it is usually easy to place bird heights within four bands: high flights (>200m) were invariably well above likely turbine height.

These height bands were divided into four, which at the time of survey corresponded with turbine models available then and likely to be used:

- Below turbine height (<15m);
- Turbine ('at-risk') height (15-150m);
- Potential higher turbine height (also 'at-risk') height (150-200m) and
- Above turbine height (>200m).

If in doubt, surveyors were instructed to always put all birds close to the turbine 'at-risk' height into that height band. Consequently, all birds at or just above the 200m height band, which was defined as within 25m of it, i.e. at least up to 225m were included in the turbine 'at-risk' height band. Only where the flight height was judged to be well above the turbine 'at-risk' height band were flights recorded on sheets as above turbine height. Thus, flights recorded as above turbine height were likely above the danger height i.e. >225m. Turbine models used in the wind farm industry have varied in size considerably and at the time of VP surveys commencing the actual model and size of turbines was unknown. Subsequently the turbine parameters were confirmed by the Applicant and were used to undertake Collision Risk Assessment (CRA).

The flightline of a target species of bird was plotted onto a 1:25,000 scale field map and inputted into QGIS. This was then used (when there were sufficient flightlines) to carry out CRA, which is the main tool used to analyse flightlines and potential mortality rates for target species.

Table 2. Locations of VPs Overlooking the Study Area and Associated Survey Effort.

			Number of VP hours watched				
VP	Grid Reference	Main viewing direction	Summer (April – Sept) 2022	Winter (Oct- Mar) 2022 - 2023	Summer (Apr – Sept) 2023	Winter (Oct– Mar) 2023 - 2024	Visible area* of site and buffer (ha)
VP1	HU 43703 74237	West	36	36	36	36	550.8
VP2	HU 41327 76341	Northeast	36	36	36	36	524.5
VP3	HU 42566 77623	Northeast	36	36	36	36	210.5
VP4	HU 41017 75077	East	36	36	36	36	251.7

* Visible area (in ha) of Study Area and buffer (viewing sky at 2m from ground, to 20m above ground, azimuth of max. 180 degrees extending to 2km radius). Visibility calculated using the least visible part of the airspace, the lowermost height passed through by the rotor blade tips (SNH 2005, revised 2010 and 2014b).

Migration watches

There was no evidence of any obvious migration routes through the Site and so additional migration watch surveys were not undertaken.

Fieldwork dates

A summary table of VP survey dates and conditions carried out in the Study Area is provided in Table 3, with the time distribution of the VP surveys carried out presented in Table 4-7. A summary of timings of diver nest surveys is provided in Table 8.

Breeding bird walkover surveys were completed across various dates monthly between April – July in both years. These were usually completed as standalone surveys, though were also supplemented with data recorded during other surveys including walking to or from VPs. Table 9 and 10 provide the survey dates and conditions for these surveys.

In accordance with best practice guidance (SNH, 2016) sensitive Schedule 1 breeding survey information is provided in a separate Confidential Appendix.

Table 3. Neshion Energy Park Vantage Point Surveys: Dates, Times and Weather Conditions.

Date	VP number	Start time	End time	Hours	Observer	Wind speed	Wind direction	Precipitation	Cloud cover	Target species where flight-line data recorded
15/04/2022	2	08:00	11:00	3	DC	4	SSE	None	8	GP, GJ (x4), CU (x2)
15/04/2022	3	12:00	15:00	3	DC	4	SSE	None	8	GJ (x3), CU
21/04/2022	1	08:00	11:00	3	DC	3	NE	None	8	GP (x3), GJ (x6), NX (x3), CU (x3), OC (x2), AC
21/04/2022	4	12:00	15:00	3	DC	4	NE	None	8	CU (x2), GJ (x2)
22/04/2022	3	08:00	11:00	3	DC	5	NE	None	7	NX (x2), GJ (x2), GP
22/04/2022	2	12:00	15:00	3	DC	5	NE	None	6-4	GJ (x15), CU (x3), RK (x2), L
25/04/2022	4	08:00	11:00	3	DC	4	NE	None	8	CU (x4), GJ (x7)
25/04/2022	1	12:00	15:00	3	DC	5	NE	None	8	MA (x6), NX (x3), GJ (x4), RK, GP, CU (x2), OC (x2)
02/05/2022	3	08:00	11:00	3	DC	4	N	None	8	GP (x2), GJ (x2), CU (x6), SN, NX, AC
02/05/2022	2	12:00	15:00	3	DC	3	N	None	8	CU (x5), GJ (x19), RK, GP (x2), MA (x2), L
06/05/2022	1	08:00	11:00	3	DC	5	SW	Light showers, mist	8	CU (x4), SN, CA, NX (x3), OC (x6), RH (x2), GJ (x4), MA
06/05/2022	4	12:00	15:00	3	DC	5	WNW	None	6	CU (x2), GJ (x8), GP (x3), SN
10/05/2022	4	08:00	11:00	3	DC	5	SW	None	8	CU (x5), GJ (x11), SN (x3), NX
10/05/2022	1	12:00	15:00	3	DC	6-5	SW	None	8	GJ (x4), CU (x5), NX
13/05/2022	2	08:00	11:00	3	DC	4	SW	None	8	GJ (x13), CU (x4), OC, SN, NX
13/05/2022	3	12:00	15:00	3	DC	2	W	None	8	AC (x3), CU (x2), NX (x3), GJ (x4), GP, SN
01/06/2022	3	08:00	11:00	3	DC	4	NW	None	1	CU (x3), AC (x4), SN (x2), AE, GJ (x2), RH (x4)
01/06/2022	1	12:00	15:00	3	DC	4	NW	None	4	GJ (x6), AE (x10), AC (x2), CU (x2), NX (x3), WM
02/06/2022	2	08:00	11:00	3	DC	4	NW	None	8	RH (x3), L, SN (x11), ML, CU (x6), GJ, AC, AE (x5), NX, OC (x2)
02/06/2022	3	12:00	15:00	3	DC	4	NW	None	8	WM, RK, AC (x2), GP (x2), GJ (x2)
03/06/2022	2	11:00	14:00	3	DC	3	NNE	None	7	AC, GP (x2), CU (x7), L, RH, NX (x2), SN (x2), OP, WE
03/06/2022	4	07:30	10:30	3	DC	3	NNE	None	7	SN (x4), AC (x6), GP (x2), CU (x4)
04/06/2022	1	07:30	10:30	3	DC	3	WSW	None	7	NX (x5), RH (x5), CU (x3), OC, AE, AC, GJ
04/06/2022	4	11:00	14:00	3	DC	4	WSW	None	5	SN

Date	VP number	Start time	End time	Hours	Observer	Wind speed	Wind direction	Precipitation	Cloud cover	Target species where flight-line data recorded
13/07/2022	3	18:00	21:00	3	DC	4	SW	Occasional light drizzle	8	AC (x4), WM (x2), RK, CU (x2), GP
14/07/2022	2	04:30	07:30	3	DC	2	W	Rain from 05:30	7	SN (x41), AC (x2), WM, OC, CU (x6)
14/07/2022	4	18:00	21:00	3	DC	3	SW	None	7	SN (x6), GP, AE, AC (x2), CU, NX, OC, GJ (x6), RH (x2)
15/07/2022	1	04:30	07:30	3	DC	4	W	Showers from 05:45	8	SN (x5), OC (x6), CU (x3), AC (x4), WM (x6), NX, AE, RH (x16)
20/07/2022	2	18:00	21:00	3	DC	3	SW	None	7	SN (x18), WM (x2), RK (x3), GJ, CU (x51), MA (x6) AC (x9), RH (x2), AE
21/07/2022	1	18:00	21:00	3	DC	3	NW	None	5	WM (x8), CU (x3), SN (x2), OC (x3), AE (x6), NX, AC (x12), RH (x4)
21/07/2022	3	04:30	07:30	3	DC	3	NW	None	8	AC (x8), RH (x2)
22/07/2022	4	04:30	07:30	3	DC	3	N	None	7	GJ (x6), RK, AC (x6), SN (x4), AE, WM
01/08/2022	1	04:30	07:30	3	PC	2	S	Occasional showers	4	GJ (x27), RH (x22), AE (x8), CU, AC
04/08/2022	2	12:00	15:00	3	DC	4	W	None	5	CU (x5), SN (x2), WM (x6), GJ (x18), AC (x2)
04/08/2022	3	08:00	11:00	3	DC	3	W	None	5	SN (x4), RH (x8), AC (x17), WM (x8), ML
07/08/2022	2	18:00	21:00	3	DC	4	W	None	8	AC (x5), GJ (x21), MA (x3)
07/08/2022	4	12:30	15:30	3	DC	3	WSW	None	7	GJ (x9), RH, AE
08/08/2022	1	04:45	07:45	3	DC	3	SW	Misty, light rain	8	WM (x5), GJ (x5), RH (x8), AC (x4)
19/08/2022	3	11:15	14:15	3	DC	5	SW	None	2	AC (x6), RH (x2), CU
19/08/2022	4	07:45	10:45	3	DC	5	SW	None	4	RH (x3), GJ (x9), AC, CU
13/09/2022	1	07:45	10:45	3	DC	5	NW	Light drizzle	8	GJ (x18), CU, SN, ML
13/09/2022	2	11:15	14:15	3	DC	4	NW	None	7	GJ (x17), RK, MA (x2), CU (x2)
15/09/2022	3	07:45	10:45	3	DC	4	NNW	Squally showers	6	ML
15/09/2022	4	11:15	14:15	3	DC	5	NNW	None	7	RK
16/09/2022	2	08:15	11:15	3	DC	4	N	None	7	GJ (x32), CU, RK
16/09/2022	1	12:00	15:00	3	DC	4	N	None	5	GJ (x44)
17/09/2022	4	07:30	10:30	3	DC	4	NNW	Light drizzle	8	GJ (x13)
17/09/2022	3	11:00	14:00	3	DC	4	NNW	None	6	
14/10/2022	1	09:00	12:00	3	DC	4	SW	Heavy showers	4	GP (x10), L (x3), GJ (x19)

Date	VP number	Start time	End time	Hours	Observer	Wind speed	Wind direction	Precipitation	Cloud cover	Target species where flight-line data recorded
14/10/2022	4	12:30	15:30	3	DC	4	SW	Heavy showers	4	H, SH
23/10/2022	3	08:30	11:30	3	DC	4	ENE	Light drizzle	8	GP (x7), GJ (x10)
23/10/2022	2	12:30	15:30	3	DC	4	E	Light drizzle	8	RK (x2), GJ (x9), SN
26/10/2022	2	08:30	11:30	3	DC	4	SE	Light rain	8	CU (x4), RK, GJ (x4), L (x45), GP (x2)
26/10/2022	3	12:00	15:00	3	DC	5	SE	Light rain	8	
27/10/2022	4	08:15	11:15	3	DC	5	SSW	None	3	GJ (x2), CU
27/10/2022	1	11:45	14:45	3	DC	5	SSW	None	4	GJ (x19), CU
03/11/2022	4	07:30	10:30	3	DC	3	SW	None	4	GJ (x16)
03/11/2022	1	11:00	14:00	3	DC	6	S	Light showers	6	CU, MA (x2)
08/11/2022	3	08:00	11:00	3	DC	4	SSE	Light rain	8	GJ (x2)
08/11/2022	2	12:00	15:00	3	DC	3	S	None	8	CU (x3), GP (x130), RK (x3), GJ (x4)
11/11/2022	1	08:00	11:00	3	DC	3	SW	Light rain	8	SN, RK, CU (x23)
11/11/2022	4	11:30	14:30	3	DC	2	SW	Light rain	8	
24/11/2022	2	08:40	11:40	3	DC	3	SSE	None	6	GJ (x11), CU (x14), L (x14)
24/11/2022	3	12:15	15:15	3	DC	2	S	None	2	GP (x7)
01/12/2022	3	08:15	11:15	3	DC	5	S	Light rain	8	
01/12/2022	2	12:00	15:00	3	DC	5	S	Light rain	8	GJ (x92), MA (x4), L (x80), GP (x60), CU
02/12/2022	1	08:30	11:30	3	DC	5	S	Light drizzle	8	CU (x2), GJ (x2), RK (x26), L (x21), SN, RK (x18), TT (x31), MA (x2)
02/12/2022	4	12:00	15:00	3	DC	5	S	Light drizzle	8	GJ (x4), WK
03/12/2022	4	08:30	11:30	3	DC	4	S	Light rain	8	
03/12/2022	1	12:00	15:00	3	DC	4	S	Light showers	8	GP (x18), TT, CU, L (x2), RK (x2)
05/12/2022	2	08:30	11:30	3	DC	2	N	None	8	GJ (x117), L (x8), CU (x18), HH, GP (x19)
05/12/2022	3	12:00	15:00	3	DC	3	N	None	7	GP (x6)
05/01/2023	2	09:00	12:00	3	DC	3	W	Light rain at start	6	ML (x2), GJ (x12), RK (x2), GP (x4)
05/01/2023	4	12:30	15:30	3	DC	2	SW	None	3	GP, GJ (x5)
07/01/2023	3	09:00	12:00	3	DC	4	SE	Drizzle	8	
07/01/2023	1	12:30	15:30	3	DC	3	S	None	8	CU

Date	VP number	Start time	End time	Hours	Observer	Wind speed	Wind direction	Precipitation	Cloud cover	Target species where flight-line data recorded
09/01/2023	4	09:00	12:00	3	DC	4	SW	Light showers	3	GJ
09/01/2023	2	12:30	15:30	3	DC	4	SW	Showers	7	CU, GJ (x4), ML (x2), H
10/01/2023	1	09:00	12:00	3	DC	4	SW	None	5	GJ (x11), CU (x24), TT, RK (x8)
10/01/2023	3	12:30	15:30	3	DC	4	SW	None	6	GJ (x7)
02/02/2023	4	08:15	11:15	3	DC	2	SSE	Light rain	7	
02/02/2023	2	11:45	14:45	3	DC	3	S	Light rain	8	RK, L (x18), GJ (x4)
03/02/2023	3	08:15	11:15	3	DC	4	NW	Light showers	8	
03/02/2023	1	11:45	14:45	3	DC	3	NW	None	7	GJ (x12), RK, CU (x3)
06/02/2023	2	08:30	11:30	3	DC	5	SSW	None	8	GJ (x34)
06/02/2023	4	12:00	15:00	3	DC	4	SW	None	7	GJ (x4)
07/02/2023	1	08:00	11:00	3	DC	2	SW	None	3	GJ (x18), CA (x2)
07/02/2023	3	11:30	14:30	3	DC	3	SW	None	2	GJ (x2)
01/03/2023	2	09:00	12:00	3	DC	4	N	None	1	L (x5), GJ (x20)
01/03/2023	4	12:30	15:30	3	DC	3	N	None	2	HH
02/03/2023	1	11:00	14:00	3	DC	3	S	None	7	GJ (x13), CU
02/03/2023	3	07:30	10:30	3	DC	3	S	None	6	NX
03/03/2023	3	09:00	12:00	3	DC	4	NW	Light showers	6	
03/03/2023	1	12:30	15:30	3	DC	4	N	Drizzle 1400-1435	4	GP (x2), GJ (x30)
04/03/2023	4	07:30	10:30	3	DC	3	NNW	None	7	SH (x2), SN
04/03/2023	2	11:00	14:00	3	DC	3	N	None	7	CU (x2), GJ (x6)
27/03/2023	1	09:00	12:00	3	DC	3	NW	None	3	GJ (x6), ML, CU
27/03/2023	3	12:30	15:30	3	DC	3	NW	None	3	OC (x2), GJ (x4)
05/04/2023	4	07:30	10:30	3	DC	5	SSE	Light rain	8	GJ (x10), MA, CU, GP
05/04/2023	2	11:00	14:00	3	DC	5	S	None	8	L (x11), RK (x3), GJ (x6), HH, MA (x4), CU (x2), OC
10/04/2023	1	07:30	10:30	3	DC	5	SE	Light rain	8	GP (x11), WS (x6), F, OC (x4), CU (x2), GJ (x2)
10/04/2023	3	11:00	14:00	3	DC	5	SE	Light drizzle	8	GJ (x2), CU
12/04/2023	2	08:00	11:00	3	DC	5	E	Light drizzle	7	OC (x4), MA (x3), GJ (x22), CU (x6), L (x2), SN (x2)
12/04/2023	4	11:30	14:30	3	DC	4	E	Light drizzle	8	RK, SN

Date	VP number	Start time	End time	Hours	Observer	Wind speed	Wind direction	Precipitation	Cloud cover	Target species where flight-line data recorded
16/04/2023	3	07:30	10:30	3	DC	7	SE	None	7	GJ (x5), CU (x2), GP (x2)
16/04/2023	1	11:00	14:00	3	DC	4	S	None	8	OC (x4), CU (x5), RH (x6), CA, GP (x2), L (x3), GJ (x4)
01/05/2023	3	11:30	14:30	3	DC	4	NW	None	8	RH (x2), CU, GJ, RK, ML, MA (x2)
01/05/2023	2	08:00	12:00	3	DC	3	NW	None	7	GP (x22), GP (x3), L (x2), RH (x4), RK (x5), NX (x2), CU (x6), SN (x11), MA (x2)
02/05/2023	4	07:30	10:30	3	DC	3	NW	Light showers	6	CA, SN (x4), GP, GJ (x34), CU (x12)
02/05/2023	1	10:30	13:30	3	DC	3	NW	None	7	CU (x5), GJ (x10), L, RH (x2), NX (x2), MA (x2), WM (x3)
11/05/2023	2	11:00	14:00	3	DC	3	NE	None	8	SH, OC (x5), L (x8), SN, RK, NX (x3), CU (x3), GJ (x16), RH (x2)
11/05/2023	1	07:30	10:30	3	DC	3	NE	None	8	SN (x6), RH (x7), GP (x2), WM (x15), GJ (x8), RK (x3), L (x7), CU (x2), AC (x7), OC (x2)
15/05/2023	4	11:00	14:00	3	DC	5	W	None	6	CU, WM (x2), RK (x2), SN
15/05/2023	3	07:30	10:30	3	DC	4	W	Showers	6	NX, WM (x4), SN (x2), GP, AC (x2), OC (x2), RK, GJ (x4)
15/06/2023	3	07:30	10:30	3	DC	1	S	None	2	SN (x3), NX (x3), RH (x2), AC (x3), AE, GJ (x5), GP
16/06/2023	2	11:30	14:30	3	DC	3	NE	None	3	CU (x4), RK (x2), NX, OC, L, SN, AC, WM, GJ (x3)
21/06/2023	1	09:45	12:45	3	DC	4	W	Light rain	8	GJ (x16), NX (x5), RH (x8), OC (x3), CU, AC (x3), CA, AE (x2)
21/06/2023	2	17:00	20:00	3	DC	4	SW	None	8	GJ (x8), SN (x5), WM, CU (x4), RH (x2)
22/06/2023	4	05:30	08:30	3	DC	4	SW	Showers	7	AC (x5), CU (x5), SN (x8), GJ (x2), NX
22/06/2023	3	17:00	20:00	3	DC	4	WSW	None	6	GJ (x2), SN (x2), CU, OC, WM, NX (x4), GP, AC (x2)
23/06/2023	1	05:30	08:30	3	DC	2	SE	None	2	SN (x5), RH (x36), NX (x9), AC (x3), GJ (x4), WM, CA (x2), OC, AE (x2)
26/06/2023	4	07:45	10:45	3	DC	3	SW	None	8	SN (x2), AC
12/07/2023	2	08:00	11:00	3	DC	2	NNE	Light showers	7	SN (x17), CU (x41), L (x3), OC, WM (x3), RH, AC (x2), GJ (x5)
12/07/2023	1	12:00	15:00	3	DC	3	NNW	Light showers	8	AE (x6), WM (x12), NX (x3), CU (x15), SN, ML, OC (x2), AC (x2), RH (x5)
13/07/2023	4	07:30	10:30	3	DC	3	NNW	Light drizzle	7	SN (x15), WM, GP (x3), OC (x3), AC (x2), NX, CU

Date	VP number	Start time	End time	Hours	Observer	Wind speed	Wind direction	Precipitation	Cloud cover	Target species where flight-line data recorded
14/07/2023	3	07:30	10:30	3	DC	2	NNE	None	7	SN (x2), ML, OC, CU (x3), AC, GP, RH, DN (x2)
16/07/2023	3	17:30	20:30	3	DC	3	W	Mist	8	RH (x4), SN (x11), WM (x4), AC (x5), NX
17/07/2023	2	1730	20:30	3	DC	4	W	None	8	SN (x4), CU (x15), AC (x3), WM, GJ (x7), OC (x2)
25/07/2023	1	18:00	21:00	3	DC	0		Light drizzle	8	AE, RH (x2), CA, WM (x5), CU (x3), NX (x2), GJ (x5)
26/07/2023	4	05:00	08:00	3	DC	5	NW	Light drizzle	8	GJ (x3), NX (x2), CU
05/08/2023	1	13:00	16:00	3	DC	2	W	None	6	RH (x4), WM (x2), NX (x2), CU (x5), OC (x4), AE, CA, GJ (x19), AC (x3)
05/08/2023	4	17:45	20:45	3	DC	2	NW	None	3	GJ (x7), OC
06/08/2023	3	05:20	08:20	3	DC	2	N	None	3	GJ (x7), RH, AC (x2)
06/08/2023	2	10:45	13:45	3	DC	2	N	Light showers	5	WM (x2), GJ (x17), CU (x12), AC (x2), RH, ML
08/08/2023	2	08:30	11:30	3	DC	4	NW	None	7	GJ (x33), OC (x3), AC, CU (x5), WM
08/08/2023	3	12:30	15:30	3	DC	5	NW	None	8	AC, CA, CU, WM
09/08/2023	4	08:00	11:00	3	DC	6	NW	Light showers	8	GJ (x4), AC
09/08/2023	1	11:30	14:30	3	DC	6	WNW	None	6	GJ (x7), CU (x4), NX (x2), ML
01/09/2023	2	11:00	14:00	3	DC	4	NE	None	2	GJ (x9), CU (x23)
01/09/2023	4	07:30	10:30	3	DC	3	NE	None	5	RH (x3), CU, GJ (x6)
03/09/2023	4	11:00	14:00	3	DC	5	SW	Light showers	8	
03/09/2023	3	07:30	10:30	3	DC	5	SW	Light drizzle	8	GJ (x2)
09/09/2023	2	08:00	11:00	3	DC	2	S	None	6	CU (x15), GJ (x2), ML
09/09/2023	1	12:00	15:00	3	DC	5	SW	None	5	ML, GJ (x2)
18/10/2023	3	09:45	12:45	3	DC	4	ESE	None	8	GJ (x2)
18/10/2023	1	13:30	16:30	3	DC	4	ESE	None	8	GJ (x11), SH, H, GP (x8)
19/10/2023	4	07:45	10:45	3	DC	6	SE	None	8	GJ (x11), SN (x2)
19/10/2023	2	11:15	14:15	3	DC	6	SE	None	8	GJ (x18), MA (x3)
22/10/2023	1	09:45	12:45	3	DC	5	SSE	Drizzle	8	L (x8), GJ (x7)
22/10/2023	3	13:15	16:15	3	DC	3	SSW	Drizzle	8	GJ (x2)
24/10/2023	2	08:15	11:15	3	DC	4	E	None	4	GJ (x14), CU (x5), ML, L (x9), C
24/10/2023	4	11:45	14:45	3	DC	4	E	Light showers	7	GJ (x4)

Date	VP number	Start time	End time	Hours	Observer	Wind speed	Wind direction	Precipitation	Cloud cover	Target species where flight-line data recorded
04/11/2023	2	08:30	11:30	3	DC	3	NE	None	8	CU (x10), ML, L, GP (x20), MA (x3), GJ (x7)
04/11/2023	4	12:00	15:00	3	DC	4	ESE	None	6	RK, GJ (x3), MA (x2)
07/11/2023	1	08:30	11:30	3	DC	2	N	None	6	GJ (x27), CA, GP (x9), CU (x3)
07/11/2023	3	12:00	15:00	3	DC	1	N	None	3	CU
10/11/2023	4	08:30	11:30	3	DC	3	NE	Drizzle	8	GJ (x6), GP (x14)
10/11/2023	2	12:00	15:00	3	DC	4	NE	None	8	GJ (x17), CU, GP (x15)
28/11/2023	3	08:30	11:30	3	DC	5	NE	Sleet shower	8	GJ (x3), ML
28/11/2023	1	12:00	15:00	3	DC	5	NE	Snow showers	8	GJ (x12), CU (x5), WS, ML
01/12/2023	1	08:30	11:30	3	DC	2	N	None	5	CU (x8), H, GJ (x11)
01/12/2023	3	12:00	15:00	3	DC	1	ENE	None	7	GJ (x7)
02/12/2023	2	08:30	11:30	3	DC	1	N	None	2	CU (x12), SH, L (x4), GJ (x3)
02/12/2023	4	12:00	15:00	3	DC	1	N	None	4	GJ (x2)
07/12/2023	3	08:30	11:30	3	DC	4	SE	None	7	GJ (x4)
07/12/2023	1	12:00	15:00	3	DC	5	SE	None	8	CU, GJ (x2), CA
11/12/2023	4	08:30	11:30	3	DC	3	NE	None	6	GJ (x6)
11/12/2023	2	12:00	15:00	3	DC	2	N	None	2	CU (x26), GJ (x6)
08/01/2024	2	08:55	11:55	3	DC	2	NE	None	7	GJ (x11), CU (x11), L (x2), RK
08/01/2024	4	12:25	15:25	3	DC	1	NE	None	8	MA (x2), GJ (x3)
09/01/2024	3	09:00	12:00	3	DC	2	W	None	6	GJ (x5), CU
09/01/2024	1	12:30	15:30	3	DC	1	NE	None	7	CU (x9)
10/01/2024	4	09:00	12:00	3	DC	3	N	Drizzle	8	RK, GJ (x3)
10/01/2024	2	12:30	15:30	3	DC	3	N	None	7	GJ (x2), CU (x5), ML
11/01/2024	1	09:00	12:00	3	DC	3	N	None	8	GJ (x22), WS (x2), CU (x5)
11/01/2024	3	12:30	15:30	3	DC	3	N	None	8	CU, GJ (x5)
05/02/2024	2	09:15	12:15	3	DC	1	NE	None	7	GJ (x5, CU, L (x7), ML
05/02/2024	4	12:45	15:45	3	DC	2	NE	Light showers	8	MA (x2), GJ (x8)
12/02/2024	3	09:00	12:00	3	DC	3	SW	None	7	GJ (x9)
12/02/2024	1	12:30	15:30	3	DC	4	S	None	4	SH, CU (x5), L (x3), OC, GJ (x5)

Date	VP number	Start time	End time	Hours	Observer	Wind speed	Wind direction	Precipitation	Cloud cover	Target species where flight-line data recorded
13/02/2024	4	08:45	11:45	3	DC	5	SW	None	3	GJ (x6), CU (x3)
13/02/2024	2	12:15	15:15	3	DC	6	SW	None	2	GJ (x2), OC, MA (x2)
16/02/2024	1	08:45	11:45	3	DC	4	NNE	None	8	OC (x3), GJ (x11), CU (x3), SH, GP (x8), WS (x2), MA (x2)
16/02/2024	3	12:15	15:15	3	DC	4	N	None	5	CU, GJ (x3), GP
25/03/2024	2	09:30	12:30	3	DC	3	NNE	None	5	GJ (x12), CU (x7), GP (x20), OC (x2)
25/03/2024	4	13:00	16:00	3	DC	3	NE	Snow showers	8	RK (x2), ML, GJ (x8)
26/03/2024	3	07:30	10:30	3	DC	3	NE	None	6	GJ (x6), CU (x2), OC
26/03/2024	1	11:00	14:00	3	DC	3	NE	None	3	OC (x2), GJ (x7), CU, L, WS (x2)
27/03/2024	1	07:30	10:30	3	DC	5	NE	None	8	CU (x4), GJ (x5), ML, OC (x3), GP (x4)
27/03/2024	3	11:00	14:00	3	DC	5	ENE	Showers	8	CU, OC (x2), GJ (x2)
29/03/2024	4	07:30	10:30	3	DC	3	S	Light showers	8	GJ (x7), L, RK (x2), CU, MA (x2)
29/03/2024	2	11:00	14:00	3	DC	3	SE	None	6	GP (x2), GJ (x5), L (x2), CU, RK (x2)

Key to Tables 4-7: Top row illustrates time of day; light blue circles equals sunrise and sunset times; red blocks equals VP survey times.

Table 4: Neshion Energy Park Vantage Point survey time distribution spring/summer 2022.

Table 5: Neshion Energy Park Vantage Point survey time distribution autumn/winter 2022-23.

Table 6: Neshion Energy Park Vantage Point survey time distribution spring/summer 2023.

Month	Date	3	4	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
April	5					o														o		
April	5					o														o		
April	10					o														o		
April	10					o														o		
April	12					o														o		
April	12					o														o		
April	16					o														o		
April	16					o														o		
May	1				o																o	
May	1				o																o	
May	2				o																o	
May	2				o																o	
May	11				o																	o
May	11				o																	o
May	15				o																	o
May	15				o																	o
June	15		o																			o
June	16		o																			o
June	21		o																			o
June	21		o																			o
June	22		o																			o
June	22		o																			o
June	23		o																			o
June	26		o																			o
July	12		o																			o
July	12		o																			o
July	13		o																			o
July	14		o																			o
July	16		o																			o
July	17		o																			o
July	25		o																			o
July	26		o																			o
August	5				o																	o
August	5				o																	o
August	6				o																	o
August	6				o																	o
August	8				o																	o
August	8				o																	o
August	9				o																	o
August	9				o																	o
September	1					o																o
September	1					o																o
September	3					o																o
September	3					o																o
September	9					o																o
September	9					o																o

Table 7: Neshion Energy Park Vantage Point survey time distribution autumn/winter 2023-24.

Table 8: Breeding Red-throated Diver Waterbody Survey Dates.

Please note, as a Schedule 1 species, red-throated diver breeding locations are considered sensitive and confidential information. Consequently, the breeding waterbodies have been letter coded in this table to maintain confidentiality. All potential waterbodies were checked multiple times during breeding bird survey walkovers. These dates refer to when breeding status was ascertained and checked.

Year	Waterbody	Dates Surveyed
2022	A	22/07/2022, 07/08/2022
	B	23/06/2022
	C	04/07/2022, 14/07/2022, 15/07/2022, 18/07/2022, 20/07/2022, 21/07/2022
	D	24/06/2022, 14/07/2022
	E	14/07/2022, 16/07/2022, 20/07/2022, 21/07/2022, 22/07/2022
	F	30/06/2022, 16/07/2022
2023	G	01/06/2023, 03/06/2023, 05/06/2023, 08/06/2023, 11/06/2023
	H	05/07/2023, 08/07/2023, 10/07/2023
	E	29/06/2023
	D	01/06/2023, 03/06/2023, 05/06/2023
	B	11/06/2023, 19/06/2023, 22/06/2023, 23/06/2023
	A	10/07/2023
	F	15/06/2023, 16/06/2023, 19/06/2023

Table 9: Breeding Bird Survey Walkovers, 2022.

Surveyor	Date	Month	Weather
DC	14/04/2022	April	NE4 to ENE3 / Cloud 5/8 to 3/8 c.1,000m / No rain
DC	17/04/2022	April	S4 to S3 / Cloud 8/8 to 8/8 c.500m / Some haar but no rain
DC	19/04/2022	April	SW5 / Cloud 7/8 to 4/8 c.1,000m / No rain
DC	24/04/2022	April	NE4 / Cloud 8/8 c.1,000m / No rain
DC	03/05/2022	May	NNW2 to S3 / Cloud 8/8 c.1,000m / No rain
DC	09/05/2022	May	S4 to S5 / Cloud 7/8 c.750m / Light rain showers from 1pm
DC	12/05/2022	May	SW4 / Cloud 8/8 c.1,000m / Occasional light rain showers
DC	15/05/2022	May	WSW3 / Some mist 4/8 c.750m / No rain
DC	25/05/2022	May	S3 / Cloud 8/8 c.750m / No rain
DC	26/05/2022	May	SW4 / Cloud 3/8 c.1,000m / No rain
DC	29/05/2022	May	NW3 / Cloud 8/8 c.750m / No rain
DC	06/06/2022	June	NE2 / Cloud 3/8 c.1,000m / No rain
DC	15/06/2022	June	S3 / Cloud 8/8 c.750m / Occasional light drizzle
DC	17/06/2022	June	SW5 / Cloud 8/8 c.750m / Light rain clearing
DC	18/06/2022	June	WSW6 / Cloud 2/8 c.1000m / No rain
DC	23/06/2022	June	SW4 / Cloud 8/8 c.750m / No rain
DC	24/06/2022	June	SE3 / Fog 8/8 c.500m / No rain
DC	30/06/2022	June	SE3 / Mist 8/8 c.500m / No rain
DC	02/07/2022	July	SW2 / Occasional light showers
DC	10/07/2022	July	SW3 / No rain
DC	20/07/2022	July	SW3 / No rain

Table 10: Breeding Bird Survey Walkovers, 2023.

Surveyor	Date	Month	Weather
DC	07/04/2023	April	SSE3 / Cloud 6/8 to 4/8 c.750m / No rain
DC	19/04/2023	April	E1 / Cloud 0/8 c.1,000m / No rain
DC	21/04/2023	April	N1 / Cloud 8/8 but soon to 1/8 c.1,000m / No rain
DC	03/05/2023	May	N2 / Cloud 7/8 c.1,000m / No rain
DC	04/05/2023	May	E4 / Cloud 6/8 c.1,000m / No rain
DC	05/05/2023	May	SE5 / Cloud 8/8 c.750m / No rain
DC	11/05/2023	May	NE2 / Cloud 8/8 c.1000m / No rain
DC	31/05/2023	May	N3 / Cloud 7/8 c.1,000m / No rain
DC	08/06/2023	June	ENE2 Cloud 2/10 c.1,000m
DC	15/06/2023	June	S3 Cloud 1/10 c.1,000m
DC	16/06/2023	June	NE2 Cloud 3/10 c.1,000m
DC	26/06/2023	June	W3 Cloud 10/10 c.1,000m
DC	05/07/2023	July	SE1 Cloud 7/8 c.1,000m
DC	08/07/2023	July	SE3 Clear 1/8 c.1,000m
DC	16/07/2023	July	NE3 Cloud 7/8 c.750m
DC	25/07/2023	July	NNE3 Cloud 8/8 c.1,000m
DC	26/07/2023	July	NNE3 Cloud 8/8 c.1,000m
DC	27/07/2023	July	NE2 Cloud 1/8 c.1,000m

Table 11. Vantage Point Surveys with Gull Data Included.

Although not required by NatureScot at the time the VP surveys were conducted, the gull data was collected. Subsequently NatureScot guidance changed requiring the collection of gull flightlines. Consequently, this is provided for completeness.

Date	VP number	Start time	End time	Hours	Observer	Wind speed	Wind direction	Precipitation	Cloud cover	Target species where flight-line data recorded
15/04/2022	2	08:00	11:00	3	DC	4	SSE	None	8	GP, GJ (x4), CU (x2), GB (x2), CM (x2)
15/04/2022	3	12:00	15:00	3	DC	4	SSE	None	8	GJ (x3), CU, CM
21/04/2022	1	08:00	11:00	3	DC	3	NE	None	8	GP (x3), GJ (x6), NX (x3), CU (x3), OC (x2), AC, CM (x24), GB (x3), HG
21/04/2022	4	12:00	15:00	3	DC	4	NE	None	8	CU (x2), GJ (x2), GB (x18), CM (x10), HG (x2)
22/04/2022	3	08:00	11:00	3	DC	5	NE	None	7	NX (x2), GJ (x2), GP, CM (x3), GB (x2)
22/04/2022	2	12:00	15:00	3	DC	5	NE	None	6-4	GJ (x15), CU (x3), RK (x2), L, GB, CM (x14)
25/04/2022	4	08:00	11:00	3	DC	4	NE	None	8	CU (x4), GJ (x7) GB (x2), CM (x3)
25/04/2022	1	12:00	15:00	3	DC	5	NE	None	8	MA (x6), NX (x3), GJ (x4), RK, GP, CU (x2), OC (x2), HG (x2), CM (x5)
02/05/2022	3	08:00	11:00	3	DC	4	N	None	8	GP (x2), GJ (x2), CU (x6), SN, NX, AC
02/05/2022	2	12:00	15:00	3	DC	3	N	None	8	CU (x5), GJ (x19), RK, GP (x2), MA (x2), L, CM (x3), GB (x4), HG
06/05/2022	1	08:00	11:00	3	DC	5	SW	Light showers, mist	8	CU (x4), SN, CA, NX (x3), OC (x6), RH (x2), GJ (x4), MA, GB (x3), HG (x4), LB
06/05/2022	4	12:00	15:00	3	DC	5	WNW	None	6	CU (x2), GJ (x8), GP (x3), SN, CM (x2), GB (x2)
10/05/2022	4	08:00	11:00	3	DC	5	SW	None	8	CU (x5), GJ (x11), SN (x3), NX, GB
10/05/2022	1	12:00	15:00	3	DC	6-5	SW	None	8	GJ (x4), CU (x5), NX, GB (x7), HG
13/05/2022	2	08:00	11:00	3	DC	4	SW	None	8	GJ (x13), CU (x4), OC, SN, NX, CM (x3), HG (x2), GB
13/05/2022	3	12:00	15:00	3	DC	2	W	None	8	AC (x3), CU (x2), NX (x3), GJ (x4), GP, SN, GB (x4)
01/06/2022	3	08:00	11:00	3	DC	4	NW	None	1	CU (x3), AC (x4), SN (x2), AE, GJ (x2), RH (x4), CM (x3), GB
01/06/2022	1	12:00	15:00	3	DC	4	NW	None	4	GJ (x6), AE (x10), AC (x2), CU (x2), NX (x3), WM, GB (x3)
02/06/2022	2	08:00	11:00	3	DC	4	NW	None	8	RH (x3), L, SN (x11), ML, CU (x6), GJ, AC, AE (x5), NX, OC (x2), GB (x2), CM (x6), LB
02/06/2022	3	12:00	15:00	3	DC	4	NW	None	8	WM, RK, AC (x2), GP (x2), GJ (x2), CM, GB
03/06/2022	2	11:00	14:00	3	DC	3	NNE	None	7	AC, GP (x2), CU (x7), L, RH, NX (x2), SN (x2), OP, WE, GB (x4), CM (x2)
03/06/2022	4	07:30	10:30	3	DC	3	NNE	None	7	SN (x4), AC (x6), GP (x2), CU (x4), GB (x2), CM (x7)

Date	VP number	Start time	End time	Hours	Observer	Wind speed	Wind direction	Precipitation	Cloud cover	Target species where flight-line data recorded
04/06/2022	1	07:30	10:30	3	DC	3	WSW	None	7	NX (x5), RH (x5), CU (x3), OC, AE, AC, GJ, GB (x2)
04/06/2022	4	11:00	14:00	3	DC	4	WSW	None	5	SN, GB (x2), CM (x2), HG
13/07/2022	3	18:00	21:00	3	DC	4	SW	Occasional light drizzle	8	AC (x4), WM (x2), RK, CU (x2), GP, CM (x11)
14/07/2022	2	04:30	07:30	3	DC	2	W	Rain from 05:30	7	SN (x41), AC (x2), WM, OC, CU (x6), CM (x40), GB (x2)
14/07/2022	4	18:00	21:00	3	DC	3	SW	None	7	SN (x6), GP, AE, AC (x2), CU, NX, OC, GJ (x6), RH (x2), CM (x2), GB
15/07/2022	1	04:30	07:30	3	DC	4	W	Showers from 05:45	8	SN (x5), OC (x6), CU (x3), AC (x4), WM (x6), NX, AE, RH (x16), LB, GB (x2)
20/07/2022	2	18:00	21:00	3	DC	3	SW	None	7	SN (x18), WM (x2), RK (x3), GJ, CU (x51), MA (x6) AC (x9), RH (x2), AE, CM (x40)
21/07/2022	1	18:00	21:00	3	DC	3	NW	None	5	WM (x8), CU (x3), SN (x2), OC (x3), AE (x6), NX, AC (x12), RH (x4), GB, CM
21/07/2022	3	04:30	07:30	3	DC	3	NW	None	8	AC (x8), RH (x2), GB (x3)
22/07/2022	4	04:30	07:30	3	DC	3	N	None	7	GJ (x6), RK, AC (x6), SN (x4), AE, WM, GB (x5), CM (x5), HG
01/08/2022	1	04:30	07:30	3	PC	2	S	Occasional showers	4	GJ (x27), RH (x22), AE (x8), CU, AC
04/08/2022	2	12:00	15:00	3	DC	4	W	None	5	CU (x5), SN (x2), WM (x6), GJ (x18), AC (x2), GB (x2)
04/08/2022	3	08:00	11:00	3	DC	3	W	None	5	SN (x4), RH (x8), AC (x17), WM (x8), ML, GB (x10), HG (x2)
07/08/2022	2	18:00	21:00	3	DC	4	W	None	8	AC (x5), GJ (x21), MA (x3), GB (x2), CM (x2), HG (x4)
07/08/2022	4	12:30	15:30	3	DC	3	WSW	None	7	GJ (x9), RH, AE
08/08/2022	1	04:45	07:45	3	DC	3	SW	Misty, light rain	8	WM (x5), GJ (x5), RH (x8), AC (x4), GB (x8)
19/08/2022	3	11:15	14:15	3	DC	5	SW	None	2	AC (x6), RH (x2), CU, GB
19/08/2022	4	07:45	10:45	3	DC	5	SW	None	4	RH (x3), GJ (x9), AC, CU, HG (x3), GB (x5)
13/09/2022	1	07:45	10:45	3	DC	5	NW	Light drizzle	8	GJ (x18), CU, SN, ML, HG (x6), GB (x4), CM (x11)
13/09/2022	2	11:15	14:15	3	DC	4	NW	None	7	GJ (x17), RK, MA (x2), CU (x2), GB, CM
15/09/2022	3	07:45	10:45	3	DC	4	NNW	Squally showers	6	ML, GB
15/09/2022	4	11:15	14:15	3	DC	5	NNW	None	7	RK, GB (x3)
16/09/2022	2	08:15	11:15	3	DC	4	N	None	7	GJ (x32), CU, RK, CM (x3), BH (x4)
16/09/2022	1	12:00	15:00	3	DC	4	N	None	5	GJ (x44), GB (x5)
17/09/2022	4	07:30	10:30	3	DC	4	NNW	Light Drizzle	8	GJ (x13), GB (x2)

Date	VP number	Start time	End time	Hours	Observer	Wind speed	Wind direction	Precipitation	Cloud cover	Target species where flight-line data recorded
17/09/2022	3	11:00	14:00	3	DC	4	NNW	None	6	CM
14/10/2022	1	09:00	12:00	3	DC	4	SW	Heavy showers	4	GP (x10), L (x3), GJ (x19), GB (x5), HG
14/10/2022	4	12:30	15:30	3	DC	4	SW	Heavy shower	4	H, SH, GB (x3), HG
23/10/2022	3	08:30	11:30	3	DC	4	ENE	Light drizzle	8	GP (x7), GJ (x10)
23/10/2022	2	12:30	15:30	3	DC	4	E	Light drizzle	8	RK (x2), GJ (x9), SN, HG (x4), GB
26/10/2022	2	08:30	11:30	3	DC	4	SE	Light rain	8	CU (x4), RK, GJ (x4), L (x45), GP (x2), HG (x330), GB (x19), CM (x2)
26/10/2022	3	12:00	15:00	3	DC	5	SE	Light rain	8	HG (x2)
27/10/2022	4	08:15	11:15	3	DC	5	SSW	None	3	GJ (x2), CU, HG (x34), GB
27/10/2022	1	11:45	14:45	3	DC	5	SSW	None	4	GJ (x19), CU, HG (x241), CM (x6), GB (x4)
03/11/2022	4	07:30	10:30	3	DC	3	SW	None	4	GJ (x16), HG (x15), CM (x2), GB
03/11/2022	1	11:00	14:00	3	DC	6	S	Light showers	6	CU, MA (x2), CM (x15), GB (x6), HG (x12), BH (x2)
08/11/2022	3	08:00	11:00	3	DC	4	SSE	Light rain	8	GJ (x2)
08/11/2022	2	12:00	15:00	3	DC	3	S	None	8	CU (x3), GP (x130), RK (x3), GJ (x4), HG
11/11/2022	1	08:00	11:00	3	DC	3	SW	Light rain	8	SN, RK, CU (x23), HG (x42), GB (x15), CM (x2), BH
11/11/2022	4	11:30	14:30	3	DC	2	SW	Light rain	8	HG (x2), GB
24/11/2022	2	08:40	11:40	3	DC	3	SSE	None	6	GJ (x11), CU (x14), L (x14), CM (x37), HG (x3), GB (x2)
24/11/2022	3	12:15	15:15	3	DC	2	S	None	2	GP (x7), CM
01/12/2022	3	08:15	11:15	3	DC	5	S	Light rain	8	
01/12/2022	2	12:00	15:00	3	DC	5	S	Light rain	8	GJ (x92), MA (x4), L (x80), GP (x60), CU, CM (x19), HG (x18), GB (x5)
02/12/2022	1	08:30	11:30	3	DC	5	S	Light drizzle	8	CU (x2), GJ (x2), RK (x26), L (x21), SN, RK (x18), TT (x31), MA (x2), HG (x8), GB (x4), CM, BH
02/12/2022	4	12:00	15:00	3	DC	5	S	Light drizzle	8	GJ (x4), WK, GB, HG
03/12/2022	4	08:30	11:30	3	DC	4	S	Light rain	8	
03/12/2022	1	12:00	15:00	3	DC	4	S	Light showers	8	GP (x18), TT, CU, L (x2), RK (x2), BH (x3), CM (x23), GB (x8), HG
05/12/2022	2	08:30	11:30	3	DC	2	N	None	8	GJ (x117), L (x8), CU (x18), HH, GP (x19), GB (x8), CM (x2), HG (x4)
05/12/2022	3	12:00	15:00	3	DC	3	N	None	7	GP (x6), GB
05/01/2023	2	09:00	12:00	3	DC	3	W	Light rain at start	6	ML (x2), GJ (x12), RK (x2), GP (x4), CM (x27), BH (x4), HG
05/01/2023	4	12:30	15:30	3	DC	2	SW	None	3	GP, GJ (x5)
07/01/2023	3	09:00	12:00	3	DC	4	SE	Drizzle	8	GB (x3)

Date	VP number	Start time	End time	Hours	Observer	Wind speed	Wind direction	Precipitation	Cloud cover	Target species where flight-line data recorded
07/01/2023	1	12:30	15:30	3	DC	3	S	None	8	CU, GB (x7), HG (x2), BH
09/01/2023	4	09:00	12:00	3	DC	4	SW	Light showers	3	GJ, GB (x4)
09/01/2023	2	12:30	15:30	3	DC	4	SW	Showers	7	CU, GJ (x4), ML (x2), H, HG (x6), GB (x2), CM (x25)
10/01/2023	1	09:00	12:00	3	DC	4	SW	None	5	GJ (x11), CU (x24), TT, RK (x8), HG (x4), CM (x31), GB (x4)
10/01/2023	3	12:30	15:30	3	DC	4	SW	None	6	GJ (x7)
02/02/2023	4	08:15	11:15	3	DC	2	SSE	Light rain	7	GB (x7), HG (x2)
02/02/2023	2	11:45	14:45	3	DC	3	S	Light rain	8	RK, L (x18), GJ (x4), HG, BH, CM (x50)
03/02/2023	3	08:15	11:15	3	DC	4	NW	Light showers	8	GB (x3)
03/02/2023	1	11:45	14:45	3	DC	3	NW	None	7	GJ (x12), RK, CU (x3), HG (x7), GB (x4)
06/02/2023	2	08:30	11:30	3	DC	5	SSW	None	8	GJ (x34), HG, GB, CM (x30)
06/02/2023	4	12:00	15:00	3	DC	4	SW	None	7	GJ (x4), GB, HG, CM
07/02/2023	1	08:00	11:00	3	DC	2	SW	None	3	GJ (x18), CA (x2), GB (x11), HG (x2)
07/02/2023	3	11:30	14:30	3	DC	3	SW	None	2	GJ (x2), GB (x3)
01/03/2023	2	09:00	12:00	3	DC	4	N	None	1	L (x5), GJ (x20), GB
01/03/2023	4	12:30	15:30	3	DC	3	N	None	2	HH, GB (x3)
02/03/2023	1	11:00	14:00	3	DC	3	S	None	7	GJ (x13), CU
02/03/2023	3	07:30	10:30	3	DC	3	S	None	6	NX
03/03/2023	3	09:00	12:00	3	DC	4	NW	Light showers	6	GB (x14), HG
03/03/2023	1	12:30	15:30	3	DC	4	N	Drizzle 1400-1435	4	GP (x2), GJ (x30), GB (x7), HG (x3)
04/03/2023	4	07:30	10:30	3	DC	3	NNW	None	7	SH (x2), SN, HG (x3)
04/03/2023	2	11:00	14:00	3	DC	3	N	None	7	CU (x2), GJ (x6)
27/03/2023	1	09:00	12:00	3	DC	3	NW	None	3	GJ (x6), ML, CU, GB (x3), CM (x4), HG (x2)
27/03/2023	3	12:30	15:30	3	DC	3	NW	None	3	OC (x2), GJ (x4), GB (x2), CM, HG (x3)
05/04/2023	4	07:30	10:30	3	DC	5	SSE	Light rain	8	GJ (x10), MA, CU, GP, GB (x8), HG
05/04/2023	2	11:00	14:00	3	DC	5	S	None	8	L (x11), RK (x3), GJ (x6), HH, MA (x4), CU (x2), OC, CM (x29), GB (x7)
10/04/2023	1	07:30	10:30	3	DC	5	SE	Light rain	8	GP (x11), WS (x6), F, OC (x4), CU (x2), GJ (x2), LB, GB (x6), CM (x36), HG (x2)
10/04/2023	3	11:00	14:00	3	DC	5	SE	Light drizzle	8	GJ (x2), CU, LB, GB
12/04/2023	2	08:00	11:00	3	DC	5	E	Light drizzle	7	OC (x4), MA (x3), GJ (x22), CU (x6), L (x2), SN (x2), GB (x3), CM (x2), BH (x2), HG

Date	VP number	Start time	End time	Hours	Observer	Wind speed	Wind direction	Precipitation	Cloud cover	Target species where flight-line data recorded
12/04/2023	4	11:30	14:30	3	DC	4	E	Light drizzle	8	RK, SN, HG (x5), GB
16/04/2023	3	07:30	10:30	3	DC	7	SE	None	7	GJ (x5), CU (x2), GP (x2), GB (x10)
16/04/2023	1	11:00	14:00	3	DC	4	S	None	8	OC (x4), CU (x5), RH (x6), CA, GP (x2), L (x3), GJ (x4), GB (x5), BH (x2), HG (x11), CM (x16)
01/05/2023	3	11:30	14:30	3	DC	4	NW	None	8	RH (x2), CU, GJ, RK, ML, MA (x2), GB
01/05/2023	2	08:00	12:00	3	DC	3	NW	None	7	GP (x22), GP (x3), L (x2), RH (x4), RK (x5), NX (x2), CU (x6), SN (x11), MA (x2), , CM (x20), LB (x2)
02/05/2023	4	07:30	10:30	3	DC	3	NW	Light showers	6	CA, SN (x4), GP, GJ (x34), CU (x12), GB (x8), CM
02/05/2023	1	10:30	13:30	3	DC	3	NW	None	7	CU (x5), GJ (x10), L, RH (x2), NX (x2), MA (x2), WM (x3), GB (x18), CM (x6), HG
11/05/2023	2	11:00	14:00	3	DC	3	NE	None	8	SH, OC (x5), L (x8), SN, RK, NX (x3), CU (x3), GJ (x16), RH (x2), GB (x6), CM (x8), HG
11/05/2023	1	07:30	10:30	3	DC	3	NE	None	8	SN (x6), RH (x7), GP (x2), WM (x15), GJ (x8), RK (x3), L (x7), CU (x2), AC (x7), OC (x2), GB (x5), CM (x20), HG
15/05/2023	4	11:00	14:00	3	DC	5	W	None	6	CU, WM (x2), RK (x2), SN, GB (x3), HG
15/05/2023	3	07:30	10:30	3	DC	4	W	Showers	6	NX, WM (x4), SN (x2), GP, AC (x2), OC (x2), RK, GJ (x4), GB (x6)
15/06/2023	3	07:30	10:30	3	DC	1	S	None	2	SN (x3), NX (x3), RH (x2), AC (x3), AE, GJ (x5), GP, CM (x5), GB (x13)
16/06/2023	2	11:30	14:30	3	DC	3	NE	None	3	CU (x4), RK (x2), NX, OC, L, SN, AC, WM, GJ (x3), CM (x9), GB
21/06/2023	1	09:45	12:45	3	DC	4	W	Light rain	8	GJ (x16), NX (x5), RH (x8), OC (x3), CU, AC (X3), CA, AE (x2), GB (x6), CM (x2), HG
21/06/2023	2	17:00	20:00	3	DC	4	SW	None	8	GJ (x8), SN (x5), WM, CU (x4), RH (x2), CM (x11), HG
22/06/2023	4	05:30	08:30	3	DC	4	SW	Showers	7	AC (x5), CU (x5), SN (x8), GJ (x2), NX, CM (x8), GB (x8), HG (x4)
22/06/2023	3	17:00	20:00	3	DC	4	WSW	None	6	GJ (x2), SN (x2), CU, OC, WM, NX (x4), GP, AC (x2), GB
23/06/2023	1	05:30	08:30	3	DC	2	SE	None	2	SN (x5), RH (x36), NX (x9), AC (x3), GJ (x4), WM, CA (x2), OC, AE (x2), GB (x2), CM (x12), LB
26/06/2023	4	07:45	10:45	3	DC	3	SW	None	8	SN (x2), AC, CM (x7), GB (x2), HG
12/07/2023	2	08:00	11:00	3	DC	2	NNE	Light showers	7	SN (x17), CU (x41), L (x3), OC, WM (x3), RH, AC (x2), GJ (x5), GB (x2), CM (x19), BH, HG (x2)
12/07/2023	1	12:00	15:00	3	DC	3	NNW	Light showers	8	AE (x6), WM (x12), NX (x3), CU (x15), SN, ML, OC (x2), AC (x2), RH (x5), GB (x13), HG (x2)
13/07/2023	4	07:30	10:30	3	DC	3	NNW	Light drizzle	7	SN (x15), WM, GP (x3), OC (x3), AC (x2), NX, CU, HG (x3), GB (x2), CM (x2)

Date	VP number	Start time	End time	Hours	Observer	Wind speed	Wind direction	Precipitation	Cloud cover	Target species where flight-line data recorded
14/07/2023	3	07:30	10:30	3	DC	2	NNE	None	7	SN (x2), ML, OC, CU (x3), AC, GP, RH, DN (x2), CM, GB (x2)
16/07/2023	3	17:30	20:30	3	DC	3	W	Mist	8	RH (x4), SN (x11), WM (x4), AC (x5), NX, CM (x3), GB (x2)
17/07/2023	2	1730	20:30	3	DC	4	W	None	8	SN (x4), CU (x15), AC (x3), WM, GJ (x7), OC (x2), GB (x3), HG (x4)
25/07/2023	1	18:00	21:00	3	DC	0		Light drizzle	8	AE, RH (x2), CA, WM (x5), CU (x3), NX (x2), GJ (x5), HG (x4), GB (x2), CM (x2)
26/07/2023	4	05:00	08:00	3	DC	5	NW	Light drizzle	8	GJ (x3), NX (x2), CU, HG (x2)
05/08/2023	1	13:00	16:00	3	DC	2	W	None	6	RH (x4), WM (x2), NX (x2), CU (x5), OC (x4), AE, CA, GJ (x19), AC (x3), GB (x5), HG (x3), CM
05/08/2023	4	17:45	20:45	3	DC	2	NW	None	3	GJ (x7), OC, CM (x2)
06/08/2023	3	05:20	08:20	3	DC	2	N	None	3	GJ (x7), RH, AC (x2), GB, CM
06/08/2023	2	10:45	13:45	3	DC	2	N	Light showers	5	WM (x2), GJ (x17), CU (x12), AC (x2), RH, ML, CM (x8), GB (x4), HG
08/08/2023	2	08:30	11:30	3	DC	4	NW	None	7	GJ (x33), OC (x3), AC, CU (x5), WM, CM, HG (x4), BH (x2)
08/08/2023	3	12:30	15:30	3	DC	5	NW	None	8	AC, CA, CU, WM, CM
09/08/2023	4	08:00	11:00	3	DC	6	NW	Light showers	8	GJ (x4), AC, HG (x2), CM, GB (x2)
09/08/2023	1	11:30	14:30	3	DC	6	WNW	None	6	GJ (x7), CU (x4), NX (x2), ML, GB (x3), CM (x3), HG
01/09/2023	2	11:00	14:00	3	DC	4	NE	None	2	GJ (x9), CU (x23), HG
01/09/2023	4	07:30	10:30	3	DC	3	NE	None	5	RH (x3), CU, GJ (x6), GB (x2)
02/09/2023	1	11:00	14:00	3	DC	3	S	None	7	GJ (x13), HG (x4), GB (x4), CM (x2), CU
02/09/2023	3	07:30	10:30	3	DC	3	S	None	6	NX, GB (x2), CM (x4)
03/09/2023	4	11:00	14:00	3	DC	5	SW	Light showers	8	GB
03/09/2023	3	07:30	10:30	3	DC	5	SW	Light drizzle	8	GJ (x2), GB, CM
09/09/2023	2	08:00	11:00	3	DC	2	S	None	6	CU (x15), GJ (x2), ML, HG (x10), CM (x4), GB
09/09/2023	1	12:00	15:00	3	DC	5	SW	None	5	ML, GJ (x2), GB (x6), CM, HG
18/10/2023	3	09:45	12:45	3	DC	4	ESE	None	8	GJ (x2), ML, GB
18/10/2023	1	13:30	16:30	3	DC	4	ESE	None	8	GJ (x11), SH, H, GP (x8), GB (x7), HG (x6)
19/10/2023	4	07:45	10:45	3	DC	6	SE	None	8	GJ (x11), SN (x2), HG, CM, GB (x3)
19/10/2023	2	11:15	14:15	3	DC	6	SE	None	8	GJ (x18), MA (x3), GB (x2), HG
22/10/2023	1	09:45	12:45	3	DC	5	SSE	Drizzle	8	L (x8), GJ (x7), GB (x3), HG (x2)
22/10/2023	3	13:15	16:15	3	DC	3	SSW	Drizzle	8	GJ (x2), GB
24/10/2023	2	08:15	11:15	3	DC	4	E	None	4	GJ (x14), CU (x5), ML, L (x9), C, GB (x5)
24/10/2023	4	11:45	14:45	3	DC	4	E	Light showers	7	GJ (x4), GB (x8), HG (x3)

Date	VP number	Start time	End time	Hours	Observer	Wind speed	Wind direction	Precipitation	Cloud cover	Target species where flight-line data recorded
04/11/2023	2	08:30	11:30	3	DC	3	NE	None	8	CU (x10), ML, L, GP (x20), MA (x3), GJ (x7), CM (x17), HG (x2), GB (x4)
04/11/2023	4	12:00	15:00	3	DC	4	ESE	None	6	RK, GJ (x3), MA (x2), HG (x15), CM (x2), GB (x5)
07/11/2023	1	08:30	11:30	3	DC	2	N	None	6	GJ (x27), CA, GP (x9), CU (x3), GB (x4), HG (x14), CM
07/11/2023	3	12:00	15:00	3	DC	1	N	None	3	CU, CM, GB
10/11/2023	4	08:30	11:30	3	DC	3	NE	Drizzle	8	GJ (x6), GP (x14), HG (x11), GB
10/11/2023	2	12:00	15:00	3	DC	4	NE	None	8	GJ (x17), CU, GP (x15), HG (x12), GB
28/11/2023	3	08:30	11:30	3	DC	5	NE	Sleet shower	8	GJ (x3), ML, CM
28/11/2023	1	12:00	15:00	3	DC	5	NE	Snow showers	8	GJ (x12), CU (x5), WS, ML, HG (x7), GB (x5), CM (x8)
01/12/2023	1	08:30	11:30	3	DC	2	N	None	5	CU (x8), H, GJ (x11), HG (x3), CM (x8), GB (x4)
01/12/2023	3	12:00	15:00	3	DC	1	ENE	None	7	GJ (x7), CM (x2)
02/12/2023	2	08:30	11:30	3	DC	1	N	None	2	CU (x12), SH, L (x4), GJ (x3), CM (x16), GB
02/12/2023	4	12:00	15:00	3	DC	1	N	None	4	GJ (x2), CM (x3)
07/12/2023	3	08:30	11:30	3	DC	4	SE	None	7	GJ (x4), CM (x2)
07/12/2023	1	12:00	15:00	3	DC	5	SE	None	8	CU, GJ (x2), CA, GB (x6), CM (x10), HG (x2)
11/12/2023	4	08:30	11:30	3	DC	3	NE	None	6	GJ (x6), HG (x3), GB
11/12/2023	2	12:00	15:00	3	DC	2	N	None	2	CU (x26), GJ (x6), CM (x23), GB (x2), HG (x5)
08/01/2024	2	08:55	11:55	3	DC	2	NE	None	7	GJ (x11), CU (x11), L (x2), RK, CM (x10), GB (x3) HG (x3)
08/01/2024	4	12:25	15:25	3	DC	1	NE	None	8	MA (x2), GJ (x3), CM, GB
09/01/2024	3	09:00	12:00	3	DC	2	W	None	6	GJ (x5), CU, CM (x2)
09/01/2024	1	12:30	15:30	3	DC	1	NE	None	7	CU (x9), HG (x5), CM, GB
10/01/2024	4	09:00	12:00	3	DC	3	N	Drizzle	8	RK, GJ (x3), GB (x4), HG (x2)
10/01/2024	2	12:30	15:30	3	DC	3	N	None	7	GJ (x2), CU (x5), ML, HG (x5), CM (x20), GB (x4)
11/01/2024	1	09:00	12:00	3	DC	3	N	None	8	GJ (x22), WS (x2), CU (x5), CM (x19), GB (x6), HG (x2)
11/01/2024	3	12:30	15:30	3	DC	3	N	None	8	CU, GJ (x5), GB (x2)
05/02/2024	2	09:15	12:15	3	DC	1	NE	None	7	GJ (x5), CU, L (x7), ML, CM (x8), GB (x3)
05/02/2024	4	12:45	15:45	3	DC	2	NE	Light showers	8	MA (x2), GJ (x8), CM, HG, GB (x2)
12/02/2024	3	09:00	12:00	3	DC	3	SW	None	7	GJ (x9), GB (x3), CM (x4)
12/02/2024	1	12:30	15:30	3	DC	4	S	None	4	SH, CU (x5), L (x3), OC, GJ (x5), HG (x5), GB (x5), CM
13/02/2024	4	08:45	11:45	3	DC	5	SW	None	3	GJ (x6), CU (x3), GB, CM

Date	VP number	Start time	End time	Hours	Observer	Wind speed	Wind direction	Precipitation	Cloud cover	Target species where flight-line data recorded
13/02/2024	2	12:15	15:15	3	DC	6	SW	None	2	GJ (x2), OC, MA (x2), CM (x8)
16/02/2024	1	08:45	11:45	3	DC	4	NNE	None	8	OC (x3), GJ (x11), CU (x3), SH, GP (x8), WS (x2), MA (x2), GB (x6), CM (x8)
16/02/2024	3	12:15	15:15	3	DC	4	N	None	5	CU, GJ (x3), GP, CM
25/03/2024	2	09:30	12:30	3	DC	3	NNE	None	5	GJ (x12), CU (x7), GP (x20), OC (x2), CM (x8), GB (x6)
25/03/2024	4	13:00	16:00	3	DC	3	NE	Snow showers	8	RK (x2), ML, GJ (x8), GB (x2), HG (x2)
26/03/2024	3	07:30	10:30	3	DC	3	NE	None	6	GJ (x6), CU (x2), OC, GB (x4), CM (x2)
26/03/2024	1	11:00	14:00	3	DC	3	NE	None	3	OC (x2), GJ (x7), CU, L, WS (x2), HG (x2), CM (x6), GB (x6)
27/03/2024	1	07:30	10:30	3	DC	5	NE	None	8	CU (x4), GJ (x5), ML, OC (x3), GP (x4), CM (x8), GB (x2), HG (x2)
27/03/2024	3	11:00	14:00	3	DC	5	ENE	Showers	8	CU, OC (x2), GJ (x2), GB
29/03/2024	4	07:30	10:30	3	DC	3	S	Light showers	8	GJ (x7), L, RK (x2), CU, MA (x2), HG (x3), GB (x2)
29/03/2024	2	11:00	14:00	3	DC	3	SE	None	6	GP (x2), GJ (x5), L (x2), CU, RK (x2), GB (x3), CM (x8)

REFERENCES

- Brown, A.F. and Shepherd, K.B. 1993. A method for censusing upland breeding waders. *Bird Study*, 40, 189-195.
- Band, W., Madders, M. and Whitfield, D. P. 2005. Developing field and analytical methods to assess avian collision risk at wind farms. In: de Lucas, M, Janss, G. and Ferrer, M. (eds). *Birds and Wind Power*. Lynx Edicions, Barcelona.
- Gilbert, G. Gibbons, D.W. and Evans, J. 1998. *Bird Monitoring Methods: a manual of techniques for key UK species*. RSPB, Sandy.
- Hardey, J., Crick, H., Wernham, C., Riley, H., Etheridge, B. and Thompson, D. 2006 (2nd Edition 2009; 3rd Edition 2013). *Raptors, a field guide to survey and monitoring*. The Stationery Office, Edinburgh.
- HM Government (1981). Wildlife and Countryside Act 1981. [online] Legislation.gov.uk. Available at: <https://www.legislation.gov.uk/ukpga/1981/69/contents>. [Accessed 17/04/2026]
- SNH, 2016. Environmental Statements and Annexes of Environmentally Sensitive Bird Information. SNH Advisory Note.
- SNH. 2017 (and updates). Recommended bird survey methods to inform impact assessment of onshore wind farms. SNH Advisory Note.
- Whitfield, P. 2002, Survey methods to assess windfarm impacts on upland bird communities. SNH Advisory Services.
- Whitfield, P. and Bullman, R. 2004, Survey methods to assess the impacts of proposed onshore wind farms on bird communities. SNH Advisory Services.