

2025

Beinn Ghlas Repowering

Appendix 7.1: Ornithology Technical Report

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Introduction

1. This report details the ornithological survey work undertaken at the site of the proposed Beinn Ghlas Repowering (hereafter referred to as the 'Proposed Development') by Natural Research (Projects) Ltd. (NRP) between September 2020 and August 2022. A minimum of two breeding seasons and two non-breeding seasons have been covered.
2. The objectives of the study were to:
 - ♦ Map the distribution of breeding birds, including scarce breeding species listed in Annex 1 of the EU Birds Directive (2009/147/EEC) on the Conservation of Wild Birds 1979 (the Birds Directive) or Schedule 1 of the Wildlife and Countryside Act 1981 (as amended) (WCA).
 - ♦ Quantify the level of bird flight activity by breeding, wintering and foraging birds of potential conservation importance; and
 - ♦ Record the presence and abundance of other birds of conservation importance (those listed in Biodiversity Action Plans (BAPs) or on the Red List of Birds of Conservation Concern (BoCC) (Stanbury *et al.*, 2021)¹ or the IUCN Red list of Threatened Species (IUCN, 2022)² the study period.
3. This report is supported by **Appendix 7.2: Confidential Ornithology**.

Field Survey Methods

4. The baseline surveys detailed here commenced in September 2020 and continued until end of August 2022.
5. The Study Area was defined with reference to the Ornithological Study Area (OSA) boundary and encompasses a series of buffers of up to 6 km radius; with buffer size dependent on the sensitivity of key species to potential effects associated with the Proposed Development (**Figure 1**). The various survey areas, which make up the Study Area, are defined as follows:
 - ♦ 'Site' refers to the area enclosed by the Ornithological Study Area boundary.
 - ♦ 'moorland bird survey area', 'winter walkover survey area' or 'core survey area' refers to the Site plus an additional 500 m wide strip around the Site.
 - ♦ 'black grouse survey area' refers to the Site plus an additional 1.5 km wide strip, and

¹ Stanbury, A., Eaton, M., Aebischer, N., Balmer, D., Brown, A., Douse, A., Lindley, P., McCulloch, N., Noble, D., & Win I. (2021). The status of our bird populations: the fifth Birds of Conservation Concern in the United Kingdom, Channel Islands and Isle of Man and second IUCN Red List assessment of extinction risk for Great Britain. British Birds 114: 723-747.

² IUCN. (2022). IUCN Red List of Threatened Species (ver. 2021-2). Available at: <http://www.iucnredlist.org>. (Accessed: October 2022).

- ♦ 'raptor survey area' refers to the Site plus an additional 2-6 km wide strip depending on the focal species and presence of contiguous suitable habitat outside of the core survey area.

6. The field surveyors were Bob Stakim (RAS), John Halliday (JH), Malcolm Henderson (MH), Kevin Cuthbert (KC), Rhodri Evetts (RE), Alex Ash (AA), Stephen Bentall (SB) and Blair Urquhart (BU). All field staff are trained ornithologists with extensive experience in surveying birds. Field staff also received training prior to and during survey work to maintain professional standards.

Flight Activity Survey

7. Information on bird flight activity was collected during timed watches from strategic Generic Vantage Points (GVPs) using the methods described by Band *et al.* (2007)³. GVPs were selected through a mix of GIS analysis and field trials, with the aim of maximising ground visibility within the Site using the minimum number of points. A total of six VPs were used providing coverage of the Site and associated 500 m buffer. Viewsheds from each VP are derived using a 20 m vertical cut-off and truncated horizontally at 2 km (**Figure 2**).
8. In January 2021, due to a revision to the Site boundary GVP1 was replaced by GVP7.
9. Observers at VPs positioned themselves to minimise their effects on bird behaviour. A viewing arc not exceeding 180 degrees was scanned. Watches were undertaken during daylight hours by a single observer in a wide range of weather conditions, mainly in conditions of good ground visibility (> 2km)⁴.
10. Between September 2020 and August 2022, a total of 892 hours of Vantage Point watches were undertaken (**Table 1**).

Table 1. Summary of monthly GVP effort, September 2020 to August 2022. Data are hours of observation.

GVP No.	Non-Breeding							Breeding					
	2021				2022								
	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Total
2	6.00	6.00	4.00	4.00	4.00	6.00	6.00	9.00	9.00	6.00	6.00	6.00	72.00
3	6.00	6.00	4.00	4.00	4.00	6.00	6.00	9.00	9.00	6.00	6.00	6.00	72.00
4	5.00	6.00	4.00	4.00	4.00	6.00	6.00	9.00	9.00	6.00	6.00	6.00	71.00
5	6.00	6.00	4.00	4.00	4.00	6.00	6.00	9.00	3.00	6.00	6.00	6.00	66.00
6	6.00	6.00	4.00	4.00	4.00	6.00	6.00	9.00	9.00	6.00	6.00	6.00	72.00
7	6.00	6.00	4.00	4.00	4.00	6.00	6.00	6.00	9.00	6.00	6.00	6.00	69.00
Total													892.00

11. During each watch, hierarchical recording methods were used, as follows:

- ♦ **Focal bird sampling - timed.** The viewing arc was scanned constantly until a *Target A Species*⁵ was detected in flight. Once detected, the bird was followed until it ceased flying or was lost to view. The time the bird was initially detected and the time it spent flying (to the nearest second) were recorded. The route followed by the bird was plotted in the field onto an enlarged 1:25,000 scale map, with the direction of flight indicated. The bird's flying elevation above the ground was estimated at the point of detection and at 15 second intervals thereafter, using a countdown timer with an audible alarm. Flying elevation was classified as <20 m, 20-50 m, 50-100 m, 100-150 m, 150-200 m or >200 m.

In some circumstances, instead of mapping a flight line, a 'flight area' denoting the area in which a bout of flight activity occurred was plotted on the field map. Recording the spatial extent of a flight bout with a flight area was preferable in circumstances where:

- simultaneous flight activity by a number of birds was observed,
- an individual flight bout is observed over a long period of time,
- an individual flight bout is too complicated, i.e. a display flight, or
- any combination of the above.

- ♦ **Focal bird sampling – untimed.** The same scanning procedure as described above was used. However, flights of *Target B Species* were not timed, instead the flight path was mapped, and flying elevation was recorded at the start and when it changed during the recorded bout. Where a flock was observed a central flight line representative of the route was estimated.
- ♦ **Activity summaries.** At the end of each 5-min period, flight activity within the survey area by species of lesser conservation importance (*Secondary*

Table 1. Summary of monthly GVP effort, September 2020 to August 2022. Data are hours of observation.

GVP No.	Non-Breeding							Breeding					
	2020				2021								
	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Total
1	6.00	6.00	4.00	2.00	-	-	-	-	-	-	-	-	18.00
2	6.00	6.00	4.00	4.00	4.00	5.00	6.00	12.00	9.00	6.00	6.00	6.00	74.00
3	6.00	6.00	4.00	4.00	4.00	6.00	9.00	12.00	9.00	6.00	6.00	6.00	78.00
4	6.00	6.00	4.00	4.00	4.00	6.00	3.00	15.00	9.00	6.00	6.00	6.00	75.00
5	6.00	6.00	2.50	4.00	4.00	7.50	3.00	12.00	9.00	6.00	6.00	6.00	72.00
6	6.00	6.00	2.50	4.00	4.00	7.50	6.00	12.00	9.00	6.00	6.00	6.00	75.00
7	-	-	-	-	12.00	12.00	6.00	21.00	9.00	6.00	6.00	6.00	78.00

³ Band, W., Madders, M. & Whitfield, D.P. (2007). Developing field and analytical methods to assess avian collision risk at wind farms. In de Lucas, M, Janss, G.F.E. and Ferrer, M. (Eds.) Birds and Wind Farms: Risk assessment and Mitigation, pp. 259 - 275. Quercus, Madrid.

⁴ See Appendices 2 and 3.

⁵ Target species were drawn from those listed in Annex 1 of the Birds Directive and Schedule 1 of the WCA. Other species considered important in a regional or local context may also be included. These are listed in Appendix 1.

Species) was summarised. Each VP watch was sub-divided into 5-minute periods and at the end of each 5-minute period the total number of individuals of each secondary target species seen flying in the study area was recorded. The height, direction and number of individuals involved in notable bird movements were recorded.

12. Data were entered in the field onto recording sheets and later transferred to Excel spreadsheets. Maps of flight activity by *Target Species* were compiled for each watch. Each flying bout was numbered consecutively and cross-referenced to the relevant flightpath on the map.

Scarce Breeding Bird Survey

13. Priority was given to detecting the species considered most likely to occur; red-throated diver (*Gavia stellata*), golden eagle (*Aquila chrysaetos*), white-tailed eagle (*Haliaeetus albicilla*), osprey (*Pandion haliaetus*), hen harrier (*Circus cyaneus*), goshawk (*Accipiter gentilis*), merlin (*Falco columbarius*) and greenshank (*Tringa nebularia*).
14. Surveys for eagle species focused on areas suitable for nesting and foraging within the 6 km buffer of the Site. Surveys for red-throated diver, osprey, hen harrier, goshawk, merlin and greenshank focused on areas or sites suitable for nesting and foraging within the 2 km buffer of the Site (**Figure 1**). One-hundred and forty-seven separate searches or watches were conducted during the study period, totalling over 477 hours, to search for scarce breeding species (**Table 2**). These visits complemented search effort accrued during VP watches. Methods used for individual species are summarised below.
15. Red-throated diver (RH). For diver species, all potential breeding sites within 2 km of the Site were checked for suitability and if suitable, further checks for occupancy were made at least twice per calendar month in May-August. The methods employed were based on those described in Gilbert *et al.* (1998)⁶. Wherever possible lochs were scanned from a distance to search for incubating birds or other evidence of breeding. Care was taken to record possible re-lay attempts by failed pairs.
16. Golden eagle (EA) and white-tailed eagle (WE). Survey methods based on Hardey *et al.* (2013)⁷ were followed.
17. Osprey (OP). Survey methods based on Hardey *et al.* (2013)⁶ were followed. Potential nest sites were searched for in spring to look for the evidence of occupancy (presence of birds, faeces, fresh prey remains).

18. Hen harrier (HH). Survey methods based on Hardey *et al.* (2013)⁶ were followed. Emphasis was given to searching habitats considered potentially suitable for nesting, in this case limited to areas of heath/bog with stands > 0.4m tall and areas of re-stock plantation.
19. Goshawk (GI). Survey methods devised by Dr M. Marquiss (NRP, unpublished) were followed. These methods consisted of observing potential nesting habitat (woods > 3 ha with numerous large and well-spaced mature trees, providing good canopy cover). Observers listened for calling birds and watched for display flights. Areas were also searched for evidence of goshawk occupation (such as faeces, prey remains, moulted feathers and nests). Particular emphasis was given to stream sides, where tree growth is faster and whorls of branches are further apart.
20. Merlin (ML). Survey methods based on Hardey *et al.* (2013)⁶ were followed. Within suitable habitats, old crow nests (which could be re-used by merlin), fenceposts, hummocks, bushes and trees were checked for signs of occupation (e.g., plucked prey, moulted feathers, pellets and faeces). Emphasis was given to heath bog habitats with stands of heather >0.4m tall and edges of closed canopy forestry plantations.
21. Greenshank (GK). Survey methods in Gilbert *et al.* (1998)⁵ were followed, with emphasis given to searching all waterbodies, including lochs, lochans, pool complexes and rivers. Searches were also undertaken in open forest.

Table 2. Details of Scarce Breeding Bird surveys, 2021 and 2022.

Date	Start time	End time	Duration (hrs)	Observer	Cloud (10 ^{ths})	Cloud base (m)	Wind direction	Wind force	Precip*	Visibility (km)	Target species
03/02/21	1200	1300	1.00	RE	10	700	E	9	ILS	2	WE EA
09/02/21	1345	1615	2.50	AA	2	1000	SE	3	nil	20	WE
18/02/21	1030	1600	5.50	RAS	10	400	SSW	5	CLR	4	EA
22/02/21	0740	0840	1.00	JH	2	500	S	6	nil	10	WE
22/02/21	1540	1640	1.00	JH	1	1000	S	5	nil	10	WE
22/02/21	0950	1650	7.00	BU	5	900	WSW	4	nil	20	WE EA
24/02/21	0720	0820	1.00	JH	10	500	S	6	ILR	3	WE
24/02/21	1200	1300	1.00	JH	10	600	SW	5	ILR	5	EA
24/02/21	1400	1530	1.50	JH	9	600	SW	5	nil	8	WE
25/02/21	0800	1500	7.00	JH	5	700	W	5	nil	10	WE
02/03/21	0845	1645	8.00	RAS	0	-	E	3	nil	5	WE EA HH GI
03/03/21	0815	1115	3.00	RAS	10	200	nil	0	CHF	2	WE
08/03/21	1445	1600	1.25	KC	10	300	SSW	3	ILF	5	WE
11/03/21	0840	1340	5.00	KC	9	400	SW	5	IHH	10	WE
11/03/21	1340	1440	1.00	KC	8	600	SW	4	IHR	15	WE

⁶ Gilbert, G., Gibbons, D.W. & Evans, J. (1998). Bird monitoring methods. RSPB Sandy, Bedfordshire.

⁷ Hardey, J., Crick, H., Wernham, C., Riley, H., Etheridge, B. & Thompson, D. (2013). Raptors, a field guide to survey and monitoring. The Stationery Office, Edinburgh.

Table 2. Details of Scarce Breeding Bird surveys, 2021 and 2022.

Date	Start time	End time	Duration (hrs)	Observer	Cloud (10 ^{ths})	Cloud base (m)	Wind direction	Wind force	Precip*	Visibility (km)	Target species
12/03/21	0650	0920	2.50	KC	10	500	SW	5	IHS	1	WE
18/03/21	1030	1335	3.08	AA	9	400	NW	5	nil	20	EA
19/03/21	0800	1320	5.33	AA	5	1000	N	2	nil	20	EA
08/04/21	0700	0930	2.50	JH	10	400	SW	5	ILR	2	RH
14/04/21	0720	0920	2.00	JH	0	-	NW	1	nil	10	ML
14/04/21	1220	1450	2.50	JH	2	1500	NW	1	nil	10	ML WE
14/04/21	1115	1315	2.00	MH	4	1000	N	2	nil	10	WE ML GI
15/04/21	0800	1000	2.00	JH	0	-	SE	2	nil	10	WE RH ML
15/04/21	1130	1330	2.00	MH	4	1000	SE	3	nil	10	GI
22/04/21	1045	1200	1.25	MH	1	1000	SE	2	nil	10	WE ML
22/04/21	1330	1600	2.50	MH	2	1000	W	3	nil	10	WE ML
30/04/21	1405	1605	2.00	BU	10	1000	NE	2	nil	20	KT
05/05/21	1100	1300	2.00	MH	6	1000	N	4	nil	10	WE RH
06/05/21	0730	1230	5.00	MH	8	1000	NW	5	nil	10	GI KT
11/05/21	1630	1700	0.50	JH	4	1000	S	4	nil	10	WE
12/05/21	1000	1500	5.00	JH	8	800	SE	4	ILR	8	WE RH ML
13/05/21	1000	1300	3.00	JH	5	1500	SE	4	nil	10	WE RH
18/05/21	1100	1300	2.00	JH	7	700	SW	2	IHR	10	ML
20/05/21	0500	1200	7.00	JH	8	800	E	3	nil	10	RH
20/05/21	0900	1300	4.00	MH	10	1000	SE	4	ILR	10	KT
21/05/21	0715	1115	4.00	MH	10	1000	E	3	nil	10	HH ML
21/05/21	0730	1030	3.00	JH	9	1000	NW	5	nil	10	EA
31/05/21	1245	1415	1.50	MH	2	1000	SE	4	nil	10	KT
31/05/21	1130	1400	2.50	JH	2	-	SE	4	nil	10	RH GK
01/06/21	1415	1445	0.50	JH	5	1500	SE	4	nil	10	WE
03/06/21	1030	1330	3.00	MH	8	1000	E	3	nil	10	KT
03/06/21	1330	1430	1.00	JH	9	1000	E	4	nil	10	WE
04/06/21	1315	1445	1.50	JH	9	1000	S	4	nil	10	RH GK
05/06/21	0520	1420	9.00	JH	8	900	SE	3	nil	10	WE RH ML
06/06/21	0540	1400	8.33	JH	5	1000	SW	3	nil	10	RH GK ML
08/06/21	0530	1230	7.00	JH	10	700	SE	4	ILR	10	HH GI
08/06/21	1230	1430	2.00	JH	10	700	SE	4	nil	10	EA
08/06/21	0630	1430	8.00	MH	10	1000	nil	0	ILR	10	OP KT
09/06/21	0645	1415	7.50	MH	10	600	SE	2	ILR	8	KT HH
10/06/21	0745	1415	6.50	MH	10	400	S	3	nil	10	RAPTORS
07/07/21	1230	1400	1.50	JH	3	1000	NW	3	nil	10	WE
12/07/21	1130	1500	3.50	JH	3	1500	NW	3	nil	10	WE RH
13/07/21	1430	1530	1.00	JH	10	600	NW	3	nil	10	WE
14/07/21	0530	1330	8.00	JH	10	700	SW	3	nil	10	RH GK ML
15/07/21	0515	1045	5.50	JH	6	800	NW	3	nil	10	WE EA
22/07/21	0645	1415	7.50	MH	0	-	nil	0	nil	10	OP
28/07/21	0830	1600	7.50	MH	10	400	SW	2	CLR	2	WE GI KT

Table 2. Details of Scarce Breeding Bird surveys, 2021 and 2022.

Date	Start time	End time	Duration (hrs)	Observer	Cloud (10 ^{ths})	Cloud base (m)	Wind direction	Wind force	Precip*	Visibility (km)	Target species
29/07/21	0800	1400	6.00	MH	10	600	NW	3	nil	10	WE
29/07/21	1430	1600	1.50	MH	9	1000	W	3	nil	10	KT
30/07/21	0730	1100	3.50	MH	10	800	N	1	nil	10	EA
09/08/21	1400	1500	1.00	JH	3	900	SW	3	nil	10	WE
10/08/21	0530	0930	4.00	JH	10	300	W	3	CHF	0.1	RH
10/08/21	1230	1300	0.50	JH	5	700	NW	3	nil	10	RH
11/08/21	0515	1045	5.50	JH	10	400	SW	4	IHR	5	RH
25/08/21	0815	1415	6.00	RE	0	-	W	3	nil	5	RH
25/08/21	1430	1610	1.67	RE	0	-	NW	1	nil	5	WE
30/08/21	1310	1610	3.00	BU	6	1000	NNE	2	nil	20	RAPTORS
08/02/22	0940	1310	3.50	BU	9	800	SW	4	IHR	5	WE
09/02/22	0945	1030	0.75	BU	10	800	SW	3	ILS	10	WE
09/02/22	1445	1615	1.50	BU	10	800	SSW	3	ILR	10	WE
14/02/22	1230	1430	2.00	MH	9	800	NW	5	ILR	10	WE
15/02/22	1000	1330	3.50	BU	8	1000	NW	4	nil	10	EA WE
15/02/22	1000	1330	3.50	MH	8	1000	NW	4	nil	10	EA
15/02/22	1400	1615	2.25	MH	10	1000	NW	5	nil	10	EA
25/02/22	0815	1415	6.00	RAS	6	1000	SW	3	ILR	5	EA WE
09/03/22	1300	1700	4.00	RAS	10	400	W	3	CLR	3	WE EA
14/03/22	1520	1720	2.00	RAS	10	300	W	3	CLR	2	EA
15/03/22	0700	1600	9.00	RAS	10	1000	S	5	nil	5	WE EA
22/03/22	1130	1830	7.00	RAS	5	1000	SSE	4	nil	5	EA
12/04/22	0705	1605	9.00	RAS	8	1000	ESE	5	nil	5	HH ML EA
14/04/22	0815	1615	8.00	RAS	10	500	SE	3	ILR	5	HH ML
15/04/22	1110	1210	1.00	RAS	9	900	SE	4	nil	5	EA
20/04/22	1000	1200	2.00	BU	5	1000	ESE	3	nil	20	ML RH
20/04/22	1500	1600	1.00	BU	6	1000	S	3	nil	20	ML RH
21/04/22	0910	1145	2.58	BU	10	1000	E	4	nil	20	EA ML RH
21/04/22	1445	1700	2.25	BU	5	1000	E	5	nil	20	EA ML RH
25/04/22	1200	1600	4.00	RAS	7	1000	NE	2	nil	5	HH ML EA
26/04/22	1210	1510	3.00	RE	8	1500	NE	3	nil	5	EA
27/04/22	1200	1500	3.00	RE	8	1200	N	3	nil	4	ML
27/04/22	1100	1500	4.00	RAS	9	1000	SSW	2	nil	5	HH ML
28/04/22	1330	1545	2.25	RE	8	1500	W	3	nil	5	WE
29/04/22	1515	1630	1.25	SB	4	1000	WSW	2	nil	3.5	EA
03/05/22	0800	1300	5.00	RAS	9	400	SSE	3	ILF	4	ML HH RH
05/05/22	1330	1630	3.00	RAS	10	400	SW	5	IHR	3	HH ML
12/05/22	0900	1700	8.00	RE	10	500	SW	6	IHR	1	RH ML GK
23/05/22	0900	1630	7.50	BU	9	800	W	2	ILR	15	EA
24/05/22	0900	1245	3.75	BU	8	800	NW	3	nil	15	EA
24/05/22	1345	1500	1.25	BU	10	800	NW	3	ILR	15	WE
25/05/22	0900	1020	1.33	BU	10	600	W	4	ILR	10	RH ML GK
25/05/22	1320	1430	1.17	BU	8	800	W	4	ILR	10	RH ML GK

Table 2. Details of Scarce Breeding Bird surveys, 2021 and 2022.

Date	Start time	End time	Duration (hrs)	Observer	Cloud (10 ^{ths})	Cloud base (m)	Wind direction	Wind force	Precip*	Visibility (km)	Target species
07/06/22	0745	0915	1.50	RAS	10	700	SE	3	nil	4	HH ML SE OP
07/06/22	1215	1315	1.00	RAS	7	1500	S	4	nil	5	HH ML SE RH
07/06/22	1615	1800	1.75	RAS	2	1500	SE	3	nil	5	HH ML SE
09/06/22	1145	1445	3.00	RAS	10	700	SE	3	ILR	5	RH GK
15/06/22	0745	0945	2.00	RAS	7	600	S	3	nil	5	HH ML SE
15/06/22	1645	1815	1.50	RAS	10	800	SW	3	nil	5	HH ML SE
27/06/22	1145	1745	6.00	RE	8	600	S	4	IHR	2	RH ML
27/06/22	1200	1700	5.00	RAS	5	600	SW	4	nil	5	HH ML SE
29/06/22	0930	1130	2.00	RE	10	500	SW	3	ILR	2	WE
29/06/22	1250	1720	4.50	RAS	6	800	SE	4	ILR	5	RH ML
30/06/22	0745	0945	2.00	RAS	10	600	SW	1	nil	5	RH HH ML
30/06/22	1300	1900	6.00	RAS	5	800	W	3	nil	5	RH HH ML WE
30/06/22	1300	1700	4.00	RE	7	700	W	3	nil	4	ML HH
01/07/22	0815	1115	3.00	RE	9	600	nil	0	IHR	1	HH RH
05/07/22	0800	1230	4.50	RAS	6	700	WNW	4	nil	5	ML HH RH GK
05/07/22	1530	1800	2.50	RAS	10	700	W	3	nil	5	HH
12/07/22	1500	1800	3.00	RAS	7	800	SW	4	nil	5	ML RH HH
13/07/22	0745	0915	1.50	RAS	6	800	W	4	nil	5	HH SE
13/07/22	1615	1745	1.50	RAS	8	900	W	3	nil	5	HH SE
14/07/22	0815	1015	2.00	RAS	7	700	W	4	nil	5	HH SE
14/07/22	1715	1915	2.00	RAS	10	700	W	4	nil	5	HH SE
18/07/22	1245	1645	4.00	RAS	3	2000	SW	3	nil	5	HH
19/07/22	0800	0930	1.50	RAS	8	2000	SW	2	nil	5	HH
19/07/22	1230	1300	0.50	RAS	8	1500	NW	3	nil	5	HH RH
19/07/22	1600	1700	1.00	RAS	9	1500	W	3	nil	5	HH
20/07/22	0815	1215	4.00	RAS	9	400	NW	3	ILR	4	WE
20/07/22	1315	1615	3.00	RAS	9	600	NW	4	nil	5	HH WE
21/07/22	0730	0930	2.00	RAS	10	400	NW	2	nil	5	HH RH EA
21/07/22	1330	1730	4.00	RAS	9	800	NW	3	nil	5	HH RH
22/07/22	0850	1150	3.00	RAS	10	700	SE	3	nil	5	HH
09/08/22	0800	1200	4.00	RAS	9	400	SW	3	nil	5	WE
09/08/22	1230	1630	4.00	RAS	9	600	W	3	nil	5	KT HZ
11/08/22	0800	1200	4.00	RAS	9	400	SW	2	nil	4	EA RH HH ML
11/08/22	1200	1700	5.00	RAS	5	1000	SW	3	nil	5	EA RH HH ML
22/08/22	1145	1700	5.25	RE	10	1000	SE	5	ILR	3	ML RH
23/08/22	0530	1445	9.25	RE	8	600	SW	4	IHR	2	WE EA OP
24/08/22	1310	1340	0.50	RE	10	700	SW	3	nil	3	RH
24/08/22	1650	1705	0.25	RE	10	1000	SW	6	nil	3	RH ML

Table 2. Details of Scarce Breeding Bird surveys, 2021 and 2022.

Date	Start time	End time	Duration (hrs)	Observer	Cloud (10 ^{ths})	Cloud base (m)	Wind direction	Wind force	Precip*	Visibility (km)	Target species
25/08/22	1310	1555	2.75	RE	10	600	SW	4	IHR	2	GI OP
26/08/22	1015	1130	1.25	BU	10	600	SW	2	CLR	2	RH
26/08/22	1435	1550	1.25	BU	10	800	SSW	2	nil	5	RH
Total (hrs)			477.50								
*Precipitation codes: Continuous/Intermittent + Light/Heavy + Rain/Snow/Hail/Fog											

Moorland Bird Survey

22. Breeding moorland bird territories were surveyed April to July 2021 and 2022, within the 500 m survey area shown in **Figure 1**. The Brown & Shepherd (1993)⁸ method for upland waders was modified to also provide reliable breeding estimates for moorland passerines by undertaking some surveys during the first few hours of daylight. All target bird species were surveyed. Surveyors conducted four separate "visits" during the survey period, totalling 256 hours, to search for moorland breeding species (**Table 3**).
23. Fieldwork was not undertaken in conditions considered likely to affect bird detection, for example strong winds (greater than Beaufort Scale Force 6), persistent precipitation, poor visibility (less than 300 m), or in unusually hot or cold temperatures.

Table 3. Details of Moorland Bird surveys, 2021 and 2022.

Date	Start time	End time	Duration (hrs)	Observer	Cloud (10 ^{ths})	Cloud base (m)	Wind direction	Wind force	Precip*	Visibility (km)	Visit No.
06/04/21	0700	1200	5.00	JH	5	1000	NW	4	nil	10	1
07/04/21	0630	1130	5.00	JH	5	1500	W	5	nil	10	1
09/04/21	0610	0840	2.50	JH	0	-	W	5	nil	10	1
09/04/21	1145	1215	0.50	JH	3	1200	W	5	nil	10	1
13/04/21	0620	0950	3.50	JH	7	1500	W	1	nil	10	1
13/04/21	0745	1345	6.00	MH	10	1000	nil	0	ILR	10	1
20/04/21	0800	1230	4.50	MH	10	500	W	2	CLR	0.5	1
21/04/21	0700	1145	4.75	MH	0	-	SE	2	nil	10	1
23/04/21	0630	1030	4.00	MH	0	-	S	2	nil	10	1
04/05/21	0645	1030	3.75	MH	10	1000	NW	4	nil	10	2
11/05/21	0700	1200	5.00	JH	9	700	S	5	nil	10	2
17/05/21	0530	0900	3.50	JH	9	500	NW	2	nil	10	2
18/05/21	0530	1100	5.50	JH	9	600	SW	2	IHR	10	2
18/05/21	0700	1045	3.75	MH	10	1000	W	2	ILR	10	2
19/05/21	0530	1030	5.00	JH	7	800	W	2	nil	10	2

⁸ Brown, A.F. & Shepherd, K.B. (1993). A method for censusing upland breeding waders. Bird Study 40: 3 pp 189 -195.

Table 3. Details of Moorland Bird surveys, 2021 and 2022.

Date	Start time	End time	Duration (hrs)	Observer	Cloud (10 ^{ths})	Cloud base (m)	Wind direction	Wind force	Precip*	Visibility (km)	Visit No.
19/05/21	0600	1030	4.50	MH	6	1000	NW	2	nil	10	2
20/05/21	0600	0900	3.00	MH	3	1000	SE	2	nil	10	2
31/05/21	0800	1245	4.75	MH	2	1000	SE	3	nil	10	3
31/05/21	0800	1130	3.50	JH	1	-	SE	4	nil	10	3
02/06/21	0500	0930	4.50	JH	3	-	E	5	nil	10	3
02/06/21	0545	1015	4.50	MH	6	1000	SE	4	nil	10	3
03/06/21	0545	1030	4.75	MH	10	1000	E	5	ILR	10	3
04/06/21	0530	1000	4.50	JH	9	1000	S	5	nil	10	3
07/06/21	0530	0900	3.50	JH	6	2000	SE	3	nil	10	3
07/06/21	0815	1230	4.25	MH	5	1000	S	3	nil	10	3
06/07/21	0530	1000	4.50	JH	1	-	E	3	nil	10	4
07/07/21	0515	1015	5.00	JH	10	300	W	3	nil	0.2	4
08/07/21	0530	0830	3.00	JH	10	300	W	1	nil	0.1	4
13/07/21	0530	1030	5.00	JH	10	300	NW	1	CHF	0.1	4
13/07/21	1030	1430	4.00	JH	10	500	NW	3	nil	8	4
20/07/21	0600	1030	4.50	MH	10	600	W	1	CLF	0.5	4
26/07/21	0915	1415	5.00	MH	10	1000	NW	1	nil	2	4
27/07/21	0800	1000	2.00	MH	10	500	W	1	nil	1	4
27/07/21	1330	1600	2.50	MH	8	1000	W	1	nil	10	4
26/04/22	0755	1155	4.00	RE	8	1500	E	3	nil	5	1
26/04/22	0800	1200	4.00	RAS	5	1000	SE	3	nil	5	1
27/04/22	0755	1155	4.00	RE	9	900	SE	2	nil	3	1
27/04/22	0800	1100	3.00	RAS	9	900	SSE	2	nil	5	1
28/04/22	0755	1025	2.50	RE	2	2000	N	1	nil	5	1
28/04/22	1045	1245	2.00	RE	4	1500	NW	2	nil	5	1
28/04/22	0800	1315	5.25	RAS	7	1500	W	2	nil	5	1
29/04/22	0800	1030	2.50	RAS	4	1000	SE	1	nil	5	1
04/05/22	0930	1630	7.00	RAS	9	500	NW	4	IHF	3	2
05/05/22	0915	1245	3.50	RAS	10	300	SW	4	CLR	2	2
10/05/22	0745	1245	5.00	RE	9	700	SW	6	IHR	2	2
10/05/22	0745	1045	3.00	RAS	9	600	SW	4	IHR	5	2
11/05/22	0735	1235	5.00	RE	9	600	W	5	IHR	1.5	2
11/05/22	0745	1045	3.00	RAS	8	600	W	4	ILR	5	2
12/05/22	0700	0930	2.50	RAS	10	600	SW	3	nil	5	2
08/06/22	0815	1415	6.00	RAS	10	500	SE	4	CLR	3	3
09/06/22	0845	1145	3.00	RAS	10	400	SSE	3	ILR	3	3
14/06/22	0915	1345	4.50	RAS	10	300	SW	3	CLR	1	3
15/06/22	0945	1345	4.00	RAS	6	800	SW	3	nil	5	3
16/06/22	1130	1330	2.00	RAS	10	500	SSW	4	nil	5	3

Table 3. Details of Moorland Bird surveys, 2021 and 2022.

Date	Start time	End time	Duration (hrs)	Observer	Cloud (10 ^{ths})	Cloud base (m)	Wind direction	Wind force	Precip*	Visibility (km)	Visit No.
16/06/22	1330	1700	3.50	RAS	10	600	SW	4	ILR	5	3
30/06/22	0945	1300	3.25	RAS	8	700	W	3	ILF	5	3
30/06/22	0815	1245	4.50	RE	10	600	NW	2	ILR	4	3
06/07/22	0800	1200	4.00	RAS	10	200	WSW	5	ILR	0.2	4
06/07/22	1200	1430	2.50	RAS	10	200	W	6	IHR	0.2	4
07/07/22	0800	1330	5.50	RAS	10	300	WNW	3	IHF	1	4
07/07/22	1330	1600	2.50	RAS	10	300	WSW	3	CHF	0.5	4
12/07/22	1200	1500	3.00	RAS	6	900	W	4	nil	5	4
13/07/22	0915	1315	4.00	RAS	10	300	W	4	CHF	1	4
14/07/22	1015	1415	4.00	RAS	7	800	W	4	nil	5	4
21/07/22	0930	1330	4.00	RAS	10	600	NW	3	nil	5	4
Total (hrs)			256.00								
*Precipitation codes: Continuous/Intermittent + Light/Heavy + Rain/Snow/Hail/Fog											

24. The survey aimed to cover the ground systematically with a constant search effort. All suitable ground within the 500 m survey boundary (**Figure 1**) was approached closely, typically to within 100 m. Water bodies and isolated trees were examined carefully. Ditches and streams were followed. Surveyors paused at regular intervals to scan and listen for calling and singing birds.
25. Careful attention was given to recording behaviour indicative of breeding and care was taken to avoid counting the same individual more than once. Where necessary, surveyors retraced their steps in order to check the continued presence of previously recorded birds.
26. The location and activity of birds were mapped onto enlarged 1:25,000 scale OS maps using standard BTO codes (Marchant, 1983)⁹. The position of each bird was mapped at the point it was first detected. The flight lines of birds seen flying over were recorded.

Winter Walked Transects

27. Walk-over surveys were undertaken between September 2020 and March 2021 and September 2021 and March 2022 and occurred within the 500 m buffer of the Site (**Figure 1**).
28. Walk routes meandered to closely examine as much ground as practical, in particular features of potential ornithological importance such as woodland edges, rocky outcrops, mires and streams. Where practicable, observers used a different

⁹ Marchant, J.H. (1983). BTO Common Birds Census Instructions. British Trust for Ornithology, Thetford.

route on each visit to maximise the eventual spatial coverage of the Site. Observers frequently paused to scan for birds.

29. One-hundred and four walked transects, totalling over 107 hours, were undertaken. A range of meteorological conditions were sampled, although wind speeds above Beaufort F6 were generally avoided to improve aural detection of species (**Table 4**).
30. The walked transects were effectively mobile VP watches. The procedure employed was as follows:
- ♦ For *Target Species* the time each individual was first detected was recorded along with details of age, sex and behaviour. These details were cross-referenced to a 1:25,000 scale map where the location and flight route (if applicable) were plotted.
 - ♦ For all other species, the number of individuals was recorded and locations they were first detected were plotted on the map.

Table 4. Details of Winter Walked Transect surveys, 2020/21 and 2021/22.

Date	Start time	End time	Duration (hrs)	Observer	Cloud (10 ^{ths})	Cloud base (m)	Wind direction	Wind force	Precip*	Visibility (km)
25/09/2020	0730	0845	1.25	RE	2	1000	N	4	nil	5
25/09/2020	1145	1205	0.33	RE	4	1000	NW	5	nil	5
25/09/2020	1505	1540	0.58	RE	8	1200	NW	5	nil	4
28/09/2020	1145	1235	0.83	RE	10	600	SW	4	ILR	2
28/09/2020	1535	1605	0.50	RE	10	700	SW	4	ILF	2
29/09/2020	0920	1050	1.50	RE	9	700	E	1	ILF	3
01/10/2020	1105	1205	1.00	RE	10	500	NW	3	CLR	1
01/10/2020	1510	1610	1.00	RE	10	600	NE	3	ILR	2
05/10/2020	1040	1140	1.00	RE	1	1500	E	1	nil	5
05/10/2020	1440	1510	0.50	RE	6	1000	E	3	nil	5
06/10/2020	0815	1000	1.75	RE	10	500	NE	4	CLR	1
06/10/2020	1300	1330	0.50	RE	10	700	NE	3	ILF	1.5
06/10/2020	1635	1705	0.50	RE	10	600	N	4	IHF	0.5
07/10/2020	0815	0930	1.25	RE	10	700	NW	7	IHF	1
07/10/2020	1230	1300	0.50	RE	10	700	NW	6	nil	2
08/10/2020	0800	0900	1.00	RE	5	1000	SW	3	nil	3
08/10/2020	1205	1235	0.50	RE	10	800	SW	4	CHH	0.5
09/10/2020	0825	1000	1.58	RE	10	900	NW	6	IHH	1
09/11/2020	1030	1100	0.50	JH	8	1000	SE	5	nil	10
09/11/2020	1400	1430	0.50	JH	8	900	SE	5	nil	10
10/11/2020	1000	1030	0.50	JH	10	400	SE	3	ILR	2
10/11/2020	1330	1400	0.50	JH	10	500	S	3	nil	5
16/11/2020	1135	1205	0.50	RE	10	800	W	6	IHR	1

Table 4. Details of Winter Walked Transect surveys, 2020/21 and 2021/22.

Date	Start time	End time	Duration (hrs)	Observer	Cloud (10 ^{ths})	Cloud base (m)	Wind direction	Wind force	Precip*	Visibility (km)
19/11/2020	0815	0930	1.25	RE	6	1000	NW	6	IHS	2
19/11/2020	1210	1240	0.50	RE	5	1500	NW	5	IHH	3
19/11/2020	1520	1620	1.00	RE	8	100	NW	5	IHH	2
20/11/2020	0955	1025	0.50	RE	10	400	SW	5	CHR	0.5
20/11/2020	1130	1200	0.50	RE	10	400	SW	6	CHR	0.5
10/12/2020	0815	0945	1.50	RE	10	500	S	5	nil	2
11/12/2020	1045	1130	0.75	RE	10	800	SE	7	CLR	1
15/12/2020	0800	0930	1.50	RAS	9	500	S	5	ILF	3
15/12/2020	1130	1210	0.67	RAS	6	700	S	5	nil	5
15/12/2020	1410	1600	1.83	RAS	10	700	S	4	nil	5
16/12/2020	0855	0920	0.42	RAS	10	500	SE	5	CLR	2
16/12/2020	1120	1255	1.58	RAS	10	500	SE	6	CLR	3
17/12/2020	0830	0930	1.00	RAS	10	400	SW	4	IHF	1
17/12/2020	1400	1500	1.00	RAS	10	600	SW	4	nil	5
05/01/2021	1255	1355	1.00	RE	0	-	nil	0	nil	5
08/01/2021	1205	1305	1.00	RE	0	-	S	1	nil	5
19/01/2021	0815	1005	1.83	RAS	10	800	nil	0	nil	5
19/01/2021	1205	1240	0.58	RAS	10	900	nil	0	nil	5
19/01/2021	1440	1545	1.08	RAS	10	900	SE	3	nil	5
25/01/2021	1200	1230	0.50	RAS	5	700	WNW	3	nil	5
25/01/2021	1430	1515	0.75	RAS	5	700	WNW	2	nil	5
27/01/2021	1115	1145	0.50	RAS	10	400	nil	0	CHF	0.5
27/01/2021	1345	1445	1.00	RAS	9	700	E	3	ILF	5
29/01/2021	0940	1010	0.50	BU	10	1000	NE	3	ILS	20
29/01/2021	1215	1235	0.33	BU	9	1000	NE	3	nil	20
22/02/2021	1140	1210	0.50	JH	8	700	S	5	nil	10
22/02/2021	1510	1540	0.50	JH	3	900	S	5	nil	10
24/02/2021	1000	1030	0.50	JH	10	600	S	6	nil	5
24/02/2021	1300	1400	1.00	JH	9	600	SW	5	ILR	8
25/02/2021	1145	1615	4.50	RE	6	800	SW	7	IHR	2
26/02/2021	0745	0815	0.50	JH	10	400	SE	3	ILR	2
26/02/2021	1115	1145	0.50	JH	10	600	S	3	nil	8
03/03/2021	1200	1400	2.00	RAS	10	300	SE	3	ILF	1
04/03/2021	0800	0900	1.00	RAS	6	900	E	2	nil	5
04/03/2021	1200	1230	0.50	RAS	8	800	NE	4	nil	5
04/03/2021	1530	1700	1.50	RAS	4	1000	E	3	nil	5
05/03/2021	0815	1115	3.00	RAS	8	900	SSE	2	nil	5
28/09/2021	1020	1120	1.00	KB	7	800	S	6	nil	15
28/09/2021	1735	1835	1.00	KB	3	800	S	4	nil	15
29/09/2021	0700	0800	1.00	KB	9	800	NW	2	IHR	10
29/09/2021	0800	0900	1.00	KB	9	800	NW	2	IHR	10
29/09/2021	0900	1200	3.00	KB	5	800	W	4	nil	15

Table 4. Details of Winter Walked Transect surveys, 2020/21 and 2021/22.

Date	Start time	End time	Duration (hrs)	Observer	Cloud (10 ^{ths})	Cloud base (m)	Wind direction	Wind force	Precip*	Visibility (km)
12/10/2021	0910	0940	0.50	RAS	10	400	WNW	3	CLF	0.5
12/10/2021	1240	1340	1.00	RAS	10	400	WNW	3	CLF	0.3
13/10/2021	0805	0920	1.25	RAS	10	500	NW	3	ILR	3
13/10/2021	1550	1705	1.25	RAS	10	400	W	4	ILR	1
20/10/2021	0800	0945	1.75	RAS	8	900	W	4	nil	4
20/10/2021	1245	1330	0.75	RAS	5	900	W	5	nil	5
20/10/2021	1630	1730	1.00	RAS	5	800	W	5	nil	5
21/10/2021	1100	1130	0.50	RAS	5	900	NW	4	nil	5
15/11/2021	1255	1325	0.50	KB	8	800	W	1	nil	15
15/11/2021	1530	1615	0.75	KB	10	800	W	3	nil	15
16/11/2021	0815	0915	1.00	KB	10	500	S	4	nil	2
16/11/2021	1320	1420	1.00	KB	10	500	SW	4	IHR	2
24/11/2021	0845	1145	3.00	RAS	5	700	NW	3	nil	5
09/12/2021	0810	0940	1.50	KB	10	700	W	3	nil	1
09/12/2021	1355	1425	0.50	KB	10	700	S	5	nil	5
10/12/2021	0810	0840	0.50	KB	7	700	W	2	nil	15
10/12/2021	1040	1110	0.50	KB	6	700	W	2	nil	15
17/12/2021	1035	1320	2.75	BU	10	800	SE	2	nil	10
19/01/2022	1110	1410	3.00	RAS	5	800	NW	5	ILR	5
24/01/2022	0955	1055	1.00	KB	10	300	SW	3	nil	2
25/01/2022	0820	0950	1.50	KB	10	400	S	3	nil	1
25/01/2022	1415	1515	1.00	KB	10	400	S	5	nil	1
10/02/2022	0854	0905	0.18	AA	8	800	SW	7	nil	20
10/02/2022	1205	1250	0.75	AA	8	800	W	6	nil	20
10/02/2022	1550	1620	0.50	AA	6	800	NW	5	nil	20
11/02/2022	0716	0815	0.98	AA	4	1000	SE	4	nil	20
11/02/2022	1125	1140	0.25	AA	8	1000	SE	4	nil	20
11/02/2022	1445	1600	1.25	AA	8	1000	SE	4	nil	20
21/02/2022	1215	1245	0.50	RAS	4	900	NW	5	nil	5
21/02/2022	1545	1615	0.50	RAS	2	900	WNW	4	nil	5
22/02/2022	1315	1345	0.50	RAS	9	700	W	4	nil	5
08/03/2022	0800	0930	1.50	RAS	8	900	SE	6	nil	5
08/03/2022	1230	1300	0.50	RAS	5	1000	SE	6	nil	5
08/03/2022	1600	1700	1.00	RAS	10	600	S	6	CLR	3
10/03/2022	1130	1230	1.00	RAS	10	400	S	4	CLR	2
10/03/2022	1530	1800	2.50	RAS	5	900	S	4	nil	5
16/03/2022	0745	1015	2.50	RAS	6	1000	NW	3	nil	5
16/03/2022	1315	1345	0.50	RAS	9	900	NW	3	nil	5
16/03/2022	1645	1745	1.00	RAS	5	900	W	3	nil	5
Total (hrs)			107.08							
*Precipitation codes: Continuous/Intermittent + Light/Heavy + Rain/Snow/Hail/Fog										

Black Grouse Survey

31. Searches for black grouse (*Lyrurus tetrix*) were undertaken within suitable habitat in the 1.5 km survey buffer (**Figure 1**) during the peak period for display activity by males between April and May. The methods employed were based on those described in Gilbert *et al.* (1998)⁵. Surveys were undertaken during the early morning in calm, dry weather with good visibility. Observers listened and scanned the areas considered suitable for displaying. In total, over 65 hours was spent searching for black grouse (**Table 5**).

Table 5. Details of black grouse lek surveys, 2021 and 2022.

Date	Start time	End time	Duration (hrs)	Observer	Cloud (10 ^{ths})	Cloud base (m)	Wind direction	Wind force	Precip*	Visibility (km)
14/04/2021	0500	0720	2.33	JH	0	-	S	3	nil	10
14/04/2021	0500	0800	3.00	MH	0	-	S	1	nil	10
15/04/2021	0500	0800	3.00	JH	0	-	E	2	nil	10
15/04/2021	0500	0800	3.00	MH	0	-	SE	3	nil	10
16/04/2021	0500	0800	3.00	MH	0	-	SE	5	nil	10
16/04/2021	0500	0700	2.00	JH	0	-	SE	3	nil	10
05/05/2021	0430	0730	3.00	MH	0	-	N	2	nil	10
06/05/2021	0430	0730	3.00	MH	8	1000	NW	4	nil	10
07/05/2021	0430	0730	3.00	MH	10	800	NW	1	nil	10
12/05/2021	0400	0700	3.00	JH	6	700	SE	4	ILR	8
13/05/2021	0400	0630	2.50	JH	4	1500	SE	3	nil	10
14/05/2021	0400	0630	2.50	JH	1	-	E	3	nil	10
26/04/2022	0450	0750	3.00	RE	1	1500	S	3	nil	3
26/04/2022	0500	0800	3.00	RAS	2	1000	ESE	3	nil	5
27/04/2022	0450	0750	3.00	RE	10	900	SE	2	nil	2
27/04/2022	0500	0800	3.00	RAS	9	900	SE	2	nil	5
28/04/2022	0445	0745	3.00	RE	4	1000	S	3	nil	3
28/04/2022	0615	0800	1.75	RAS	2	1500	SE	1	nil	5
03/05/2022	0500	0800	3.00	RAS	10	400	SE	3	ILR	3
10/05/2022	0420	0720	3.00	RE	10	600	SW	3	ILR	1
10/05/2022	0445	0745	3.00	RAS	10	500	SW	3	IHR	3
11/05/2022	0415	0715	3.00	RE	10	400	W	4	IHR	1
11/05/2022	0445	0745	3.00	RAS	9	500	W	4	IHR	4
Total (hrs)			65.08							
*Precipitation codes: Continuous/Intermittent + Light/Heavy + Rain/Snow/Hail/Fog										

Field Survey Results

32. Observed flight activity, timings and heights refer to all flights observed in the field from GVPs. It should be noted that flight activity and timings could reduce, due to clipping flights to the 500 m flight activity buffer and viewshed, from that recorded in the field when it comes to analysing these data in a Collision Risk Model (CRM) (see **Appendix 7.3: Collision Risk Modelling**).

Divers

Occurrence and status

33. Two species of conservation concern were recorded during the study period: **black-throated diver** (*Gavia arctica*) and **red-throated diver**.
34. **Black-throated diver** (Annex 1 and Schedule 1) was recorded once during the study period. An adult pair were seen feeding on Loch Nant on 13 May 2021 (**Figure 8a; Table 19**).
35. **Red-throated diver** (Annex 1 and Schedule 1) were recorded frequently during both baseline breeding seasons and used several lochs in and around the Site. In 2021, two breeding attempts were recorded, both of which fledged one juvenile. In 2022, three breeding attempts were recorded, two attempts failed, and one attempt fledged a single juvenile. Three flights were recorded from GVPs, all of which were recorded in 2021; no flights were recorded from GVPs in 2022 (**Confidential Figures 1a & 1b; Figures 3, 8a & 8b; Tables 6, 15, 19 & 20**).

Flight activity from GVPs

36. No flights by **black-throated diver** were recorded from GVPs.
37. Three flights by **red-throated diver** were recorded from GVPs during the study period. In total 608 seconds of flight activity was recorded (**Table 6**).

Table 6. Details of red-throated diver flights recorded from GVPs.										
Period	GVP No.	No. of flights	No. of birds	Total fly time (s)	Time in height class (s)					
					<20m	20-50m	50-100m	100-150m	150-200m	>200m
Apr-Aug	GVP2	1	2	320					320	
	GVP6	2	3	288		16	31	195	46	
Total		3	5	608		16	31	195	366	

Wildfowl

Occurrence and status

38. One species of conservation concern was recorded during the study period: **whooper swan** (*Cygnus cygnus*). Other wildfowl species recorded of lesser conservation concern included pink-footed goose (*Anser brachyrhynchus*), greylag goose (*A. anser*), Canada goose (*Branta canadensis*), goosander (*Mergus merganser*), goldeneye (*Bucephala clangula*), mallard (*Anas platyrhynchos*) and teal (*A. crecca*).
39. **Whooper swan** (Annex 1 and Schedule 1) was recorded on four occasions during the study period. Four adults were seen feeding on Loch Lonan on 29 January 2021 and two adults were seen feeding on Loch Lonan on 8 February 2022. Two flights were observed from GVPs, involving 37 birds (**Figures 4b, 9a & 9b; Tables 7, 15 & 20**).
40. Pink-footed goose is regular winter migratory species and as such is afforded protection under the Birds Directive. Pink-footed goose was recorded on eighteen occasions during the study period; all records were made during the autumn or spring migration period (**Figures 4a & 4b; Tables 7 & 15**).

Flight activity from GVPs

41. Two flights by **whooper swan** were recorded from GVPs, involving 37 individuals. Flight height varied between 20 m and 150 m above ground level (a.g.l.) (**Table 7**).

Table 7. Details of wildfowl flights recorded from GVPs.

Species	Season	GVP No.	No. of flights	No. of birds	Height class					
					<20m	20-50m	50-100m	100-150m	150-200m	>200m
Pink-footed goose	Apr-Aug	GVP3	1	60					*	*
		GVP4	2	130					*	*
		GVP6	3	575			*	*	*	*
		GVP7	3	680			*	*	*	*
	Sep-Mar	GVP1	2	41	*	*	*	*	*	*
		GVP2	2	144						*
		GVP3	1	65					*	*
		GVP4	1	40				*	*	
		GVP5	2	51					*	*
		GVP6	1	24				*	*	
Pink-footed goose Total			18	1810	*	*	*	*	*	*
Whooper swan	Sep-Mar	GVP3	2	37		*	*	*		
Whooper swan Total			2	37		*	*	*		

42. Eighteen flights by a pink-footed goose were recorded during GVP watches, involving 1,810 birds. Nine flights were recorded during the autumn migration and nine flights were recorded during the spring migration. Flights were recorded as being between less than 20 m and greater than 200 m a.g.l. (**Table 7**).

Waders

Occurrence and status

43. Five species of wader of conservation concern were recorded during the study period: **golden plover** (*Pluvialis apricaria*), **greenshank**, **curlew** (*Numenius arquata*), **whimbrel** (*N. phaeopus*) and **woodcock** (*Scolopax rusticola*). Species of lesser conservation concern that were recorded included common sandpiper (*Actitis hypoleucos*) and snipe (*Gallinago gallinago*).
44. **Golden plover** (Annex 1) was recorded regularly during the breeding season but infrequently during the non-breeding season. During the non-breeding season 23 observations were made with a mean flock size of seven birds (range 1 - 24). In 2021, four breeding territories were confirmed within the 500 m buffer of the Site. In 2022, three breeding territories were confirmed within the 500 m buffer of the Site (**Figures 4a, 4b, 9a, 9b, 14a & 14b; Tables 8a & 15-20**).
45. **Greenshank** (Schedule 1) were recorded during both breeding seasons in the study period. These breeding season records coupled with bird behaviour, including copulation, display flights, agitated alarm calling and territorial singing, suggests two pairs attempted to breed in 2021 and four pairs attempted to breed in 2022 within 2 km of the Site. A single flight was recorded from GVPs, involving two birds (**Confidential Figures 1a & 1b; Figures 9a & 9b; Tables 8b, 15, 16, 19 & 20**).
46. **Curlew** (Red list, IUCN near threatened) was recorded infrequently during both breeding seasons. In 2021 and 2022, a number of pairs of curlews were holding territory but all were beyond the 500 m buffer of the Site. No flights by curlew were recorded from GVPs (**Figures 9a & 9b; Tables 19 & 20**).
47. **Whimbrel** (Annex 1 and Schedule 1) was recorded on one occasion during the study period, on 20 May 2021. It is likely this bird was on passage north to its breeding grounds (**Figure 9; Table 19**).
48. A **woodcock** (Red list) was flushed during the course of winter walked transects (**Table 17**). No evidence of breeding was found during the study period.

Flight activity from GVPs

49. Twenty-two flights by **golden plover** were recorded from GVPs during the study period involving 116 individuals. Flights were recorded as being between less than 20 m and 150 m a.g.l. (**Table 8a**).

Table 8a. Details of golden plover flights recorded from GVPs.

Season	GVP No.	No. of flights	No. of birds	Height class					
				<20m	20-50m	50-100m	100-150m	150-200m	>200m
Apr-Aug	GVP3	7	14	*	*	*			
	GVP4	2	4		*	*	*		
	GVP6	1	1	*					
	GVP7	1	3	*	*				
Sep-Mar	GVP1	5	87	*	*	*	*		
	GVP2	5	6	*	*	*	*		
	GVP3	1	1		*				
Total		22	116	*	*	*	*		

50. One flight by **greenshank** was recorded from GVPs during the study period involving two individuals. The flight was recorded as being between less than 20 m and 50 m a.g.l. (**Table 8b**).

Table 8b. Details of greenshank flights recorded from GVPs.

Period	GVP No.	No. of flights	No. of birds	Total fly time (s)	Time in height class (s)					
					<20m	20-50m	50-100m	100-150m	150-200m	>200m
Apr-Aug	GVP4	1	2	102	34	68				
Total		1	2	102	34	68				

51. No flight activity was recorded for any other wader species from GVPs during the study period.

Raptors and owls

Occurrence and status

52. Eight species of scarce raptor were recorded during surveys: **golden eagle**, **white-tailed eagle**, **red kite**, **osprey**, **peregrine**, **hen harrier**, **goshawk** and **merlin**. Two species of scarce owl were recorded during the study period: **barn owl** (*Tyto alba*) and **short-eared owl** (*Asio flammeus*). Other raptor species of lesser conservation concern were also recorded, including buzzard (*Buteo buteo*), sparrowhawk (*Accipiter nisus*) and common kestrel (*Falco tinnunculus*).
53. **Golden eagle** (Annex 1 and Schedule 1) was present throughout the study period and was recorded regularly in flight in and around the Site. An active breeding site (EA1) and an historic breeding site (EA2) are located adjacent to the Site boundary. In 2021, the territory was occupied by an adult pair and nest refurbishment was recorded in March at EA1. Chick(s) had hatched during the third week of May and the pair successfully fledged one chick. By January 2022 the resident male has disappeared (presumed dead) and a near-adult male had taken up residence. The pair were observed undertaking nest refurbishment at EA1 and

EA2 during March and April, however no breeding attempt was made (**Confidential Figure 1a & 1b; Figures 5 & 10; Tables 9, 15 & 17-20**).

54. **White-tailed eagle** (Annex 1 and Schedule 1) was present throughout the study period and was recorded regularly in flight in and around the Site. Two known breeding sites are located within 6 km of the Site boundary (WE1 and WE2). In 2021 both territories were occupied by adult pairs. Chicks had hatched by mid-May and both pairs successfully fledged one chick. In 2022, both territories were occupied by adult pairs. By May 2022 the breeding attempt at WE1 had failed. The breeding attempt at WE2 was successful, fledging one chick (**Confidential Figures 1a & 1b; Figures 6a, 6b, 11a & 11b; Tables 10, 15 & 18-20**).
55. **Red kite** (Annex 1 and Schedule 1) was observed on six occasions during the study period. No evidence of breeding by **red kite** was obtained during the study period, despite extensive searches in potential breeding habitat. Five flights were recorded from GVPs (**Figures 7a, 7b & 12; Tables 11, 15 & 19**).
56. **Osprey** (Annex 1 and Schedule 1) was recorded on six occasions during the study period. In 2021, evidence of breeding by **osprey** was obtained at one site located greater than 2 km from the Site boundary. No flights were recorded from GVPs (**Confidential Figure 1a; Figures 12a & 12b; Table 19**).
57. **Peregrine** (Annex 1 and Schedule 1) was observed on four occasions during the study period. No evidence of breeding by **peregrine** was obtained during the study period, despite extensive searches in potential breeding habitat (**Figures 7a & 12b; Tables 12, 15, 18 & 19**).
58. **Hen harrier** (Annex 1 and Schedule 1) was observed on 42 occasions during the study period, with the majority of observations (25 records) being made during the 2022 breeding season. Evidence of breeding by **hen harrier** was obtained at one location in 2022, however no breeding site was found. Eighteen flights were recorded from GVPs, 12 of which were recording during the 2022 breeding season (**Figures 7a, 7b, 12a & 12b; Tables 13, 15, 17, 19 & 20**).
59. **Goshawk** (Schedule 1) was recorded on two occasions during the study period. An adult female was observed on 08 January 2021 during the course of a winter walked transect and an adult male was seen in flight on 1 July 2022 during a Scarce Breeding Bird survey. No flights were recorded from GVPs (**Figure 12a & 12b; Tables 17 & 19**).
60. **Merlin** (Annex 1 and Schedule 1) was recorded on 29 occasions during the study period with the majority of observations being made in the breeding season. In 2021, evidence of breeding by **merlin** was suspected at one location however no breeding site was found. In 2022, breeding was again suspected in the same location as 2021 but no breeding site was located. A successful breeding site was

located, fledging a minimum of three young (**Confidential Figure 1b; Figures 7a, 7b, 12a & 12b; Tables 14, 15 & 18-20**).

61. **Short-eared owl** (Annex 1) was recorded on two occasions during the study period. A single bird was seen in flight on 2 December 2021 and 11 May 2022. No evidence of breeding by **short-eared owl** was obtained during the study period, despite extensive searches in potential breeding habitat (**Figure 12b; Table 20**).
62. **Barn owl** (Schedule 1) was recorded once during the study period. On 15 February 2022 a pair were roosting in a nest box in an abandoned farm building (**Confidential Figure 1b; Table 19**).

Flight activity from GVPs

63. Ninety flights by **golden eagle** were recorded from GVPs during the study period. A total duration of 16,394 seconds of flight activity was recorded (**Table 9**).

Table 9. Details of golden eagle flights recorded from GVPs.

Period	GVP No.	No. of flights	No. of birds	Total fly time (s)	Time in height class (s)					
					<20m	20-50m	50-100m	100-150m	150-200m	>200m
Apr-Aug	GVP2	6	6	1691		38	108	262	258	1025
	GVP3	1	1	216	139	77				
	GVP4	8	8	939	3	87	217	541	91	
	GVP5	8	8	718	195	122	120	133	147	
	GVP6	13	14	3054	65	314	429	496	463	1288
	GVP7	6	6	779	33	96	16	93	185	355
Sep-Mar	GVP2	1	1	28			28			
	GVP3	2	2	315			61	87	61	106
	GVP4	17	17	3840	1173	526	797	797	301	244
	GVP5	9	9	1715	154	210	782	390	105	75
	GVP6	11	11	2131	654	502	491	30	242	212
	GVP7	8	11	968	56	319	232	30	331	
Total		90	94	16394	2472	2291	3281	2859	2184	3305

64. Eighty flights by **white-tailed eagle** were recorded from GVPs during the study period. A total duration of 21,724 seconds of flight activity was recorded (**Table 10**).

Table 10. Details of white-tailed eagle flights recorded from GVPs.

Period	GVP No.	No. of flights	No. of birds	Total fly time (s)	Time in height class (s)					
					<20m	20-50m	50-100m	100-150m	150-200m	>200m
Apr-Aug	GVP2	6	6	1181	65	166	281	244	259	167
	GVP3	4	5	850	32	361	284	94	47	31

Table 10. Details of white-tailed eagle flights recorded from GVPs.

Period	GVP No.	No. of flights	No. of birds	Total fly time (s)	Time in height class (s)					
					<20m	20-50m	50-100m	100-150m	150-200m	>200m
Apr-Aug	GVP4	20	20	5749	1196	1621	1475	1225	229	
	GVP5	3	4	1066		15	90	225	549	185
	GVP6	7	8	4323	225	240	362	958	668	1872
	GVP7	15	16	5001	77	915	540	869	879	1717
Sep-Mar	GVP2	3	3	590	30	32	169	360		
	GVP3	6	6	815		92	541	93	90	
	GVP4	3	3	48	30		18			
	GVP5	2	2	128				60		68
	GVP6	7	7	650	31	128	260	231		
	GVP7	4	5	1323	228	303	522	270		
Total		80	85	21724	1914	3873	4542	4629	2721	4040

65. Five flights by **red kite** were recorded from GVPs during the study period. A total duration of 716 seconds of flight activity was recorded (**Table 11**).

Table 11. Details of red kite flights recorded from GVPs.

Period	GVP No.	No. of flights	No. of birds	Total fly time (s)	Time in height class (s)					
					<20m	20-50m	50-100m	100-150m	150-200m	>200m
Apr-Aug	GVP2	1	1	62	62					
	GVP7	4	4	654	158	402	94			
Total		5	5	716	220	402	94			

66. Two flights by **peregrine** were recorded from GVPs during the study period. A total duration of 75 seconds of flight activity was recorded (**Table 12**).

Table 12. Details of peregrine flights recorded from GVPs.

Period	GVP No.	No. of flights	No. of birds	Total fly time (s)	Time in height class (s)					
					<20m	20-50m	50-100m	100-150m	150-200m	>200m
Sep-Mar	GVP1	2	2	75	12	16		47		
Total		2	2	75	12	16		47		

67. Eighteen flights by **hen harrier** were recorded from GVPs during the study period. A total duration of 1,480 seconds of flight activity was recorded (**Table 13**).

Table 13. Details of hen harrier flights recorded from GVPs.

Period	GVP No.	No. of flights	No. of birds	Total fly time (s)	Time in height class (s)					
					<20m	20-50m	50-100m	100-150m	150-200m	>200m
Apr-Aug	GVP2	2	2	50	50					
	GVP3	2	2	41	41					
	GVP4	3	3	324	261	47	16			
	GVP5	4	4	432	216	16	46	93	31	31
	GVP6	4	4	459	427	32				
Sep-Mar	GVP3	1	1	7	7					
	GVP4	1	1	24	24					
	GVP7	1	1	143	16	16		111		
Total		18	18	1480	1042	111	62	204	31	31

68. Nine flights by **merlin** were recorded from GVPs during the study period. A total duration of 781 seconds of flight activity was recorded (**Table 14**).

Table 14. Details of merlin flights recorded from GVPs.

Period	GVP No.	No. of flights	No. of birds	Total fly time (s)	Time in height class (s)					
					<20m	20-50m	50-100m	100-150m	150-200m	>200m
Apr-Aug	GVP4	1	1	109	16	16	78			
	GVP6	1	1	51	17	34				
Sep-Mar	GVP2	1	1	7	7					
	GVP3	1	1	73			36	36		
	GVP4	4	4	537	215	89	61	141	32	
	GVP5	1	1	4		4				
Total		9	9	781	255	143	175	177	32	

Black grouse

Occurrence and status

69. **Black grouse** (Red list) were recorded infrequently during the study period. Only one record of black grouse was made within the Site (**Figures 13a & 13b; Tables 18-21**).
70. Lekking males were observed during dedicated surveys in April and May 2021 and 2022. However, the number of males attending lek sites was low with the majority of observations being made up of highly dispersed single displaying males. The highest count at a lek site was three males in April 2021.

Flight activity from GVPs

71. No flights by **black grouse** were recorded from GVPs during the survey period.

Other species of interest

72. Raven (*Corvus corax*) was by far the most abundant species recorded during the GVP surveys (**Table 15**).
73. Red grouse were present breeding with 15 territories identified in a survey area of approximately 16 km² (which is a low density of around 0.94 pairs per km²) and skylark territories were reasonably abundant with 38 territories identified (thus around 2.4 pairs per km²). Cuckoo was present during the breeding season and a few territories of other small passerine species such as reed bunting, whinchat, stonechat, wheatear and grey wagtail were identified. Skylark and cuckoo are Red listed BoCC and BAP listed species; whinchat and grey wagtail are Red listed BoCC; red grouse and reed bunting are BAP listed species (**Figures 14a & 14b; Table 16**).
74. Snow bunting was also present during the non-breeding season (**Table 17**).

Table 15. The percentage of five-minute recording periods in which each species was encountered during watches from all GVPs during the study period.

Species	No. of 5-minute periods recorded	Occurrence (%)*
Raven	296	2.765
Kestrel	121	1.130
White-tailed eagle	111	1.037
Golden eagle	109	1.018
Buzzard	36	0.336
Swift	29	0.271
Golden plover	24	0.224
Pink-footed goose	19	0.178
Hen harrier	18	0.168
Snipe	15	0.140
Merlin	10	0.093
Red grouse	10	0.093
Cuckoo	9	0.084
Great black-backed gull	5	0.047
Red kite	5	0.047
Red-throated diver	3	0.028
Whooper swan	3	0.028
Redwing	3	0.028
Peregrine	2	0.019
Snow bunting	2	0.019
Sparrowhawk	2	0.019
Goosander	2	0.019
Mallard	2	0.019
Grey heron	2	0.019
Twite	2	0.019
Starling	1	0.009
Ring ouzel	1	0.009
Fieldfare	1	0.009
Lesser black-backed gull	1	0.009
Mistle thrush	1	0.009
Greenshank	1	0.009

Birds listed in Annex 1 of the Birds Directive or Schedule 1 of the WCA are shown in bold.

* The percentage of 5-min recording periods in which each species was encountered during watches from GVPs (n = 892) is shown (892 x 12 = 10,704).

Table 16. Territory abundance of selected species recorded during the Moorland Bird Survey within the 500m survey buffer.

Species		Count of Territories	
		2021	2022
<i>Skylark</i>	<i>Alauda arvensis</i>	38	24
<i>Red grouse</i>	<i>Lagopus lagopus</i>	15	13
<i>Snipe</i>	<i>Gallinago gallinago</i>	10	12
<i>Cuckoo</i>	<i>Cuculus canorus</i>	7	5
<i>Stonechat</i>	<i>Saxicola torquata</i>	5	6
Golden plover	<i>Pluvialis apricaria</i>	4	3
<i>Grey wagtail</i>	<i>Motacilla cinerea</i>	4	4
<i>Teal</i>	<i>Anas crecca</i>	3	1
<i>Wheatear</i>	<i>Oenanthe oenanthe</i>	3	7
<i>Mallard</i>	<i>Anas platyrhynchos</i>	2	3
<i>Common sandpiper</i>	<i>Actitis hypoleucos</i>	2	1
<i>Reed bunting</i>	<i>Emberiza schoeniclus</i>	1	0
<i>Whinchat</i>	<i>Saxicola rubetra</i>	1	0
Greenshank	<i>Tringa nebularia</i>	1	2
<i>Lapwing</i>	<i>Vanellus vanellus</i>	0	1
<i>Tree pipit</i>	<i>Anthus trivialis</i>	0	1

Birds listed in Annex 1 of the Birds Directive or Schedule 1 of the WCA are shown in bold. Red-listed birds of Conservation Concern and Biodiversity Action Plan (BAP) species are shown in italic.

Table 18. Results of winter walked transects, September 2021 to March 2022.

Species	2021				2022			Grand Total
	September	October	November	December	January	February	March	
Black grouse	1							1
Bullfinch				40			8	48
Golden eagle							signs	signs
Golden plover	2	21					3	26
Goldeneye					1			1
Goosander							2	2
Kestrel	1	2						3
Meadow pipit	40				10			50
Merlin						1		1
Mistle thrush	1							1
Peregrine			1					1
Raven	3		2		1		2	8
Red grouse	2	6	3	1	2		5	19
Skylark	1							1
Snipe	2							2
Song thrush							1	1
White-tailed eagle					2	1	2	5

Table 17. Results of winter walked transects, September 2020 to March 2021.

Species	2020				2021			Grand Total
	September	October	November	December	January	February	March	
Bullfinch				20	2			22
Buzzard			1		1	1		3
Cormorant						3		3
Golden eagle				signs	2			2
Golden plover		14		25			4	43
Goldeneye					1	2		3
Goosander						16		16
Goshawk					1			1
Hen harrier		1						1
Kestrel	1		2				1	4
Linnet		40						40
Raven		3		3	2			8
Red grouse	17	23	7	18	8	8	13	94
Snipe		1	1					2
Snow bunting						8		8
Song thrush						2		2
Sparrowhawk		1						1
Woodcock				1				1

Table 19. Results of Scarce Breeding Bird surveys, 2021 and 2022.

Date	Time	Species	Number	Sex	Age	Behaviour	Signs	Comments
09/02/2021	1455	White-tailed eagle	1	M	A	Flying		landed
09/02/2021	1457	White-tailed eagle	1	F	A	Flying		seen briefly while following male
18/02/2021	1347	Golden eagle	1	M	A	Territorial		
18/02/2021	1358	Golden eagle	1	M	A	Territorial		
22/02/2021	1020	White-tailed eagle	1	M	A	Perch		yellow(?) wing tag on left wing
22/02/2021	1025	White-tailed eagle	1	F	SUB	Flying		lost 1033
22/02/2021	1031	White-tailed eagle	1	M	A	Flying		lost 1033
22/02/2021	1058	White-tailed eagle	1		SUB	Flying		lost 1106
24/02/2021	0735	Black grouse	2	2M		Flying		Am Maol, flushed
25/02/2021	0937	Hen harrier	1	M	A	Flying		
25/02/2021	1107	White-tailed eagle	2	MF	2A	Flying		landed on hill
25/02/2021	1127	White-tailed eagle	2	MF	2A	Flying		flew from hill, landed in tree
25/02/2021	1147	White-tailed eagle	2	MF	2A	Flying		flew from tree towards hills to north
02/03/2021	1100	Hen harrier	1	M	A	Hunt/feed		soaring + hunting
02/03/2021	1130	Hen harrier	1	F?		Hunt/feed		soaring + hunting
02/03/2021	1350	Golden eagle	1	F?	A	Territorial		circling in area, possibly tagged
02/03/2021	1403	Golden eagle	1			Territorial		perched then short flight
02/03/2021	1424	White-tailed eagle	2	MF	2A	Flying		no tags
02/03/2021	1509	White-tailed eagle	2	MF	2A	Flying, vocalise		no tags, vocal on perch
02/03/2021	1521	White-tailed eagle	2	MF	2A	Flying		from perch to roost/nest area
03/03/2021	0930	Black grouse	2	2M	2A	Display	Lek site	Outside 1.5km buffer
03/03/2021	0945	White-tailed eagle	1	F?	A	Territorial	Used nest (this yr)	old nest in Scot's pine, new nest in Sitka spruce
08/03/2021	1530	Red-throated diver	1		A	Loafing		Loch Nant
11/03/2021	1030	White-tailed eagle	0				Old nest (prev. yr)	eyrie collapsed
11/03/2021	1230	Golden eagle	0				Used nest (this yr)	fresh vegetation on nest
18/03/2021	1110	Golden eagle	0				Old nest (prev. yr)	very large nest, no sign of new material but couldn't see into it
19/03/2021	0947	Golden eagle	1	F	A	Flying		
19/03/2021	1011	Golden eagle	1		A	Flying		
19/03/2021	1033	Golden eagle	1	F	A	Flying		
19/03/2021	1055	Golden eagle	1	F	A	Flying		landed on crag but difficult to see (shadow/haze)
19/03/2021	1140	Golden eagle	1	F	A	Flying, display		interaction with WE and display, land on crag
19/03/2021	1143	White-tailed eagle	1	M	SUB	Flying		
14/04/2021	1159	White-tailed eagle	1		A	Territorial		landed in tree
14/04/2021	1204	White-tailed eagle	1		A	Territorial		tree to tree
14/04/2021	1208	White-tailed eagle	1		A	Hunt/feed		flight away from nest area
14/04/2021	1215	Red-throated diver	2		2A	Territorial		
15/04/2021	0840	Merlin	1			Vocalise		heard briefly, same location had pair on 13/4/21 during MBS
15/04/2021	0925	Golden plover	1			Vocalise, territorial		
05/05/2021	1142	White-tailed eagle	1		A	Flying		lost from sight, height >200m
11/05/2021	1640	White-tailed eagle	1		A?	Roost		roosting in dead conifer at probable nest site
12/05/2021	1200	White-tailed eagle	2	MF	2A	Vocalise	Used nest (this yr)	changeover at eyrie, observed from FVP
12/05/2021	1130	Red-throated diver	1			Vocalise		heard in vicinity of Loch Nell
13/05/2021	1020	White-tailed eagle	1	F		Chick tend	Nest with young	behaving as if with chicks
13/05/2021	1200	White-tailed eagle	2	MF				changeover at nest, F flew off, tagged (yellow left, white? right)
13/05/2021	1100	Black-throated diver	2	MF		Loaf, feed		Loch Nant
20/05/2021	0605	Greenshank	2	MF		Vocalise, flying		flushed to Lochan
20/05/2021	0730	Red-throated diver	2	MF		Incubate	Nest	
20/05/2021	0710	Greenshank	1			Territorial, sing, vocalise		flushed to smaller lochan to SW
20/05/2021	0920	Greenshank	1			Territorial, sing, vocalise		some sign of territorial behaviour/ singing
20/05/2021	1050	Whimbrel	1			Vocalise, flying		Sior Loch, flushed
21/05/2021	0740	Curlew	3		3A	Agitated/alarm		Loch an Droighinn
21/05/2021	0800	White-tailed eagle	1		A	Hunt/feed		
21/05/2021	0730	Golden eagle	2	MF	2A	Chick tend	Nest with young	female sitting low on eyrie throughout watch. Male flew to eyrie for brief visit with nest material @0830.
31/05/2021	1140	Golden plover	2	MF		Territorial		

Table 19. Results of Scarce Breeding Bird surveys, 2021 and 2022.

Date	Time	Species	Number	Sex	Age	Behaviour	Signs	Comments
31/05/2021	1240	Greenshank	1			Flying		flushed from edge of loch
31/05/2021	1250	Red-throated diver	0				Nest failed	nest empty, no birds present
31/05/2021	1325	Merlin	1	M		Flying		seen briefly flying E to W
01/06/2021	1440	White-tailed eagle	1		A	Roost		resting in dead conifer near nest, no activity on nest but heat haze
03/06/2021	1400	White-tailed eagle	1		A	Chick tend	Nest with young	adult standing on eyrie, tending/feeding? Young
05/06/2021	0530	White-tailed eagle	1		A	Flying, chick tend	Nest with young	flew and landed on eyrie
05/06/2021	0640	White-tailed eagle	1	F	A	Chick tend, vocalise	Nest with young	tagged F on eyrie (perched just above it). Flying around and landing in nearby tree @0830
06/06/2021	0825	Curlew	2	MF		Agitated/alarm, sing, territorial		Midmuir/Sior Loch
06/06/2021	0830	Greenshank	2	MF		Sing, feed		brief song flight
06/06/2021	0915	Greenshank	1			Flying		
06/06/2021	0930	Greenshank	1			Flying		
06/06/2021	0945	Greenshank	1			Sing		song flight
06/06/2021	0635	Greylag goose	4					on Loch Sonachan
08/06/2021	1025	Red kite	1			Flying		
08/06/2021	1350	Golden eagle	1		CH		Nest with young	chick c. 3 weeks stood up and stretched wings, no adults present
08/06/2021	0815	Osprey	2	MF	2A	Agitated/alarm	Nest with eggs or young	pair of birds at nest with eggs or young
09/06/2021	0845	Osprey	1		A	Hunt/feed		Airds Bay
10/06/2021	0800	White-tailed eagle	1		A	Hunt/feed		
10/06/2021	0810	Curlew	1		A	Territorial		Musdale
10/06/2021	0910	Curlew	2		2A	Territorial		Midmuir
10/06/2021	0920	White-tailed eagle	1		A	Hunt/feed		
07/07/2021	1230	White-tailed eagle	2	MF	2A	Perch, flying, chick tend	Nest with young	difficult to see chicks due to distance and heat haze, at least 1 present, seen wing flapping
12/07/2021	1215	White-tailed eagle	2	F+?	A+JUV	Perch, chick tend	Nest with young	adult female tagged, juvenile c. 70 days, feather growth complete
12/07/2021	1230	Red-throated diver	2	MF		Loaf, feed		Loch Nant, no evidence of breeding
12/07/2021	1430	White-tailed eagle	2		A+JUV	Perch	Nest with young	A landed in tree beside nest and flew off @1450, juvenile on branch just below nest, wing flapping
13/07/2021	1515	White-tailed eagle	2		A+JUV	Perch		Juvenile recently fledged (70days+), at top of conifer c. 100m from nest tree, wing flapping, only 1 juv seen, adult in conifer
14/07/2021	0605	Curlew	1			Agitated/alarm, flying		Musdale, flushed
14/07/2021	0735	Red-throated diver	2	MF		Flying		Sior Loch, 150-200m
14/07/2021	0815	Merlin	2	MF		Agitated/alarm, flying		Female flushed and pair alarming as if with young but flew off and not heard or seen again during next 2 hours
14/07/2021	0950	Merlin	0				Feathers, Faeces, Kill/prey	checked nearest suitable breeding site and found moulted male primaries and old plucking's but no recent signs or evidence of breeding
14/07/2021	0830	Red-throated diver	2	MF		Incubate, loaf	Nest with eggs	relay at same location
14/07/2021	1130	White-tailed eagle	1			Flying		seen very briefly in flight
15/07/2021	0530	White-tailed eagle	2		A+JUV	Perch	Recent fledglings	recently fledged juvenile in conifer near eyrie
15/07/2021	0640	White-tailed eagle	2	F+?	A+JUV	Perch	Nest with young	almost fully fledged juvenile in eyrie
15/07/2021	0930	Golden eagle	2		A+JUV	Perch, chick tend	Nest with young	chick c. 9weeks in eyrie, adult arrived at 0950 and landed in tree
22/07/2021	0815	Osprey	2		2A	Agitated/alarm	Nest with young	
29/07/2021	1020	White-tailed eagle	1		A	Flying		
29/07/2021	1020	White-tailed eagle	1		JUV			full grown chick at nest
30/07/2021	0930	Golden eagle	1		JUV		Nest with young	full grown chick on nest
30/07/2021	0955	Golden eagle	1		A			bringing prey into nest
09/08/2021	1425	White-tailed eagle	1		JUV	Roost		fledged juv roosting in dead conifer near nest site, brief flight to adjacent conifer
10/08/2021	0720	Red-throated diver	2		A+JUV	Loaf, chick tend		On loch
10/08/2021	0745	Red-throated diver	1		A	Flying		
10/08/2021	1245	Red-throated diver	2		A+JUV	Roost, Flying		On loch, adult flight, juv stayed, not fully fledged
11/08/2021	0715	Red-throated diver	3		A+2JUV	Chick tend, vocalise	Used nest (this yr)	On loch, adult and 2 small chicks (c 1 week) near nest
11/08/2021	0915	Red-throated diver	2		A+JUV	Loaf		On loch, chick is c. 5 weeks old
25/08/2021	1025	Red-throated diver	1		JUV	Loaf		On loch, chick c. 4 weeks old
25/08/2021	1300	Red-throated diver	1		JUV	Loaf		On loch, c. 5-6 weeks
25/08/2021	1315	Red-throated diver	0				Used nest (this yr)	egg fragments in nest
25/08/2021	1610	White-tailed eagle	1			Flying		came out of small gully, circled above nest site
30/08/2021	1331	Golden eagle	2	MF		Flying, display		circling together, little bit of display, lost @1340
30/08/2021	1342	Golden eagle	1	M	A	Flying, hunt/feed		lost @1345
30/08/2021	1349	Golden eagle	1	M	A	Flying, hunt/feed		lost @1352

Table 19. Results of Scarce Breeding Bird surveys, 2021 and 2022.

Date	Time	Species	Number	Sex	Age	Behaviour	Signs	Comments
30/08/2021	1415	White-tailed eagle	1		JUV	Perch		perched in nest tree
30/08/2021	1517	Golden eagle	1		A	Flying		
09/02/2022	0946	White-tailed eagle	2	MF	2A	Perch		
09/02/2022	1517	White-tailed eagle	1	F	A	Flying		lost in squally shower
09/02/2022	1518	White-tailed eagle	1	M	A	Flying		lost in squally shower
09/02/2022	1529	White-tailed eagle	2	MF	2A	Perch		in small tree by loch, still present @ 1615
09/02/2022	1601	Peregrine	1	M	A	Flying, Hunt/feed		flight v low lost in trees/shelter belt
15/02/2022	1030	White-tailed eagle	2	MF		Territorial		fresh material on nest
15/02/2022	1330	Barn owl	2	MF		Roost		roosting in nest box in old farm building
25/02/2022	1122	Golden eagle	1	M	IMM	Hunt/feed		
25/02/2022	1230	Golden eagle	0				No signs	checked for eyrie, nil result
25/02/2022	1300	White-tailed eagle	2	MF	2A	Territorial, Perch		perched at nest site
09/03/2022	1305	White-tailed eagle	1	F?	A	Territorial	Used nest (this yr)	a few fresh sticks added
09/03/2022	1430	Red-throated diver	1		A	Territorial		
14/03/2022	1615	Golden eagle	0				Old nest (prev. yr)	few fresh sticks and heather stalks on nest, no cup lining
15/03/2022	0725	Hen harrier	1	M	IMM			
15/03/2022	0730	White-tailed eagle	2	MF	2A	Territorial, Vocalise	Used nest (this yr)	perched together throughout 4.5hrs, nest built up with fresh material
22/03/2022	1344	Golden eagle	1	F	IMM	Hunt/feed		perched near eyrie
22/03/2022	1409	Golden eagle	1	M?		Display		perched on eyrie
22/03/2022	1424	Golden eagle	1	M	A	Display		Ad male displays as Ad female arrives
22/03/2022	1426	Golden eagle	1	F	A	Territorial		possibly with radio tag fitted
22/03/2022	1431	Golden eagle	1	F	IMM	Flying		escorted off site by Ad female
22/03/2022	1515	Golden eagle	2	MF	2A	Territorial	Used nest (this yr)	fresh sticks added, pair cruising around nest site for an hour
12/04/2022	1220	Golden eagle	1	F	A	Roost	Feathers	tagged
12/04/2022	1320	Hen harrier	1	M	A	Hunt/feed		
14/04/2022	0953	Red-throated diver	2	MF	2A	Flying		
14/04/2022	1218	Curlew	2	MF	2A	Display		
14/04/2022	1414	Osprey	1		A	Flying		carrying fish prey
14/04/2022	1414	White-tailed eagle	1	M	A	Flying		chasing OP, tagged
15/04/2022	1135	Golden eagle	0				Used nest (this yr)	nest unfinished and in same condition as on the March visit
20/04/2022	1131	Osprey	1		A	Flying, Hunt/feed		lost @1134
21/04/2022	1001	Black grouse	1	M	A	Flying		
21/04/2022	1500	Golden eagle	0				Used nest (this yr), Feathers, Faeces	signs of start of eyrie, lots of down & splash
25/04/2022	1410	Golden eagle	1	M	A	Flying		
26/04/2022	1230	Golden eagle	1	F	A	Roost		Perched roosting
26/04/2022	1232	Golden eagle	1	F	A	Flying		takes flight & proceeds N, same as bird 1
26/04/2022	1430	Golden eagle	0	F			Feathers	crag covered in down from F
27/04/2022	1230	Merlin	1			Hunt/feed		briefly mobbed RN
27/04/2022	1248	Merlin	1	M	A	Hunt/feed, Vocalise		
27/04/2022	1430	Merlin	2	MF	A	Agitated/alarm		both birds alarming loudly over a small section of plantation, likely attempting to breed in the area
27/04/2022	1120	Merlin	1	M	A	Territorial		Poss nest prospecting
28/04/2022	1440	White-tailed eagle	1		A	Incubate	Nest	bird on nest raises body above cup and resettles in view, no other activity in or around nest
29/04/2022	1536	Golden eagle	2	MF	2CY+A			soaring
29/04/2022	1539	Golden eagle	1					heading towards Beinn Dearg, separate EA (not bird1)
29/04/2022	1605	Golden eagle	0				Pellets, Feathers, Faeces	
03/05/2022	0800	Red-throated diver	0				No signs	
03/05/2022	1230	Red-throated diver	0				No signs	
05/05/2022	1603	Hen harrier	1	M	IMM	Hunt/feed		
05/05/2022	1630	White-tailed eagle	2	MF	2A	Perch		one on the nest, one perched neat, not mapped
12/05/2022	1015	Red-throated diver	2	MF	2A	Display		not laid yet
12/05/2022	1100	Greenshank	1		A	Hunt/feed		same bird as line below
12/05/2022	1110	Greenshank	1		A	Vocalise		same bird as point above
12/05/2022	1240	Curlew	1	M	A	Sing		on breeding territory

Table 19. Results of Scarce Breeding Bird surveys, 2021 and 2022.

Date	Time	Species	Number	Sex	Age	Behaviour	Signs	Comments
12/05/2022	1330	Merlin	1	M	A	Flying		lost behind trees
12/05/2022	1615	White-tailed eagle	1		A	Flying		
23/05/2022	0922	Golden eagle	1	M	A	Flying		flew up gully
23/05/2022	0926	Golden eagle	1	M	A	Flying		same bird as 0922
23/05/2022	0945	White-tailed eagle	2	MF	2SUB	Flying		lost 0948 both in moult
23/05/2022	0948	Golden eagle	1	M	A	Territorial, Flying		lost 0954
23/05/2022	0955	Golden eagle	1	M	A	Flying		lost 0957
23/05/2022	1019	Golden eagle	1	M	A	Flying		lost 1022
23/05/2022	1200	White-tailed eagle	1	F	SUB	Flying, Hunt/feed		lost 1201
23/05/2022	1216	White-tailed eagle	1	F	SUB	Flying, Hunt/feed		lost 1216
23/05/2022	1218	White-tailed eagle	1	F	SUB	Flying		lost 1221
23/05/2022	1317	White-tailed eagle	1	M	SUB	Flying		lost 1319
23/05/2022	1321	White-tailed eagle	1	M	SUB	Flying		lost 1325
23/05/2022	1406	White-tailed eagle	1	F	SUB	Flying		lost 1408
23/05/2022	1437	Golden eagle	1	F	A	Flying, Territorial		lost 1438
23/05/2022	1441	Golden eagle	1	M	A	Flying		lost 1442
23/05/2022	1445	Golden eagle	1		CHICK		Used nest (this yr)	one chick in eyrie
24/05/2022	1500	White-tailed eagle	0				Nest failed	failed breeding attempt, no activity recorded
25/05/2022	0935	White-tailed eagle	1	F	A	Flying		lost 0940
25/05/2022	0950	Red-throated diver	2	MF	2A	Territorial, Loafing		
07/06/2022	1226	Hen harrier	1	M	IMM	Hunt/feed		
09/06/2022	1200	Golden plover	2	MF	2A	Agitated/alarm		
09/06/2022	1230	Curlew	2	MF	2A	Agitated/alarm		
09/06/2022	1243	Red-throated diver	1		A	Flying		
09/06/2022	1330	Common sandpiper	0					egg sucked by crow
09/06/2022	1352	Red-throated diver	1		A	Incubate		
09/06/2022	1200	Greenshank	2		2A	Vocalise		
15/06/2022	0827	White-tailed eagle	1		A	Hunt/feed		
15/06/2022	0927	Red-throated diver	1		A	Flying		
27/06/2022	1700	Red-throated diver	2		A	Roost		
27/06/2022	1436	White-tailed eagle	1			Hunt/feed		
29/06/2022	0935	White-tailed eagle	2	MF	2A	Roost		Remained perched for survey period, no sign of juv
29/06/2022	1400	White-tailed eagle	1		IMM	Hunt/feed		
29/06/2022	1411	White-tailed eagle	1	F	A	Hunt/feed		
29/06/2022	1515	Red-throated diver	0				Nest failed	nest flooded
29/06/2022	1615	Merlin	1	M	A	Hunt/feed		
30/06/2022	0843	Red-throated diver	2	MF?	2A	Flying		
30/06/2022	0943	Red-throated diver	2	MF?	2A	Flying		
30/06/2022	1304	White-tailed eagle	1	F	SUB	Hunt/feed		
30/06/2022	1311	Red-throated diver	1		A	Incubate		
30/06/2022	1737	White-tailed eagle	3	MF+JUV	2A+JUV	Chick tend		
30/06/2022	1303	White-tailed eagle	1		IMM	Flying		
30/06/2022	1518	Merlin	1	M	A	Hunt/feed		lost due to distance
30/06/2022	1622	White-tailed eagle	1		IMM	Flying		
01/07/2022	0850	Goshawk	1	M	A	Flying		
01/07/2022	1020	Red-throated diver	4		4A	Vocalise		
01/07/2022	1021	Red-throated diver	4		4A	Flying		same as bird 2, took flight
05/07/2022	0950	Golden plover	1	F	A	Agitated/alarm		
05/07/2022	1029	Merlin	1	M	A	Flying		carrying prey
05/07/2022	1105	Merlin	5	MF+3JUV	2A+3JUV		Nest with young	3 fully feathered chicks, some down on head, in old crow nest in rowan
12/07/2022	1645	Merlin	3		3JUV	Flying		min x3 JUVs fledged
14/07/2022	0956	Hen harrier	1	F	A	Hunt/feed		
14/07/2022	1857	Hen harrier	1	M	A	Flying		
14/07/2022	1859	Hen harrier	1	M	A	Flying		

Table 19. Results of Scarce Breeding Bird surveys, 2021 and 2022.

Date	Time	Species	Number	Sex	Age	Behaviour	Signs	Comments
18/07/2022	1355	Hen harrier	1	F	A	Hunt/feed		
18/07/2022	1424	Hen harrier	1	M	A	Hunt/feed		
18/07/2022	1446	Hen harrier	1	F	A	Hunt/feed		
18/07/2022	1517	Hen harrier	1	F	A	Hunt/feed		
20/07/2022	1021	Osprey	1		A	Flying		
20/07/2022	1107	White-tailed eagle	1	M	A	Vocalise		
20/07/2022	1130	White-tailed eagle	1		JUV		Nest with young	fully grown juv in nest
20/07/2022	1509	White-tailed eagle	1		A	Flying		
20/07/2022	1600	White-tailed eagle	2	MF	A	Roost		
21/07/2022	0838	Golden eagle	1	F	A	Hunt/feed		tagged
21/07/2022	0844	Golden eagle	1	F	A	Hunt/feed		tagged
21/07/2022	0854	Red-throated diver	2	MF	2A	Territorial		
21/07/2022	0930	Red-throated diver	1		A	Flying		flying in poor vis
21/07/2022	1335	Red-throated diver	1		A	Incubate		
21/07/2022	1419	White-tailed eagle	2	MF	2A	Hunt/feed		
21/07/2022	1550	Hen harrier	1	M	IMM	Hunt/feed		carrying prey
09/08/2022	1000	White-tailed eagle	1		JUV	Perch, Vocalise		perched at nest, vocal + wing stretching
09/08/2022	1031	White-tailed eagle	1	M	A	Chick tend		carrying prey to nest to perch nearby
09/08/2022	1116	White-tailed eagle	1	F	A	Chick tend		carrying prey to nest to perch nearby
09/08/2022	1130	White-tailed eagle	2	MF	2A	Perch		both adults perched together at end of VP
11/08/2022	0925	Red-throated diver	2	MF	2A	Territorial		
11/08/2022	0933	Hen harrier	1	F	JUV	Hunt/feed		
11/08/2022	0936	Red-throated diver	2	MF	2A	Flying		
11/08/2022	1105	Golden eagle	1	M?	A	Territorial		
11/08/2022	1208	Red-throated diver	2		A+JUV	Chick tend		downy chick
11/08/2022	1330	Golden eagle	0				Feathers	very little fresh feathers
11/08/2022	1350	White-tailed eagle	1	M?	IMM	Flying		Tag fitted
11/08/2022	1510	Hen harrier	1		JUV	Hunt/feed		
22/08/2022	1205	Red-throated diver	1		A	Hunt/feed		fishing
22/08/2022	1600	White-tailed eagle	1		A	Flying		
23/08/2022	0940	White-tailed eagle	1	M	A	Flying		
23/08/2022	0945	White-tailed eagle	1		JUV	Flying		fledged JUV on the wing
23/08/2022	0539	Golden eagle	1	M?	A	Roost, Perch		Roosting in tree
23/08/2022	0603	Golden eagle	1	M?	A	Flying		

Table 20. Incidental records, September 2020 to August 2022.

Date	Time	Species	Number	Sex	Age	Behaviour	Signs	Comments
29/01/2021	1515	Whooper swan	4		4A	Hunt/feed		
10/03/2021	0826	White-tailed eagle	1		JUV	Flying		
17/03/2021	1115	Golden plover	2	MF	2A	Flying		
17/03/2021	1305	Golden eagle	1	F	A	Flying		satellite tagged
17/03/2021	1306	Golden eagle	1	M	A	Flying		
09/04/2021	0825	Black grouse	1	F		Flying		flushed
13/04/2021	0620	Black grouse	1	M		Flying, Display	Lek site, Faeces	flushed
13/04/2021	0802	Hen harrier	1	M		Flying		
13/04/2021	1220	Merlin	1	F	A	Hunt/feed		
13/04/2021	1230	Merlin	1	M	A	Hunt/feed		
13/04/2021	1330	Merlin	0				Pellets	
15/04/2021	0600	Red-throated diver			Vocalise		Heard only	
15/04/2021	0600	White-tailed eagle	1	M?	A	Roost		

Table 20. Incidental records, September 2020 to August 2022.

Date	Time	Species	Number	Sex	Age	Behaviour	Signs	Comments
15/04/2021	0715	White-tailed eagle	1	M		Flying		flew to another tree
16/04/2021	0700	White-tailed eagle	1	M?	A	Roost		in tree
20/04/2021	1146	Hen harrier	1	M	A			
23/04/2021	0850	Hen harrier	1	M	A	Hunt/feed, Flying		
04/05/2021	0915	Canada goose	2	MF		Incubate		
17/05/2021	0540	Black grouse	1	M		Display	Lek site	as recorded on BKL 13/5/21
17/05/2021	1340	White-tailed eagle	2	MF		Chick tend	Nest w young	pair on eyrie, one flew to dead conifer
18/05/2021	0800	Red-throated diver	1			Vocalise, Flying		heard briefly in flight, possibly flew off lochan
18/05/2021	1000	Red-throated diver	1			Hunt/feed		
31/05/2021	0810	White-tailed eagle	1		A	Hunt/feed		height 20-50m, mobbed by 2 x crows.
01/06/2021	0615	Golden plover	1			Vocalise		
04/06/2021	0645	Red-throated diver	2	MF		Roost		also, Canada goose pr + gosling, 1 lapwing, 3 x mallard, 1 x teal
04/06/2021	0850	Red-throated diver	2	MF		Roost		
07/06/2021	0600	Black grouse	1	M		Flying		flushed
01/07/2021	1235	Red-throated diver	1			Roost		possible relay?
05/07/2021	1430	White-tailed eagle	1		A?	Roost		in dead conifer by nest
06/07/2021	0700	Golden eagle	1		SUB	Flying		flushed
06/07/2021	0600	Curlew	1			Flying, Agitated/alarm		with young, flushed
06/07/2021	1325	White-tailed eagle	1		A	Flying		flushed
13/07/2021	0751	Red-throated diver	2	MF		Flying		
21/07/2021	1030	Red-throated diver	2		2A	Hunt/feed		not nesting on lochan
27/07/2021	1515	White-tailed eagle	1		A	Territorial		circling over loch
09/08/2021	0730	Red-throated diver	3	MF	2A+JUV	Roost, Hunt/feed		
23/08/2021	1645	Golden eagle	1		A	Flying		20-50m, seen as leaving site
24/08/2021	1205	Golden eagle	3	MF+?	2A+JUV	Flying		seen just before starting VP, 100 -> 200m
08/09/2021	1830	White-tailed eagle	1		JUV	Roost		sitting in tree, flies away and comes back, moves to tree 10 m away @20:00, appears to be roosting
09/09/2021	0800	White-tailed eagle	1			Perch		sitting in tree
24/11/2021	0819	White-tailed eagle	2	2M?	A+JUV	Flying		
02/12/2021	1343	Short-eared owl	1		A	Roost		flushed from roost
02/01/2022	1147	Golden eagle	1	F	A	Territorial		Sat-tag fitted
02/01/2022	1148	Golden eagle	1	M	IMM	Flying		
02/01/2022	1148	Golden eagle	1	F	A	Flying		
02/01/2022	1215	Golden eagle	1	F	A	Territorial, Perch		Sat-tag fitted
02/01/2022	1240	Golden eagle	1	F	A	Territorial, Perch		Sat-tag fitted
08/02/2022	1320	Whooper swan	2		A	Hunt/feed		
27/04/2022	1010	Red-throated diver	2	MF	2A	Territorial		
27/04/2022	0735	Red-throated diver	2	MF?	2A	Roost, Vocalise		
27/04/2022	0735	Greenshank	2	MF?	2A	Hunt/feed		
27/04/2022	0743	Greenshank	2	MF?	2A	Vocalise		same birds
27/04/2022	0630	Red-throated diver	2	MF?	2A	Flying		
27/04/2022	0705	Golden plover	2	MF	2A	Territorial		
28/04/2022	0810	Merlin	1	F	A	Agitated/alarm		
28/04/2022	0700	Curlew	1			Territorial		
28/04/2022	0703	Greenshank	1			Territorial		
28/04/2022	0710	Greenshank	1			Hunt/feed		possibly same as bird
28/04/2022	0756	Greenshank	1	M	A	Display		
28/04/2022	0757	Greenshank	1	M	A	Display		
29/04/2022	0945	Golden eagle	0			Roost	Feathers	few fresh feathers
29/04/2022	1315	Red-throated diver	2	MF	2A			
04/05/2022	1008	Golden eagle	2	MF	2A	Roost	Feathers	
10/05/2022	0843	Golden eagle	1	F?	A	Flying		
10/05/2022	0907	White-tailed eagle	1	M?	A	Flying		
10/05/2022	0945	Red-throated diver	2	MF	2A	Territorial, Display		

Table 20. Incidental records, September 2020 to August 2022.

Date	Time	Species	Number	Sex	Age	Behaviour	Signs	Comments
10/05/2022	0640	Hen harrier	1	M	A	Hunt/feed		
10/05/2022	0645	White-tailed eagle	1	M	A	Hunt/feed		wing tagged
10/05/2022	0707	Merlin	1	M	A	Hunt/feed		
11/05/2022	0810	White-tailed eagle	1	F	A	Hunt/feed		
11/05/2022	0950	Short-eared owl	1		A	Flying		
11/05/2022	0548	White-tailed eagle	1		IMM	Flying		
11/05/2022	0616	Red-throated diver	2	MF	2A	Territorial		
11/05/2022	0630	Curlew	1			Territorial		
11/05/2022	0656	Greenshank	1			Territorial		
26/05/2022	0758	White-tailed eagle	1	M	A	Hunt/feed		
08/06/2022	1614	Golden eagle	1		IMM	Perch		
08/06/2022	1614	White-tailed eagle	1		A	Perch		
14/06/2022	1308	Red-throated diver	1	F?	A	Incubate	Nest with eggs	1 egg
14/06/2022	1310	Hen harrier	1	M	A	Hunt/feed		
29/06/2022	1205	White-tailed eagle	1		IMM	Flying		
06/07/2022	1141	White-tailed eagle	1		IMM	Flying		
06/07/2022	1420	White-tailed eagle	1	M	A	Flying		
07/07/2022	0906	Golden eagle	1	M?	IMM	Flying		flushed off perch
12/07/2022	1345	White-tailed eagle	1	F	IMM	Hunt/feed		
13/07/2022	0926	Hen harrier	1	F?	A	Hunt/feed		
13/07/2022	0958	Red-throated diver	0				Nest failed	2 eggs in loch
13/07/2022	1220	Red-throated diver	1		A	Flying		flying in heavy fog
21/07/2022	1314	White-tailed eagle	1	F	A	Hunt/feed		
10/08/2022	1357	White-tailed eagle	1	M?	IMM	Perch		to perch after flight

Table 21. Black grouse lek survey results, 2021 and 2022.

Date	Time	Species	Number	Sex	Behaviour	Signs	Location	Comments
14/04/2021	0550	Black grouse	3	3M	Display	Lek site	Creag an Taghain	
14/04/2021	0610	Black grouse	2	2M	Flying		Creag an Taghain	2 leave lek
14/04/2021	0647	Black grouse	1	M	Flying		Creag an Taghain	1 leaves lek
14/04/2021	0545	Black grouse			Display		Tom na h-Iolaire	heard but not seen around this area
15/04/2021	0635	Black grouse			Vocalise, display		Loch na Carraigeach	heard displaying E of Loch Nant (outside 1.5km)
05/05/2021	0630	Black grouse	1			Lek site	River Nant	heard only, poss just single bird
07/05/2021	0520	Black grouse	1	M		Lek site	Creag an Taghain	
13/05/2021	0420	Black grouse	2	2M	Display	Lek site	Creag an Taghain	displaying 100m apart
03/05/2022	0745	Black grouse	2	2M	Display	Lek site	Torr an Daimh Mhoir	Off-site (NM909261)
10/05/2022	0620	Black grouse	1	F	Perched		Glen Lonan	Perched in a tree

Appendix 1: Bird species to be recorded during surveys

SPECIES RECORDED FOR ASSESSMENT OF FLIGHT ACTIVITY			Additional species (e.g. breeding and/or wintering
Target A species	Target B species	Secondary species	
Diver species	Whooper swan	Cormorant	Tree pipit
Common Scoter	Greylag goose	Grey heron	Duncock
White-tailed eagle	Barnacle goose	Kestrel	Song thrush
Golden eagle	White-fronted goose	Buzzard	Grasshopper warbler
Hen harrier	Pink-footed goose	Sparrowhawk	Wood warbler
Goshawk	Brent goose	Red grouse	Spotted flycatcher
Red kite	Bean goose	Grey partridge	Marsh tit
Osprey	Golden plover	Lapwing	Willow tit
Merlin	Dunlin	Redshank	Crested tit
Peregrine	Greenshank	Common sandpiper	Starling
Hobby	Whimbrel	Oystercatcher	House sparrow
Barn owl	Curlew	Snipe	Tree sparrow
Short-eared owl	Wood sandpiper	Woodcock	Linnet
Black grouse	Tern species	Herring gull	Twite
Capercaillie	Arctic skua	Cuckoo	Lesser redpoll
Nightjar	Great skua	Ring ouzel	Crossbill species
Chough		Raven	Bullfinch
		(Any flocks >30)	Hawfinch
(Other rare raptors)			Yellow hammer
			Reed bunting
			Corn bunting
			Mute swan
			Mallard
			Goosander
			Teal

Appendix 2: Generic Vantage Point Survey Information

**Watch ID relates to Appendix 3 Weather Details*

Date	GVP No.	Start time	End time	Duration	Observer	Watch ID*
23/09/2020	GVP4	1215	1515	3.00	BU	BGR_200923_001
23/09/2020	GVP6	1250	1550	3.00	RE	BGR_200923_002
24/09/2020	GVP1	1030	1330	3.00	BU	BGR_200924_001
24/09/2020	GVP2	1400	1700	3.00	BU	BGR_200924_002
24/09/2020	GVP3	1315	1615	3.00	RE	BGR_200924_003
24/09/2020	GVP5	0930	1230	3.00	RE	BGR_200924_004
25/09/2020	GVP5	1205	1505	3.00	RE	BGR_200925_001
25/09/2020	GVP6	0845	1145	3.00	RE	BGR_200925_002
28/09/2020	GVP3	1235	1535	3.00	RE	BGR_200928_001
29/09/2020	GVP1	1445	1745	3.00	RE	BGR_200929_001
29/09/2020	GVP4	1050	1350	3.00	RE	BGR_200929_002
30/09/2020	GVP2	1130	1430	3.00	RE	BGR_200930_001
01/10/2020	GVP2	0805	1105	3.00	RE	BGR_201001_001
01/10/2020	GVP6	1205	1505	3.00	RE	BGR_201001_002
02/10/2020	GVP1	1340	1640	3.00	RE	BGR_201002_001
02/10/2020	GVP3	1000	1300	3.00	RE	BGR_201002_002
05/10/2020	GVP1	1520	1820	3.00	RE	BGR_201005_001
05/10/2020	GVP4	1140	1440	3.00	RE	BGR_201005_002
06/10/2020	GVP5	1330	1630	3.00	RE	BGR_201006_001
06/10/2020	GVP6	1000	1300	3.00	RE	BGR_201006_002
07/10/2020	GVP3	1305	1605	3.00	RE	BGR_201007_001
07/10/2020	GVP5	0930	1230	3.00	RE	BGR_201007_002
08/10/2020	GVP2	1245	1545	3.00	RE	BGR_201008_001
08/10/2020	GVP4	0905	1205	3.00	RE	BGR_201008_002
09/11/2020	GVP3	1100	1400	3.00	JH	BGR_201109_001
10/11/2020	GVP2	1415	1515	1.00	JH	BGR_201110_001
10/11/2020	GVP4	1030	1330	3.00	JH	BGR_201110_002
11/11/2020	GVP2	0810	1110	3.00	JH	BGR_201111_001
16/11/2020	GVP1	1210	1510	3.00	RE	BGR_201116_001
18/11/2020	GVP1	1030	1130	1.00	RE	BGR_201118_001
18/11/2020	GVP3	0910	1010	1.00	RE	BGR_201118_002
19/11/2020	GVP5	1245	1515	2.50	RE	BGR_201119_001
19/11/2020	GVP6	0935	1205	2.50	RE	BGR_201119_002
20/11/2020	GVP4	1025	1125	1.00	RE	BGR_201120_001
10/12/2020	GVP1	1300	1500	2.00	RE	BGR_201210_001
10/12/2020	GVP4	0945	1145	2.00	RE	BGR_201210_002
11/12/2020	GVP2	0840	1040	2.00	RE	BGR_201211_001
14/12/2020	GVP3	1240	1440	2.00	RAS	BGR_201214_001
15/12/2020	GVP5	0930	1130	2.00	RAS	BGR_201215_001
15/12/2020	GVP6	1210	1410	2.00	RAS	BGR_201215_002
16/12/2020	GVP2	1255	1455	2.00	RE	BGR_201216_001
16/12/2020	GVP4	0920	1120	2.00	RAS	BGR_201216_002
17/12/2020	GVP5	1200	1400	2.00	RAS	BGR_201217_001

Date	GVP No.	Start time	End time	Duration	Observer	Watch ID*
17/12/2020	GVP6	0930	1130	2.00	RAS	BGR_201217_002
18/12/2020	GVP3	0845	1045	2.00	RAS	BGR_201218_001
05/01/2021	GVP7	1400	1600	2.00	RE	BGR_210105_001
08/01/2021	GVP7	1000	1200	2.00	RE	BGR_210108_001
18/01/2021	GVP3	1220	1420	2.00	RAS	BGR_210118_001
19/01/2021	GVP5	1240	1440	2.00	RAS	BGR_210119_001
19/01/2021	GVP6	1005	1205	2.00	RAS	BGR_210119_002
20/01/2021	GVP2	1125	1325	2.00	RAS	BGR_210120_001
20/01/2021	GVP4	0930	1130	2.00	RE	BGR_210120_002
20/01/2021	GVP7	0900	1100	2.00	RAS	BGR_210120_003
20/01/2021	GVP7	1245	1445	2.00	RE	BGR_210120_004
21/01/2021	GVP7	0930	1130	2.00	RE	BGR_210121_001
21/01/2021	GVP7	1135	1335	2.00	RE	BGR_210121_002
25/01/2021	GVP4	1230	1430	2.00	RAS	BGR_210125_001
27/01/2021	GVP5	0915	1115	2.00	RAS	BGR_210127_001
27/01/2021	GVP6	1145	1345	2.00	RAS	BGR_210127_002
29/01/2021	GVP2	1245	1445	2.00	BU	BGR_210129_001
29/01/2021	GVP3	1015	1215	2.00	BU	BGR_210129_002
03/02/2021	GVP2	0855	1155	3.00	RE	BGR_210203_001
04/02/2021	GVP2	1140	1340	2.00	RE	BGR_210204_001
04/02/2021	GVP7	0815	1115	3.00	RE	BGR_210204_002
08/02/2021	GVP3	1240	1540	3.00	RE	BGR_210208_001
09/02/2021	GVP4	1015	1315	3.00	AA	BGR_210209_001
09/02/2021	GVP5	0855	1155	3.00	RE	BGR_210209_002
09/02/2021	GVP6	1235	1535	3.00	RE	BGR_210209_003
10/02/2021	GVP3	0855	1155	3.00	RE	BGR_210210_001
10/02/2021	GVP4	1250	1550	3.00	RE	BGR_210210_002
11/02/2021	GVP7	0855	1155	3.00	RE	BGR_210211_001
22/02/2021	GVP5	0840	1140	3.00	JH	BGR_210222_001
22/02/2021	GVP6	1210	1510	3.00	JH	BGR_210222_002
24/02/2021	GVP5	0820	0950	1.50	JH	BGR_210224_001
24/02/2021	GVP6	1030	1200	1.50	JH	BGR_210224_002
25/02/2021	GVP7	0835	1135	3.00	RE	BGR_210225_001
26/02/2021	GVP7	0815	1115	3.00	JH	BGR_210226_001
01/03/2021	GVP3	1225	1525	3.00	RAS	BGR_210301_001
03/03/2021	GVP2	1415	1715	3.00	RAS	BGR_210303_001
04/03/2021	GVP5	0900	1200	3.00	RAS	BGR_210304_001
04/03/2021	GVP6	1230	1530	3.00	RAS	BGR_210304_002
10/03/2021	GVP6	0935	1235	3.00	RE	BGR_210310_001
10/03/2021	GVP7	0855	1155	3.00	KC	BGR_210310_002
11/03/2021	GVP2	1220	1520	3.00	RE	BGR_210311_001
11/03/2021	GVP3	0840	1140	3.00	RE	BGR_210311_002
17/03/2021	GVP3	0810	1110	3.00	AA	BGR_210317_001
17/03/2021	GVP7	1200	1500	3.00	AA	BGR_210317_002
18/03/2021	GVP4	1425	1725	3.00	AA	BGR_210318_001
05/04/2021	GVP3	0830	1130	3.00	JH	BGR_210405_001
05/04/2021	GVP5	1200	1500	3.00	JH	BGR_210405_002

Date	GVP No.	Start time	End time	Duration	Observer	Watch ID*
06/04/2021	GVP5	1210	1510	3.00	JH	BGR_210406_001
07/04/2021	GVP7	1200	1500	3.00	JH	BGR_210407_001
09/04/2021	GVP7	0840	1140	3.00	JH	BGR_210409_001
12/04/2021	GVP2	0800	1100	3.00	MH	BGR_210412_001
12/04/2021	GVP3	1200	1500	3.00	MH	BGR_210412_002
12/04/2021	GVP5	0845	1145	3.00	JH	BGR_210412_003
12/04/2021	GVP6	1210	1510	3.00	JH	BGR_210412_004
13/04/2021	GVP6	1040	1340	3.00	JH	BGR_210413_001
14/04/2021	GVP6	0920	1220	3.00	JH	BGR_210414_001
14/04/2021	GVP7	0800	1100	3.00	MH	BGR_210414_002
15/04/2021	GVP6	0800	1100	3.00	MH	BGR_210415_001
15/04/2021	GVP7	1025	1325	3.00	JH	BGR_210415_002
15/04/2021	GVP7	1325	1625	3.00	JH	BGR_210415_003
16/04/2021	GVP2	0700	1000	3.00	JH	BGR_210416_001
16/04/2021	GVP5	0800	1100	3.00	MH	BGR_210416_002
19/04/2021	GVP3	1200	1500	3.00	MH	BGR_210419_001
19/04/2021	GVP4	0830	1130	3.00	MH	BGR_210419_002
20/04/2021	GVP4	1300	1600	3.00	MH	BGR_210420_001
21/04/2021	GVP4	1200	1500	3.00	MH	BGR_210421_001
21/04/2021	GVP4	1500	1700	2.00	MH	BGR_210421_002
22/04/2021	GVP2	1200	1330	1.50	MH	BGR_210422_001
22/04/2021	GVP4	0645	0945	3.00	MH	BGR_210422_002
22/04/2021	GVP4	0945	1045	1.00	MH	BGR_210422_003
23/04/2021	GVP2	1045	1215	1.50	MH	BGR_210423_001
27/04/2021	GVP2	1515	1615	1.00	BU	BGR_210427_001
27/04/2021	GVP7	1150	1450	3.00	BU	BGR_210427_002
28/04/2021	GVP2	1400	1600	2.00	BU	BGR_210428_001
28/04/2021	GVP7	1035	1335	3.00	BU	BGR_210428_002
30/04/2021	GVP3	1105	1405	3.00	BU	BGR_210430_001
03/05/2021	GVP2	1115	1415	3.00	MH	BGR_210503_001
03/05/2021	GVP3	0745	1045	3.00	MH	BGR_210503_002
04/05/2021	GVP6	1030	1330	3.00	MH	BGR_210504_001
05/05/2021	GVP7	0730	1030	3.00	MH	BGR_210505_001
07/05/2021	GVP5	0730	1030	3.00	MH	BGR_210507_001
10/05/2021	GVP3	1200	1500	3.00	JH	BGR_210510_001
10/05/2021	GVP5	0820	1120	3.00	JH	BGR_210510_002
11/05/2021	GVP6	1155	1455	3.00	JH	BGR_210511_001
12/05/2021	GVP6	0700	1000	3.00	JH	BGR_210512_001
13/05/2021	GVP2	1300	1600	3.00	JH	BGR_210513_001
13/05/2021	GVP7	0630	0930	3.00	JH	BGR_210513_002
14/05/2021	GVP2	0630	0930	3.00	JH	BGR_210514_001
17/05/2021	GVP3	1200	1500	3.00	MH	BGR_210517_001
17/05/2021	GVP4	0815	1115	3.00	MH	BGR_210517_002
17/05/2021	GVP5	0915	1215	3.00	JH	BGR_210517_003
18/05/2021	GVP4	1045	1345	3.00	MH	BGR_210518_001
19/05/2021	GVP4	1030	1330	3.00	JH	BGR_210519_001
19/05/2021	GVP7	1030	1330	3.00	MH	BGR_210519_002
01/06/2021	GVP2	1015	1315	3.00	MH	BGR_210601_001

Date	GVP No.	Start time	End time	Duration	Observer	Watch ID*
01/06/2021	GVP4	0630	0930	3.00	MH	BGR_210601_002
01/06/2021	GVP5	0630	0930	3.00	JH	BGR_210601_003
01/06/2021	GVP6	1000	1300	3.00	JH	BGR_210601_004
02/06/2021	GVP4	0930	1230	3.00	JH	BGR_210602_001
02/06/2021	GVP5	1015	1315	3.00	MH	BGR_210602_002
03/06/2021	GVP3	1000	1300	3.00	JH	BGR_210603_001
03/06/2021	GVP7	0615	0915	3.00	JH	BGR_210603_002
04/06/2021	GVP3	0615	0915	3.00	MH	BGR_210604_001
04/06/2021	GVP6	1015	1315	3.00	JH	BGR_210604_002
07/06/2021	GVP2	0930	1230	3.00	JH	BGR_210607_001
11/06/2021	GVP7	0700	1000	3.00	MH	BGR_210611_001
05/07/2021	GVP7	0930	1230	3.00	JH	BGR_210705_001
06/07/2021	GVP6	1000	1300	3.00	JH	BGR_210706_001
07/07/2021	GVP5	0820	1120	3.00	JH	BGR_210707_001
08/07/2021	GVP4	0925	1225	3.00	JH	BGR_210708_001
09/07/2021	GVP3	0650	0950	3.00	JH	BGR_210709_001
12/07/2021	GVP2	0830	1130	3.00	JH	BGR_210712_001
19/07/2021	GVP3	1000	1300	3.00	MH	BGR_210719_001
20/07/2021	GVP2	1100	1400	3.00	MH	BGR_210720_001
21/07/2021	GVP5	1045	1345	3.00	MH	BGR_210721_001
21/07/2021	GVP6	0715	1015	3.00	MH	BGR_210721_002
23/07/2021	GVP7	0615	0915	3.00	MH	BGR_210723_001
27/07/2021	GVP4	1015	1315	3.00	MH	BGR_210727_001
04/08/2021	GVP2	1320	1620	3.00	BU	BGR_210804_001
04/08/2021	GVP7	1000	1300	3.00	BU	BGR_210804_002
09/08/2021	GVP5	1020	1320	3.00	JH	BGR_210809_001
09/08/2021	GVP6	0645	0945	3.00	JH	BGR_210809_002
10/08/2021	GVP5	1300	1600	3.00	JH	BGR_210810_001
10/08/2021	GVP6	0930	1230	3.00	JH	BGR_210810_002
12/08/2021	GVP7	0620	0920	3.00	JH	BGR_210812_001
23/08/2021	GVP4	1315	1615	3.00	RE	BGR_210823_001
24/08/2021	GVP3	1210	1510	3.00	RE	BGR_210824_001
24/08/2021	GVP4	0835	1135	3.00	RE	BGR_210824_002
27/08/2021	GVP3	0815	1115	3.00	RE	BGR_210827_001
30/08/2021	GVP2	1005	1305	3.00	BU	BGR_210830_001
06/09/2021	GVP7	1315	1615	3.00	KB	BGR_210906_001
06/09/2021	GVP7	1645	1945	3.00	KB	BGR_210906_002
07/09/2021	GVP3	0935	1235	3.00	KB	BGR_210907_001
07/09/2021	GVP3	1300	1600	3.00	KB	BGR_210907_002
08/09/2021	GVP2	1740	2040	3.00	KB	BGR_210908_001
08/09/2021	GVP5	1020	1320	3.00	KB	BGR_210908_003
08/09/2021	GVP6	1340	1640	3.00	KB	BGR_210908_004
09/09/2021	GVP2	0755	1055	3.00	KB	BGR_210909_001
27/09/2021	GVP4	1330	1630	3.00	KB	BGR_210927_001
27/09/2021	GVP4	1700	1900	2.00	KB	BGR_210927_002
28/09/2021	GVP5	1120	1420	3.00	KB	BGR_210928_001
28/09/2021	GVP6	1435	1735	3.00	KB	BGR_210928_002

Date	GVP No.	Start time	End time	Duration	Observer	Watch ID*
11/10/2021	GVP2	1430	1730	3.00	RAS	BGR_211011_001
12/10/2021	GVP4	0940	1240	3.00	RAS	BGR_211012_001
12/10/2021	GVP7	1410	1710	3.00	RAS	BGR_211012_002
13/10/2021	GVP5	0920	1220	3.00	RAS	BGR_211013_001
13/10/2021	GVP6	1250	1550	3.00	RAS	BGR_211013_002
15/10/2021	GVP2	1120	1220	1.00	RAS	BGR_211015_001
15/10/2021	GVP3	0800	1100	3.00	RAS	BGR_211015_002
18/10/2021	GVP2	1205	1405	2.00	RAS	BGR_211018_001
19/10/2021	GVP7	1045	1345	3.00	RAS	BGR_211019_001
20/10/2021	GVP5	1330	1630	3.00	RAS	BGR_211020_001
20/10/2021	GVP6	0945	1245	3.00	RAS	BGR_211020_002
21/10/2021	GVP3	0800	1100	3.00	RAS	BGR_211021_001
21/10/2021	GVP4	1130	1430	3.00	RAS	BGR_211021_002
15/11/2021	GVP4	1330	1530	2.00	KB	BGR_211115_001
16/11/2021	GVP5	0915	1115	2.00	KB	BGR_211116_001
16/11/2021	GVP6	1120	1320	2.00	KB	BGR_211116_002
17/11/2021	GVP2	1350	1550	2.00	KB	BGR_211117_001
17/11/2021	GVP3	0905	1105	2.00	KB	BGR_211117_002
17/11/2021	GVP3	1120	1320	2.00	KB	BGR_211117_003
18/11/2021	GVP7	0840	1040	2.00	KB	BGR_211118_001
22/11/2021	GVP7	1210	1410	2.00	RAS	BGR_211122_001
23/11/2021	GVP5	0900	1100	2.00	RAS	BGR_211123_001
23/11/2021	GVP6	1130	1330	2.00	RAS	BGR_211123_002
24/11/2021	GVP4	1230	1430	2.00	RAS	BGR_211124_001
25/11/2021	GVP2	0835	1035	2.00	RAS	BGR_211125_001
01/12/2021	GVP7	1245	1445	2.00	RAS	BGR_211201_001
02/12/2021	GVP5	1135	1335	2.00	RAS	BGR_211202_001
02/12/2021	GVP6	0905	1105	2.00	RAS	BGR_211202_002
03/12/2021	GVP4	0845	1045	2.00	RAS	BGR_211203_001
06/12/2021	GVP7	1310	1510	2.00	KB	BGR_211206_001
07/12/2021	GVP2	0925	1125	2.00	KB	BGR_211207_001
08/12/2021	GVP5	0935	1135	2.00	KB	BGR_211208_001
08/12/2021	GVP6	1205	1405	2.00	KB	BGR_211208_002
09/12/2021	GVP3	0940	1140	2.00	KB	BGR_211209_001
09/12/2021	GVP3	1155	1355	2.00	KB	BGR_211209_002
10/12/2021	GVP4	0840	1040	2.00	KB	BGR_211210_001
17/12/2021	GVP2	1330	1530	2.00	BU	BGR_211217_001
18/01/2022	GVP7	1200	1400	2.00	RAS	BGR_220118_001
19/01/2022	GVP4	0910	1110	2.00	RAS	BGR_220119_001
20/01/2022	GVP5	0940	1140	2.00	RAS	BGR_220120_001
20/01/2022	GVP6	1215	1415	2.00	RAS	BGR_220120_002
21/01/2022	GVP2	0845	1045	2.00	RAS	BGR_220121_001
24/01/2022	GVP2	1055	1255	2.00	KB	BGR_220124_001
24/01/2022	GVP7	1340	1540	2.00	KB	BGR_220124_002
25/01/2022	GVP5	1215	1415	2.00	KB	BGR_220125_001
25/01/2022	GVP6	0950	1150	2.00	KB	BGR_220125_002
26/01/2022	GVP3	0840	1040	2.00	KB	BGR_220126_001
26/01/2022	GVP3	1050	1250	2.00	KB	BGR_220126_002

Date	GVP No.	Start time	End time	Duration	Observer	Watch ID*
27/01/2022	GVP4	0855	1055	2.00	KB	BGR_220127_001
08/02/2022	GVP2	1345	1645	3.00	BU	BGR_220208_001
09/02/2022	GVP2	1115	1415	3.00	BU	BGR_220209_001
10/02/2022	GVP3	1250	1550	3.00	AA	BGR_220210_001
10/02/2022	GVP7	0905	1205	3.00	AA	BGR_220210_002
11/02/2022	GVP5	0820	1120	3.00	AA	BGR_220211_001
11/02/2022	GVP6	1140	1440	3.00	AA	BGR_220211_002
14/02/2022	GVP7	0915	1215	3.00	MH	BGR_220214_001
16/02/2022	GVP4	0845	1145	3.00	MH	BGR_220216_001
17/02/2022	GVP3	0845	1145	3.00	MH	BGR_220217_001
21/02/2022	GVP4	1245	1545	3.00	RAS	BGR_220221_001
22/02/2022	GVP5	1345	1645	3.00	RAS	BGR_220222_001
22/02/2022	GVP6	1015	1315	3.00	RAS	BGR_220222_002
07/03/2022	GVP3	1245	1545	3.00	RAS	BGR_220307_001
08/03/2022	GVP5	0930	1230	3.00	RAS	BGR_220308_001
08/03/2022	GVP6	1300	1600	3.00	RAS	BGR_220308_002
10/03/2022	GVP2	0830	1130	3.00	RAS	BGR_220310_001
10/03/2022	GVP4	1230	1530	3.00	RAS	BGR_220310_002
11/03/2022	GVP7	0820	1120	3.00	RAS	BGR_220311_001
14/03/2022	GVP7	1220	1520	3.00	RAS	BGR_220314_001
16/03/2022	GVP5	1345	1645	3.00	RAS	BGR_220316_001
16/03/2022	GVP6	1015	1315	3.00	RAS	BGR_220316_002
17/03/2022	GVP3	0820	0920	1.00	RAS	BGR_220317_001
21/03/2022	GVP2	1440	1740	3.00	RAS	BGR_220321_001
21/03/2022	GVP3	1220	1420	2.00	RAS	BGR_220321_002
23/03/2022	GVP4	0930	1230	3.00	RAS	BGR_220323_001
11/04/2022	GVP2	1230	1530	3.00	RAS	BGR_220411_001
13/04/2022	GVP3	1310	1610	3.00	RAS	BGR_220413_001
13/04/2022	GVP4	0935	1235	3.00	RAS	BGR_220413_002
15/04/2022	GVP7	0810	1110	3.00	RAS	BGR_220415_001
18/04/2022	GVP2	1230	1530	3.00	SB	BGR_220418_001
19/04/2022	GVP5	0900	1200	3.00	SB	BGR_220419_001
19/04/2022	GVP6	1215	1515	3.00	SB	BGR_220419_002
20/04/2022	GVP3	0815	1115	3.00	SB	BGR_220420_001
20/04/2022	GVP4	1200	1500	3.00	BU	BGR_220420_002
20/04/2022	GVP7	1200	1500	3.00	SB	BGR_220420_003
21/04/2022	GVP3	0750	1050	3.00	SB	BGR_220421_001
21/04/2022	GVP4	1130	1430	3.00	SB	BGR_220421_002
21/04/2022	GVP6	1145	1445	3.00	BU	BGR_220421_003
22/04/2022	GVP2	0910	1210	3.00	SB	BGR_220422_001
25/04/2022	GVP5	1235	1535	3.00	RE	BGR_220425_001
26/04/2022	GVP6	1200	1500	3.00	RAS	BGR_220426_001
29/04/2022	GVP5	0820	1120	3.00	RE	BGR_220429_001
02/05/2022	GVP3	1310	1610	3.00	RAS	BGR_220502_001
06/05/2022	GVP7	0850	1150	3.00	RAS	BGR_220506_001
09/05/2022	GVP2	1300	1600	3.00	RE	BGR_220509_001
10/05/2022	GVP6	1045	1345	3.00	RAS	BGR_220510_001

Date	GVP No.	Start time	End time	Duration	Observer	Watch ID*
11/05/2022	GVP4	1045	1345	3.00	RAS	BGR_220511_001
13/05/2022	GVP5	0845	1145	3.00	RE	BGR_220513_001
17/05/2022	GVP7	1045	1345	3.00	BU	BGR_220517_001
23/05/2022	GVP2	1405	1705	3.00	SB	BGR_220523_001
24/05/2022	GVP3	0855	1155	3.00	SB	BGR_220524_001
24/05/2022	GVP6	1240	1540	3.00	SB	BGR_220524_002
25/05/2022	GVP3	1520	1820	3.00	SB	BGR_220525_001
25/05/2022	GVP4	1020	1320	3.00	BU	BGR_220525_002
25/05/2022	GVP7	1135	1435	3.00	SB	BGR_220525_003
26/05/2022	GVP4	1150	1450	3.00	SB	BGR_220526_001
26/05/2022	GVP6	0805	1105	3.00	SB	BGR_220526_002
27/05/2022	GVP2	0805	1105	3.00	SB	BGR_220527_001
06/06/2022	GVP3	1230	1530	3.00	RAS	BGR_220606_001
07/06/2022	GVP5	0915	1215	3.00	RAS	BGR_220607_001
07/06/2022	GVP6	1315	1615	3.00	RAS	BGR_220607_002
08/06/2022	GVP7	1415	1715	3.00	RAS	BGR_220608_001
09/06/2022	GVP4	1445	1645	2.00	RAS	BGR_220609_001
10/06/2022	GVP2	0815	1115	3.00	RAS	BGR_220610_001
13/06/2022	GVP2	1210	1510	3.00	RAS	BGR_220613_001
14/06/2022	GVP5	1345	1645	3.00	RAS	BGR_220614_001
15/06/2022	GVP6	1345	1645	3.00	RAS	BGR_220615_001
16/06/2022	GVP7	0830	1130	3.00	RAS	BGR_220616_001
29/06/2022	GVP3	1255	1555	3.00	RE	BGR_220629_001
29/06/2022	GVP4	0850	1150	3.00	RAS	BGR_220629_002
29/06/2022	GVP4	1150	1250	1.00	RAS	BGR_220629_003
01/07/2022	GVP3	0830	1130	3.00	RAS	BGR_220701_001
04/07/2022	GVP2	1245	1545	3.00	RAS	BGR_220704_001
05/07/2022	GVP4	1230	1530	3.00	RAS	BGR_220705_001
06/07/2022	GVP7	1430	1630	2.00	RAS	BGR_220706_001
08/07/2022	GVP7	0900	1200	3.00	RAS	BGR_220708_001
08/07/2022	GVP7	1200	1300	1.00	RAS	BGR_220708_002
11/07/2022	GVP3	1305	1605	3.00	RAS	BGR_220711_001
12/07/2022	GVP4	0900	1200	3.00	RAS	BGR_220712_001
13/07/2022	GVP5	1315	1615	3.00	RAS	BGR_220713_001
14/07/2022	GVP6	1415	1715	3.00	RAS	BGR_220714_001
15/07/2022	GVP2	0850	1150	3.00	RAS	BGR_220715_001
19/07/2022	GVP5	1300	1600	3.00	RAS	BGR_220719_001
19/07/2022	GVP6	0930	1230	3.00	RAS	BGR_220719_002
08/08/2022	GVP2	1325	1625	3.00	RAS	BGR_220808_001
10/08/2022	GVP3	0830	1130	3.00	RAS	BGR_220810_001
10/08/2022	GVP4	1150	1450	3.00	RAS	BGR_220810_002
24/08/2022	GVP5	1010	1310	3.00	RE	BGR_220824_001
24/08/2022	GVP6	1345	1645	3.00	RE	BGR_220824_002
25/08/2022	GVP7	1000	1300	3.00	RE	BGR_220825_001
26/08/2022	GVP4	1135	1435	3.00	BU	BGR_220826_001
29/08/2022	GVP3	1250	1550	3.00	RAS	BGR_220829_001
30/08/2022	GVP2	1150	1450	3.00	RAS	BGR_220830_001
30/08/2022	GVP7	0830	1130	3.00	RAS	BGR_220830_002

Date	GVP No.	Start time	End time	Duration	Observer	Watch ID*
31/08/2022	GVP5	0900	1200	3.00	RAS	BGR_220831_001
31/08/2022	GVP6	1230	1530	3.00	RAS	BGR_220831_002

Appendix 3: Weather details for GVP Watches

Precipitation Codes: Continuous / Intermittent + Light / Heavy + Rain / Snow / Hail / Fog

Watch ID	Period	Cloud (10ths)	Cloud base (m)	Wind Direction	Wind Force	Precipitation	Visibility (km)
BGR_200924_001	0	4	1000	NNE	1	nil	20
BGR_200924_001	1	4	1000	NE	1	nil	20
BGR_200924_001	2	5	1000	ENE	2	nil	20
BGR_200924_001	3	5	1000	ENE	2	nil	20
BGR_200929_001	0	8	1000	S	4	nil	4
BGR_200929_001	1	7	1000	SW	4	ILR	4
BGR_200929_001	2	7	900	SW	5	nil	4
BGR_200929_001	3	6	900	SW	5	nil	4
BGR_200924_002	0	5	1000	NE	2	nil	20
BGR_200924_002	1	7	1000	NNE	3	nil	20
BGR_200924_002	2	9	1000	NNE	3	nil	20
BGR_200924_002	3	10	1000	NNE	3	nil	20
BGR_200930_001	0	10	500	SE	1	CHR	1.5
BGR_200930_001	1	10	500	W	2	CHR	1.5
BGR_200930_001	2	10	600	nil	0	CHR	2
BGR_200930_001	3	10	500	NW	3	CHR	1.5
BGR_200924_003	0	5	1500	NE	3	nil	8
BGR_200924_003	1	7	1500	NE	3	nil	5
BGR_200924_003	2	8	1500	NE	4	nil	5
BGR_200924_003	3	8	1500	NE	4	nil	5
BGR_200928_001	0	10	600	SW	4	ILR	3
BGR_200928_001	1	9	700	SW	5	nil	3
BGR_200928_001	2	10	600	SW	5	ILR	3
BGR_200928_001	3	10	600	SW	5	ILF	3
BGR_200923_001	0	5	1000	WSW	1	nil	20
BGR_200923_001	1	5	1000	nil	0	nil	20
BGR_200923_001	2	5	1000	nil	0	nil	20
BGR_200923_001	3	6	1000	W	1	nil	20
BGR_200929_002	0	10	600	S	4	ILF	2
BGR_200929_002	1	8	800	SW	4	nil	3
BGR_200929_002	2	7	900	S	4	nil	4
BGR_200929_002	3	7	900	SW	4	ILR	3
BGR_200924_004	0	2	1500	NE	2	nil	5
BGR_200924_004	1	2	1500	NE	2	nil	5
BGR_200924_004	2	4	1500	NE	2	nil	5
BGR_200924_004	3	4	1500	NE	2	nil	5

Watch ID	Period	Cloud (10ths)	Cloud base (m)	Wind Direction	Wind Force	Precipitation	Visibility (km)
BGR_200925_001	0	4	1000	NW	5	nil	6
BGR_200925_001	1	5	1200	NW	4	nil	6
BGR_200925_001	2	8	1200	N	4	ILR	3
BGR_200925_001	3	8	1200	NW	5	nil	4
BGR_200923_002	0	2	1000	NW	2	nil	4
BGR_200923_002	1	5	1000	N	1	nil	4
BGR_200923_002	2	4	1000	NE	1	nil	5
BGR_200923_002	3	5	1000	NE	1	nil	5
BGR_200925_002	0	3	1000	N	3	nil	5
BGR_200925_002	1	1	900	NW	3	nil	5
BGR_200925_002	2	2	900	N	4	nil	5
BGR_200925_002	3	3	900	NW	4	nil	5
BGR_201002_001	0	1	1500	SW	4	nil	5
BGR_201002_001	1	1	2000	SW	4	nil	5
BGR_201002_001	2	0	-		4	nil	5
BGR_201002_001	3	0	-		5	nil	5
BGR_201005_001	0	8	1000	ENE	2	nil	5
BGR_201005_001	1	8	1000	nil	0	nil	5
BGR_201005_001	2	10	1000	NW	4	nil	3
BGR_201005_001	3	10	900	W	5	nil	3
BGR_201001_001	0	10	500	NW	3	CLR	2
BGR_201001_001	1	10	500	N	3	ILR	2
BGR_201001_001	2	9	600	NE	3	ILF	3
BGR_201001_001	3	10	600	NE	2	nil	3
BGR_201008_001	0	7	900	W	6	nil	4
BGR_201008_001	1	8	800	NW	7	IHR	3
BGR_201008_001	2	8	800	NW	7	IHH	2
BGR_201008_001	3	8	700	NW	7	IHH	2
BGR_201002_002	0	7	1500	SW	4	nil	5
BGR_201002_002	1	5	1500	SW	4	nil	5
BGR_201002_002	2	2	1500	SW	5	nil	5
BGR_201002_002	3	1	1500	SW	5	nil	5
BGR_201007_001	0	9	600	NW	5	nil	3
BGR_201007_001	1	9	600	NW	6	IHR	2
BGR_201007_001	2	9	600	NW	6	IHR	2
BGR_201007_001	3	9	600	NW	6	IHR	2
BGR_201005_002	0	1	1500	E	2	nil	5
BGR_201005_002	1	5	1500	NW	1	nil	5
BGR_201005_002	2	6	1000	NE	1	nil	5
BGR_201005_002	3	6	1000	E	1	nil	5
BGR_201008_002	0	5	1000	SW	2	nil	3
BGR_201008_002	1	6	800	SW	3	nil	3
BGR_201008_002	2	8	900	SW	3	nil	3
BGR_201008_002	3	8	900	SW	4	ILR	3
BGR_201006_001	0	10	800	N	4	ILF	3
BGR_201006_001	1	10	600	NW	4	CLR	2
BGR_201006_001	2	10	600	N	4	IHR	2
BGR_201006_001	3	10	500	NW	4	IHF	2

Watch ID	Period	Cloud (10ths)	Cloud base (m)	Wind Direction	Wind Force	Precipitation	Visibility (km)
BGR_201007_002	0	10	500	NW	7	IHF	2
BGR_201007_002	1	10	700	NW	6	IHF	2
BGR_201007_002	2	10	600	NW	6	IHR	2
BGR_201007_002	3	10	700	NW	6	nil	3
BGR_201001_002	0	10	600	NE	3	CHR	2
BGR_201001_002	1	10	600	N	2	CHR	2
BGR_201001_002	2	10	600	N	2	ILR	3
BGR_201001_002	3	10	700	NE	2	ILR	3
BGR_201006_002	0	10	600	NE	3	CLR	2
BGR_201006_002	1	10	600	NE	3	IHF	2
BGR_201006_002	2	10	500	N	3	IHR	2
BGR_201006_002	3	10	700	NE	3	ILF	2
BGR_201116_001	0	9	800	SW	6	ILR	3
BGR_201116_001	1	10	700	SW	7	IHR	2
BGR_201116_001	2	10	700	SW	7	IHR	2
BGR_201116_001	3	10	600	SW	7	IHR	1.5
BGR_201118_001	0	10	500	SW	7	CHR	1
BGR_201118_001	1	10	500	SW	7	CHR	1
BGR_201110_001	0	10	500	S	6	CLR	5
BGR_201110_001	1	10	400	S	6	CLR	1
BGR_201111_001	0	10	400	S	7	CHR	1.5
BGR_201111_001	1	10	400	S	7	CHR	1.5
BGR_201111_001	2	10	400	S	7	CHR	2
BGR_201111_001	3	10	400	S	7	CHR	3
BGR_201109_001	0	8	1000	SE	5	nil	10
BGR_201109_001	1	7	1000	SE	5	nil	10
BGR_201109_001	2	8	900	SE	6	nil	10
BGR_201109_001	3	7	900	SE	6	nil	10
BGR_201118_002	0	10	500	SW	7	CHR	1
BGR_201118_002	1	10	600	SW	7	CHR	1
BGR_201110_002	0	10	400	SE	3	nil	2
BGR_201110_002	1	10	400	SE	3	nil	2
BGR_201110_002	2	10	400	SE	4	nil	3
BGR_201110_002	3	10	500	SE	4	ILR	5
BGR_201120_001	0	10	400	SW	5	CHR	1
BGR_201120_001	1	10	500	SW	5	CHR	1
BGR_201119_001	0	3	1500	NW	3	nil	4
BGR_201119_001	1	5	1500	NW	3	IHH	3
BGR_201119_001	2	8	1000	W	3	IHH	3
BGR_201119_001	3	7	1000	W	3	IHH	3
BGR_201119_002	0	7	1000	NW	5	nil	4
BGR_201119_002	1	8	1000	NW	5	nil	4
BGR_201119_002	2	9	1000	NW	4	nil	4
BGR_201119_002	3	10	1000	NW	4	nil	4
BGR_201210_001	0	10	400	S	5	CLR	1
BGR_201210_001	1	10	400	S	5	CLR	0.8
BGR_201210_001	2	10	400	SE	6	CHR	0.8

Watch ID	Period	Cloud (10ths)	Cloud base (m)	Wind Direction	Wind Force	Precipitation	Visibility (km)
BGR_201211_001	0	10	900	E	7	nil	3
BGR_201211_001	1	10	700	E	7	CLR	1
BGR_201211_001	2	10	800	SE	7	ILR	2
BGR_201216_001	0	10	500	SE	6	CLR	1
BGR_201216_001	1	10	500	SE	6	CLR	1
BGR_201216_001	2	10	500	SE	6	CLR	1
BGR_201214_001	0	10	500	SW	5	ILR	2
BGR_201214_001	1	10	600	SW	5	ILR	3
BGR_201214_001	2	8	700	SW	6	nil	5
BGR_201218_001	0	10	600	SSE	6	nil	3
BGR_201218_001	1	10	600	SSE	6	nil	5
BGR_201218_001	2	10	500	SSE	6	CHR	1
BGR_201210_002	0	10	500	S	5	CLR	1
BGR_201210_002	1	10	400	SE	5	CLR	1
BGR_201210_002	2	10	400	S	5	CLR	1
BGR_201216_002	0	10	500	SE	5	ILR	2
BGR_201216_002	1	9	500	SE	6	ILR	4
BGR_201216_002	2	10	600	SE	5	ILR	4
BGR_201215_001	0	8	600	S	5	nil	5
BGR_201215_001	1	9	700	S	5	nil	5
BGR_201215_001	2	7	700	S	5	nil	5
BGR_201217_001	0	9	600	SW	5	nil	5
BGR_201217_001	1	9	600	SW	5	nil	5
BGR_201217_001	2	9	600	SW	5	nil	5
BGR_201215_002	0	6	800	S	5	nil	5
BGR_201215_002	1	7	700	S	5	nil	5
BGR_201215_002	2	6	700	S	4	nil	5
BGR_201217_002	0	10	400	SW	4	IHF	0.5
BGR_201217_002	1	10	400	SW	4	ILF	1
BGR_201217_002	2	9	500	SW	5	ILR	3
BGR_210120_001	0	2	1000	N	2	nil	5
BGR_210120_001	1	3	1000	N	2	IHF	4
BGR_210120_001	2	4	1000	N	2	IHF	4
BGR_210129_001	0	9	1000	NE	3	nil	20
BGR_210129_001	1	9	1000	NE	4	ILS	20
BGR_210129_001	2	8	1000	NE	3	nil	20
BGR_210118_001	0	9	600	W	4	nil	5
BGR_210118_001	1	9	600	W	4	ILR	4
BGR_210118_001	2	10	400	W	4	CLR	1
BGR_210129_002	0	10	1000	NE	3	ILS	20
BGR_210129_002	1	10	1000	NE	3	ILS	20
BGR_210129_002	2	10	1000	NE	3	nil	20
BGR_210120_002	0	0	-	nil	0	nil	3
BGR_210120_002	1	0	-	nil	0	nil	3
BGR_210120_002	2	0	-	nil	0	nil	3
BGR_210125_001	0	4	700	WNNW	3	nil	5
BGR_210125_001	1	4	700	WNNW	3	nil	5
BGR_210125_001	2	5	700	WNNW	3	nil	5

Watch ID	Period	Cloud (10ths)	Cloud base (m)	Wind Direction	Wind Force	Precipitation	Visibility (km)
BGR_210119_001	0	10	900	SSE	2	nil	5
BGR_210119_001	1	10	900	SSE	2	nil	5
BGR_210119_001	2	10	900	SE	3	ILF	4
BGR_210127_001	0	9	400	nil	0	IHF	1
BGR_210127_001	1	10	300	W	1	CHF	0.3
BGR_210127_001	2	9	400	W	2	IHF	1
BGR_210119_002	0	10	900	SW	2	nil	5
BGR_210119_002	1	10	900	SW	1	nil	5
BGR_210119_002	2	10	900	SW	1	nil	5
BGR_210127_002	0	10	500	nil	0	IHF	0.5
BGR_210127_002	1	10	500	SE	2	IHF	0.5
BGR_210127_002	2	10	500	E	3	IHF	0.5
BGR_210105_001	0	4	3000	nil	0	nil	5
BGR_210105_001	1	2	3000	S	1	nil	5
BGR_210105_001	2	2	3000	nil	0	nil	4
BGR_210108_001	0	2	3000	S	1	nil	5
BGR_210108_001	1	0	-	nil	0	nil	5
BGR_210108_001	2	0	-	S	1	nil	5
BGR_210120_003	0	1	1000	N	2	nil	5
BGR_210120_003	1	1	1000	N	2	nil	5
BGR_210120_003	2	2	1000	N	2	nil	5
BGR_210120_004	0	2	800	SE	2	nil	3
BGR_210120_004	1	5	700	SE	1	nil	3
BGR_210120_004	2	8	400	E	1	IHF	1
BGR_210121_001	0	10	700	NW	8	IHS	2
BGR_210121_001	1	10	600	NW	8	IHH	2
BGR_210121_001	2	9	600	NW	8	IHH	2
BGR_210121_002	0	10	600	NW	8	IHR	2
BGR_210121_002	1	10	500	NW	8	IHH	2
BGR_210121_002	2	10	500	NW	8	IHH	1
BGR_210203_001	0	10	600	E	10	CLS	0.8
BGR_210203_001	1	10	600	E	10	CLS	1
BGR_210203_001	2	10	600	E	10	CLS	1
BGR_210203_001	3	10	500	E	10	CHS	0.8
BGR_210204_001	0	10	600	E	9	CLS	1.5
BGR_210204_001	1	10	600	E	9	CHS	0.8
BGR_210204_001	2	10	600	E	9	CHS	0.8
BGR_210204_001	3	10	600	E	10	CHS	0.5
BGR_210208_001	0	6	800	E	7	nil	2
BGR_210208_001	1	7	800	E	7	ILS	1.5
BGR_210208_001	2	8	800	E	7	ILS	1.5
BGR_210208_001	3	7	800	E	7		2
BGR_210210_001	0	0	-	E	4	nil	3
BGR_210210_001	1	0	-	E	5	nil	3
BGR_210210_001	2	0	-	E	6	nil	3
BGR_210210_001	3	0	-	E	7	nil	3
BGR_210209_001	0	3	1000	SE	3	nil	20

Watch ID	Period	Cloud (10ths)	Cloud base (m)	Wind Direction	Wind Force	Precipitation	Visibility (km)
BGR_210209_001	1	3	1000	SE	3	nil	20
BGR_210209_001	2	3	1000	SE	3	nil	20
BGR_210209_001	3	3	1000	SE	3	nil	20
BGR_210210_002	0	0	-	E	5	nil	3
BGR_210210_002	1	0	-	E	5	nil	3
BGR_210210_002	2	1	1500	E	5	nil	3
BGR_210210_002	3	2	1500	E	6	nil	3
BGR_210209_002	0	2	900	E	5	nil	3
BGR_210209_002	1	1	900	NE	5	nil	3
BGR_210209_002	2	2	1000	E	5	nil	3
BGR_210209_002	3	2	1000	NE	6	nil	3
BGR_210222_001	0	2	500	S	6	nil	10
BGR_210222_001	1	2	600	S	6	nil	10
BGR_210222_001	2	2	700	S	6	nil	10
BGR_210222_001	3	6	700	S	6	nil	10
BGR_210224_001	0	10	500	S	7	CHR	2
BGR_210224_001	1	10	500	S	7	IHR	3
BGR_210209_003	0	1	1000	NE	6	nil	3
BGR_210209_003	1	1	1000	NE	6	nil	3
BGR_210209_003	2	2	1000	NE	6	nil	3
BGR_210209_003	3	3	1000	E	5	nil	3
BGR_210222_002	0	8	700	S	5	nil	10
BGR_210222_002	1	5	800	S	5	nil	10
BGR_210222_002	2	7	800	S	5	nil	10
BGR_210222_002	3	5	900	S	5	nil	10
BGR_210224_002	0	10	600	S	7	nil	5
BGR_210224_002	1	10	500	S	7	ILR	5
BGR_210204_002	0	10	700	NE	8	nil	2
BGR_210204_002	1	10	700	E	9	nil	2
BGR_210204_002	2	10	700	E	9	CLS	1
BGR_210204_002	3	10	700	E	9	CLS	1
BGR_210211_001	0	1	2000	E	6	nil	3
BGR_210211_001	1	2	2000	E	6	nil	3
BGR_210211_001	2	3	2000	E	6	nil	3
BGR_210211_001	3	4	1500	E	8	nil	3
BGR_210225_001	0	5	700	WSW	8	nil	2
BGR_210225_001	1	5	700	SW	7	nil	2
BGR_210225_001	2	6	700	SW	7	nil	
BGR_210225_001	3	8	700	SW	7	nil	2
BGR_210226_001	0	9	400	SE	3	CLR	2
BGR_210226_001	1	10	400	S	3	ILR	2
BGR_210226_001	2	10	400	S	3	ILR	5
BGR_210226_001	3	10	500	S	3	nil	8
BGR_210303_001	0	10	400	SE	3	ILF	1
BGR_210303_001	1	10	400	SE	2	ILF	3
BGR_210303_001	2	10	500	SE	2	nil	4
BGR_210303_001	3	10	500	SE	2	nil	4
BGR_210311_001	0	10	600	W	8	CHR	0.8

Watch ID	Period	Cloud (10ths)	Cloud base (m)	Wind Direction	Wind Force	Precipitation	Visibility (km)
BGR_210311_001	1	10	600	W	8	IHR	1.5
BGR_210311_001	2	10	500	W	8	IHR	2
BGR_210311_001	3	9	600	W	8	IHR	1.5
BGR_210301_001	0	3	900	SE	3	nil	5
BGR_210301_001	1	3	900	SE	4	nil	5
BGR_210301_001	2	3	900	S	4	nil	5
BGR_210301_001	3	2	1000	S	3	nil	5
BGR_210311_002	0	9	600	W	8	IHR	2
BGR_210311_002	1	10	600	W	8	IHH	1
BGR_210311_002	2	9	500	W	7	IHH	1
BGR_210311_002	3	9	600	W	7	IHH	1
BGR_210317_001	0	10	600	NW	5	nil	20
BGR_210317_001	1	8	700	NW	4	nil	20
BGR_210317_001	2	7	700	NW	4	nil	20
BGR_210317_001	3	7	700	NW	4	nil	20
BGR_210318_001	0	10	1000	NW	4	nil	20
BGR_210318_001	1	10	1000	NW	3	nil	20
BGR_210318_001	2	10	1000	NW	3	nil	20
BGR_210318_001	3	10	1000	NW	3	nil	20
BGR_210304_001	0	8	800	E	2	nil	5
BGR_210304_001	1	9	800	E	3	nil	5
BGR_210304_001	2	7	800	E	3	nil	5
BGR_210304_001	3	7	800	E	3	nil	5
BGR_210304_002	0	8	800	NE	4	nil	5
BGR_210304_002	1	9	800	NE	4	nil	5
BGR_210304_002	2	7	800	NE	4	nil	5
BGR_210304_002	3	6	900	NE	3	nil	5
BGR_210310_001	0	10	700	SW	6	nil	2
BGR_210310_001	1	10	700	SW	6	nil	2
BGR_210310_001	2	10	800	S	6	IHR	2
BGR_210310_001	3	10	700	S	6	CHR	0.8
BGR_210310_002	0	8	500	SW	3	nil	10
BGR_210310_002	1	7	600	SW	4	nil	10
BGR_210310_002	2	9	600	SW	5	nil	10
BGR_210310_002	3	10	400	S	5	IHR	5
BGR_210317_002	0	10	1000	NW	4	nil	20
BGR_210317_002	1	8	1000	NW	3	nil	20
BGR_210317_002	2	7	1000	NW	3	nil	20
BGR_210317_002	3	7	1000	NW	3	nil	20
BGR_210412_001	0	0	-	E	1	nil	10
BGR_210412_001	1	0	-	E	1	nil	10
BGR_210412_001	2	0	-	N	2	nil	10
BGR_210412_001	3	0	-	N	2	nil	10
BGR_210416_001	0	0	-	SE	4	nil	10
BGR_210416_001	1	0	-	SE	4	nil	10
BGR_210416_001	2	3	1500	SE	4	nil	10
BGR_210416_001	3	7	1200	SE	4	nil	10

Watch ID	Period	Cloud (10ths)	Cloud base (m)	Wind Direction	Wind Force	Precipitation	Visibility (km)
BGR_210422_001	0	1	1000	SW	3	nil	10
BGR_210422_001	1	3	1000	W	3	nil	10
BGR_210422_001	2	3	1000	W	3	nil	10
BGR_210423_001	0	3	1000	SE	3	nil	10
BGR_210423_001	1	6	1000	SE	3	nil	10
BGR_210423_001	2	8	1000	SE	4	nil	10
BGR_210427_001	0	10	1000	NE	3	nil	20
BGR_210427_001	1	8	1000	NE	3	nil	20
BGR_210428_001	0	8	1000	N	2	nil	20
BGR_210428_001	1	9	1000	N	3	nil	20
BGR_210428_001	2	9	1000	N	3	nil	20
BGR_210405_001	0	7	1000	NW	6	nil	10
BGR_210405_001	1	8	800	NW	6	ILS	8
BGR_210405_001	2	8	600	NW	6	ILS	5
BGR_210405_001	3	7	700	NW	6	ILS	8
BGR_210412_002	0	0	-	W	1	nil	10
BGR_210412_002	1	0	-	W	2	nil	10
BGR_210412_002	2	0	-	W	1	nil	10
BGR_210412_002	3	0	-	W	1	nil	10
BGR_210419_001	0	10	1000	S	5	nil	10
BGR_210419_001	1	10	1000	S	5	nil	10
BGR_210419_001	2	10	1000	S	5	nil	10
BGR_210419_001	3	10	1000	S	5	nil	10
BGR_210430_001	0	7	1000	NE	3	nil	20
BGR_210430_001	1	9	1000	NE	2	nil	20
BGR_210430_001	2	10	1000	NE	2	ILS	20
BGR_210430_001	3	9	1000	NE	2	ILS	20
BGR_210419_002	0	10	1000	S	3	nil	10
BGR_210419_002	1	10	1000	S	3	nil	10
BGR_210419_002	2	10	1000	S	3	nil	10
BGR_210419_002	3	10	1000	S	3	nil	10
BGR_210420_001	0	10	800	SW	3	nil	10
BGR_210420_001	1	10	1000	SW	3	nil	10
BGR_210420_001	2	8	1000	SW	3	nil	10
BGR_210420_001	3	8	1000	SW	3	nil	10
BGR_210421_001	0	0	-	SE	3	nil	10
BGR_210421_001	1	0	-	SE	2	nil	10
BGR_210421_001	2	0	-	SE	2	nil	10
BGR_210421_001	3	0	-	SE	2	nil	10
BGR_210421_002	0	0	-	SE	2	nil	10
BGR_210421_002	1	0	-	SE	2	nil	10
BGR_210421_002	2	0	-	SE	2	nil	10
BGR_210422_002	0	2	100	SE	1	nil	10
BGR_210422_002	1	0	-	SE	1	nil	10
BGR_210422_002	2	0	-	SE	1	nil	10
BGR_210422_002	3	1	100	SE	1	nil	10
BGR_210422_003	0	2	1000	SE	1	nil	10
BGR_210422_003	1	2	1000	SE	1	nil	10

Watch ID	Period	Cloud (10ths)	Cloud base (m)	Wind Direction	Wind Force	Precipitation	Visibility (km)
BGR_210405_002	0	7	1000	NW	6	nil	10
BGR_210405_002	1	8	1000	NW	6	nil	10
BGR_210405_002	2	8	1000	NW	5	ILS	10
BGR_210405_002	3	9	800	NW	5	ILS	8
BGR_210406_001	0	3	1000	NW	6	nil	10
BGR_210406_001	1	5	1000	NW	6	nil	10
BGR_210406_001	2	6	1000	NW	6	ILS	10
BGR_210406_001	3	7	1000	NW	6	nil	10
BGR_210412_003	0	0	-	nil	0	nil	10
BGR_210412_003	1	0	-	W	1	nil	10
BGR_210412_003	2	0	-	W	1	nil	10
BGR_210412_003	3	0	-	W	1	nil	10
BGR_210416_002	0	0	-	SE	5	nil	10
BGR_210416_002	1	3	1000	SE	4	nil	10
BGR_210416_002	2	8	1000	S	4	nil	10
BGR_210416_002	3	8	1000	S	4	nil	10
BGR_210412_004	0	0	-	W	2	nil	10
BGR_210412_004	1	0	-	W	2	nil	10
BGR_210412_004	2	0	-	W	3	nil	10
BGR_210412_004	3	0	-	W	2	nil	10
BGR_210413_001	0	10	600	SW	1	CLR	8
BGR_210413_001	1	10	700	SW	1	CLR	8
BGR_210413_001	2	10	700	SW	1	CLR	8
BGR_210413_001	3	10	800	SW	1	ILR	10
BGR_210414_001	0	1	-	NW	1	nil	10
BGR_210414_001	1	2	1500	NW	1	nil	10
BGR_210414_001	2	4	1200	NW	1	nil	10
BGR_210414_001	3	5	1000	NW	2	nil	10
BGR_210415_001	0	0	-	S	5	nil	10
BGR_210415_001	1	0	-	S	4	nil	10
BGR_210415_001	2	0	-	S	4	nil	10
BGR_210415_001	3	0	-	S	4	nil	10
BGR_210407_001	0	9	1500	W	5	nil	10
BGR_210407_001	1	9	1200	W	5	nil	10
BGR_210407_001	2	10	1200	W	5	nil	10
BGR_210407_001	3	10	1000	W	5	nil	10
BGR_210409_001	0	0	-	W	5	nil	10
BGR_210409_001	1	1	-	W	5	nil	10
BGR_210409_001	2	5	1500	W	5	nil	10
BGR_210409_001	3	6	1200	W	5	nil	10
BGR_210414_002	0	0	-	S	1	nil	10
BGR_210414_002	1	0	-	S	1	nil	10
BGR_210414_002	2	0	-	N	2	nil	10
BGR_210414_002	3	3	1000	N	2	nil	10
BGR_210415_002	0	0	-	SE	3	nil	10
BGR_210415_002	1	0	-	SE	3	nil	10
BGR_210415_002	2	2	2000	S	3	nil	10

Watch ID	Period	Cloud (10ths)	Cloud base (m)	Wind Direction	Wind Force	Precipitation	Visibility (km)
BGR_210415_002	3	3	2000	S	3	nil	10
BGR_210415_003	0	4	1500	S	3	nil	10
BGR_210415_003	1	5	1500	S	2	nil	10
BGR_210415_003	2	6	1500	S	2	nil	10
BGR_210415_003	3	6	1500	S	3	nil	10
BGR_210427_002	0	8	1000	NNE	3	nil	20
BGR_210427_002	1	9	1000	NNE	2	ILR	20
BGR_210427_002	2	9	1000	NE	2	nil	20
BGR_210427_002	3	10	1000	NE	2	nil	20
BGR_210428_002	0	7	1000	NE	2	nil	20
BGR_210428_002	1	6	1000	N	2	nil	20
BGR_210428_002	2	7	1000	N	2	nil	20
BGR_210428_002	3	7	1000	N	3	nil	20
BGR_210503_001	0	10	800	S	6	nil	10
BGR_210503_001	1	10	600	SE	6	CLR	8
BGR_210503_001	2	10	600	SE	6	CLR	8
BGR_210513_001	0	5	1500	SE	5	nil	10
BGR_210513_001	1	5	1500	SE	4	nil	10
BGR_210513_001	2	7	1500	SE	4	nil	10
BGR_210513_001	3	8	1500	SE	4	nil	10
BGR_210514_001	0	1	-	E	3	nil	10
BGR_210514_001	1	1	-	E	3	nil	10
BGR_210514_001	2	1	-	SE	4	nil	10
BGR_210514_001	3	7	1200	SE	3	nil	10
BGR_210503_002	0	10	600	SE	4	ILR	6
BGR_210503_002	1	10	500	SE	5	CLR	6
BGR_210503_002	2	10	600	SE	6	CLR	6
BGR_210503_002	3	10	600	SE	6	CLR	8
BGR_210510_001	0	10	600	SE	6	CLR	8
BGR_210510_001	1	10	600	SE	6	IHR	5
BGR_210510_001	2	9	600	SE	6	IHR	8
BGR_210510_001	3	10	600	SE	6	IHR	5
BGR_210517_001	0	10	1000	W	3	nil	10
BGR_210517_001	1	10	1000	W	3	nil	10
BGR_210517_001	2	10	1000	W	4	nil	10
BGR_210517_001	3	10	1000	W	4	ILR	10
BGR_210517_002	0	9	1000	SW	3	nil	10
BGR_210517_002	1	9	1000	SW	3	nil	10
BGR_210517_002	2	9	1000	SW	3	nil	10
BGR_210517_002	3	10	1000	SW	3	nil	10
BGR_210518_001	0	10	800	W	2	CLR	10
BGR_210518_001	1	10	800	W	3	IHR	10
BGR_210518_001	2	7	1000	W	3	IHR	10
BGR_210518_001	3	7	1000	W	4	nil	10
BGR_210519_001	0	7	1000	W	2	nil	10
BGR_210519_001	1	7	1000	W	2	nil	10
BGR_210519_001	2	6	1000	W	3	nil	10
BGR_210519_001	3	7	1000	W	3	nil	10

Watch ID	Period	Cloud (10ths)	Cloud base (m)	Wind Direction	Wind Force	Precipitation	Visibility (km)
BGR_210507_001	0	9	800	NW	2	nil	10
BGR_210507_001	1	7	1000	NW	2	ILR	10
BGR_210507_001	2	5	1000	NW	3	nil	10
BGR_210507_001	3	7	1000	NW	3	nil	10
BGR_210510_002	0	10	400	SE	5	CLR	5
BGR_210510_002	1	10	500	SE	5	ILR	5
BGR_210510_002	2	9	500	SE	5	ILR	5
BGR_210510_002	3	9	600	SE	5	IHR	10
BGR_210517_003	0	9	600	NW	3	nil	10
BGR_210517_003	1	9	700	NW	2	nil	10
BGR_210517_003	2	10	800	NW	2	nil	10
BGR_210517_003	3	10	900	NW	2	nil	10
BGR_210504_001	0	10	800	N	4	nil	10
BGR_210504_001	1	10	1000	NE	4	nil	10
BGR_210504_001	2	10	1000	NE	3	nil	10
BGR_210504_001	3	10	1000	NE	3	nil	10
BGR_210511_001	0	7	1000	S	6	nil	10
BGR_210511_001	1	7	1000	S	6	nil	10
BGR_210511_001	2	6	1000	S	6	nil	10
BGR_210511_001	3	7	1000	S	6	nil	10
BGR_210512_001	0	2	1000	SE	4	nil	10
BGR_210512_001	1	3	1000	SE	4	nil	10
BGR_210512_001	2	6	900	SE	4	nil	10
BGR_210512_001	3	8	800	SE	4	nil	10
BGR_210505_001	0	0	-	N	3	nil	10
BGR_210505_001	1	0	-	N	3	nil	10
BGR_210505_001	2	6	1000	N	4	nil	10
BGR_210505_001	3	8	1000	N	4	nil	10
BGR_210513_002	0	3	1500	SE	3	nil	10
BGR_210513_002	1	2	1500	SE	3	nil	10
BGR_210513_002	2	1	-	SE	3	nil	10
BGR_210513_002	3	3	1000	SE	3	nil	10
BGR_210519_002	0	7	1000	NW	2	nil	10
BGR_210519_002	1	7	1000	NW	2	nil	10
BGR_210519_002	2	7	1000	W	3	nil	10
BGR_210519_002	3	7	1000	W	4	nil	10
BGR_210601_001	0	9	1000	S	4	nil	10
BGR_210601_001	1	9	1000	S	4	nil	10
BGR_210601_001	2	8	1000	S	4	nil	10
BGR_210601_001	3	6	1000	S	4	nil	10
BGR_210607_001	0	9	2000	SE	3	nil	10
BGR_210607_001	1	9	2000	SE	3	nil	10
BGR_210607_001	2	6	2000	SE	3	nil	10
BGR_210607_001	3	7	1500	SE	4	nil	10
BGR_210603_001	0	10	1000	E	9	CLR	8
BGR_210603_001	1	10	900	E	7	ILR	8
BGR_210603_001	2	9	900	E	7	nil	10

Watch ID	Period	Cloud (10ths)	Cloud base (m)	Wind Direction	Wind Force	Precipitation	Visibility (km)
BGR_210603_001	3	9	1000	E	6	nil	10
BGR_210604_001	0	10	800	S	5	nil	10
BGR_210604_001	1	9	1000	S	5	nil	10
BGR_210604_001	2	8	1000	S	5	nil	10
BGR_210604_001	3	8	1000	S	5	nil	10
BGR_210601_002	0	4	1000	SE	3	nil	10
BGR_210601_002	1	6	1000	SE	3	nil	10
BGR_210601_002	2	6	1000	S	3	nil	10
BGR_210601_002	3	8	1000	S	3	nil	10
BGR_210602_001	0	3	-	E	4	nil	10
BGR_210602_001	1	2	-	E	4	nil	10
BGR_210602_001	2	1	-	E	4	nil	10
BGR_210602_001	3	0	-	E	4	nil	10
BGR_210601_003	0	3	1200	SE	6	nil	10
BGR_210601_003	1	5	1200	SE	6	nil	10
BGR_210601_003	2	8	1200	SE	6	nil	10
BGR_210601_003	3	6	1200	SE	6	nil	10
BGR_210602_002	0	5	1000	SE	6	nil	10
BGR_210602_002	1	4	1000	SE	6	nil	10
BGR_210602_002	2	3	1000	SE	5	nil	10
BGR_210602_002	3	3	1000	SE	5	nil	10
BGR_210601_004	0	3	1200	SE	5	nil	10
BGR_210601_004	1	8	1200	SE	5	nil	10
BGR_210601_004	2	9	1200	SE	5	nil	10
BGR_210601_004	3	5	1500	SE	5	nil	10
BGR_210604_002	0	10	1000	S	6	nil	10
BGR_210604_002	1	10	1000	S	6	nil	10
BGR_210604_002	2	10	1000	S	5	nil	10
BGR_210604_002	3	10	900	S	5	nil	10
BGR_210603_002	0	10	1500	E	4	CLR	10
BGR_210603_002	1	10	1500	E	4	ILR	10
BGR_210603_002	2	10	1500	E	4	ILR	10
BGR_210603_002	3	10	1200	E	4	ILR	10
BGR_210611_001	0	10	800	W	6	ILR	10
BGR_210611_001	1	10	800	W	6	ILR	10
BGR_210611_001	2	10	800	W	6	nil	10
BGR_210611_001	3	10	800	W	6	nil	10
BGR_210712_001	0	10	1500	N	2	nil	10
BGR_210712_001	1	9	1500	N	2	nil	10
BGR_210712_001	2	9	1500	N	3	nil	10
BGR_210712_001	3	8	1500	N	3	nil	10
BGR_210720_001	0	10	600	W	1	nil	10
BGR_210720_001	1	4	1000	W	1	nil	10
BGR_210720_001	2	0	-	W	2	nil	10
BGR_210720_001	3	0	-	W	3	nil	10
BGR_210709_001	0	10	1500	NW	3	nil	10
BGR_210709_001	1	10	1500	E	1	nil	10
BGR_210709_001	2	10	1500	E	1	nil	10

Watch ID	Period	Cloud (10ths)	Cloud base (m)	Wind Direction	Wind Force	Precipitation	Visibility (km)
BGR_210709_001	3	10	1500	E	2	nil	10
BGR_210719_001	0	0	-	W	1	nil	10
BGR_210719_001	1	1	1000	W	2	nil	10
BGR_210719_001	2	2	1000	W	2	nil	10
BGR_210719_001	3	3	1000	W	3	nil	10
BGR_210708_001	0	10	400	W	1	nil	3
BGR_210708_001	1	10	400	W	1	nil	3
BGR_210708_001	2	10	400	W	1	nil	3
BGR_210708_001	3	10	500	W	2	nil	3
BGR_210727_001	0	10	500	W	1	nil	1
BGR_210727_001	1	10	600	W	1	nil	2
BGR_210727_001	2	10	600	W	1	nil	2
BGR_210727_001	3	10	800	W	2	nil	10
BGR_210707_001	0	10	400	W	3	nil	1
BGR_210707_001	1	10	400	W	3	nil	5
BGR_210707_001	2	10	500	W	3	nil	8
BGR_210707_001	3	10	500	NW	3	nil	10
BGR_210721_001	0	1	1000	SW	1	nil	10
BGR_210721_001	1	1	1000	SW	1	nil	10
BGR_210721_001	2	1	1000	SW	2	nil	10
BGR_210721_001	3	1	1000	SW	2	nil	10
BGR_210706_001	0	1	-	E	3	nil	10
BGR_210706_001	1	2	1500	E	2	nil	10
BGR_210706_001	2	3	1500	NE	1	nil	10
BGR_210706_001	3	4	1500	W	2	nil	10
BGR_210721_002	0	0	-	SW	4	nil	10
BGR_210721_002	1	0	-	SW	3	nil	10
BGR_210721_002	2	0	-	SW	3	nil	10
BGR_210721_002	3	0	-	SW	2	nil	10
BGR_210705_001	0	10	500	SE	3	nil	5
BGR_210705_001	1	10	500	SE	3	ILR	8
BGR_210705_001	2	10	500	SE	3	nil	10
BGR_210705_001	3	10	600	SE	3	ILR	8
BGR_210723_001	0	10	600	S	3	nil	6
BGR_210723_001	1	10	600	S	3	nil	5
BGR_210723_001	2	10	600	S	3	nil	5
BGR_210723_001	3	10	600	S	3	nil	5
BGR_210824_001	0	4	900	nil	0	nil	5
BGR_210824_001	1	3	1000	NW	1	nil	5
BGR_210824_001	2	3	1000	NW	1	nil	5
BGR_210824_001	3	3	1000	NW	1	nil	5
BGR_210827_001	0	10	300	nil	0	IHF	0.8
BGR_210827_001	1	10	300	nil	0	IHF	0.8
BGR_210827_001	2	10	400	nil	0	IHF	1
BGR_210827_001	3	10	500	nil	0	ILF	2
BGR_210823_001	0	8	700	W	2	nil	3
BGR_210823_001	1	6	800	W	2	nil	3

Watch ID	Period	Cloud (10ths)	Cloud base (m)	Wind Direction	Wind Force	Precipitation	Visibility (km)
BGR_210823_001	2	7	800	W	2	nil	3
BGR_210823_001	3	7	700	W	2	nil	3
BGR_210824_002	0	0	-	nil	0	nil	5
BGR_210824_002	1	1	1000	nil	0	nil	5
BGR_210824_002	2	3	800	E	2	nil	5
BGR_210824_002	3	4	800	NW	1	nil	5
BGR_210809_001	0	10	500	W	1	nil	2
BGR_210809_001	1	9	400	W	1	IHF	2
BGR_210809_001	2	5	700	W	2	nil	8
BGR_210809_001	3	5	800	W	3	nil	
BGR_210810_001	0	5	700	NW	3	nil	10
BGR_210810_001	1	6	800	NW	3	nil	10
BGR_210810_001	2	7	900	NW	3	nil	10
BGR_210810_001	3	8	900	NW	3	nil	10
BGR_210809_002	0	10	400	NW	1	nil	1
BGR_210809_002	1	10	400	NW	1	nil	1.5
BGR_210809_002	2	10	500	NW	1	nil	2
BGR_210809_002	3	10	600	NW	1	nil	5
BGR_210810_002	0	10	400	W	3	IHF	1
BGR_210810_002	1	10	400	W	3	IHF	1
BGR_210810_002	2	9	500	W	3	nil	5
BGR_210810_002	3	8	600	W	3	nil	10
BGR_210812_001	0	6	900	SE	4	nil	10
BGR_210812_001	1	2	1000	SE	4	nil	10
BGR_210812_001	2	4	1000	SE	4	nil	10
BGR_210812_001	3	2	1000	SE	4	nil	10
BGR_210804_001	0	9	1000	S	4	nil	20
BGR_210804_001	1	7	1000	S	4	nil	20
BGR_210804_001	2	7	1000	SSW	4	nil	20
BGR_210804_001	3	9	1000	SSW	3	nil	20
BGR_210830_001	0	9	900	NE	1	nil	20
BGR_210830_001	1	9	1000	NE	2	nil	20
BGR_210830_001	2	8	1000	ENE	2	nil	20
BGR_210830_001	3	8	1000	ENE	1	nil	20
BGR_210804_002	0	10	700	S	3	nil	15
BGR_210804_002	1	7	1000	S	3	nil	15
BGR_210804_002	2	9	1000	S	4	nil	20
BGR_210804_002	3	8	1000	S	4	nil	20
BGR_210908_001	0	2	1500	SE	3	nil	10
BGR_210908_001	1	2	1500	SE	2	nil	10
BGR_210908_001	2	6	1500	SE	2	nil	5
BGR_210908_001	3	10	1500	nil	0	nil	2
BGR_210909_001	0	10	1000	NE	4	IHR	5
BGR_210909_001	1	10	1000	NE	3	IHR	5
BGR_210909_001	2	10	1000	NE	4	nil	5
BGR_210909_001	3	10	1000	NE	4	CHR	1
BGR_210907_001	0	10	500	SW	3	nil	1
BGR_210907_001	1	10	500	SW	3	ILR	1.5

Watch ID	Period	Cloud (10ths)	Cloud base (m)	Wind Direction	Wind Force	Precipitation	Visibility (km)
BGR_210907_001	2	10	600	SW	3	nil	5
BGR_210907_001	3	10	600	SW	3	nil	15
BGR_210907_002	0	10	500	SW	3	IHR	10
BGR_210907_002	1	10	500	SW	3	nil	10
BGR_210907_002	2	10	500	SW	3	nil	10
BGR_210907_002	3	10	500	SW	3	nil	10
BGR_210927_001	0	7	800	SW	5	IHR	15
BGR_210927_001	1	8	800	SW	6	IHR	15
BGR_210927_001	2	5	800	SW	6	nil	15
BGR_210927_001	3	8	800	SW	5	IHR	15
BGR_210927_002	0	8	800	SW	6	IHR	15
BGR_210927_002	1	4	800	SW	5	nil	15
BGR_210927_002	2	3	800	SW	5	nil	15
BGR_210908_003	0	5	1000	SE	4	nil	5
BGR_210908_003	1	5	1000	SE	4	nil	5
BGR_210908_003	2	5	1000	SE	4	nil	5
BGR_210908_003	3	5	1000	SE	4	nil	5
BGR_210928_001	0	8	800	S	6	nil	15
BGR_210928_001	1	8	800	S	6	nil	15
BGR_210928_001	2	7	800	S	6	IHR	15
BGR_210928_001	3	9	800	S	6	IHR	15
BGR_210908_004	0	2	1500	SE	3	nil	10
BGR_210908_004	1	5	1500	SE	3	nil	10
BGR_210908_004	2	7	1500	SE	4	nil	10
BGR_210928_002	0	5	800	S	5	nil	15
BGR_210928_002	1	3	800	S	5	nil	15
BGR_210928_002	2	3	800	S	5	nil	15
BGR_210928_002	3	8	800	S	6	nil	15
BGR_210906_001	0	10	300	SE	3	CHR	1
BGR_210906_001	1	10	400	SE	3	CHR	1
BGR_210906_001	2	10	400	S	4	CHR	1
BGR_210906_001	3	10	400	S	4	CHR	1
BGR_210906_002	0	10	400	S	4	ILR	1
BGR_210906_002	1	10	500	SW	5	CHR	1
BGR_210906_002	2	10	500	SW	5	CHR	1
BGR_210906_002	3	10	300	SW	5	IHR	1
BGR_211011_001	0	10	600	SW	4	nil	5
BGR_211011_001	1	10	600	SW	4	nil	5
BGR_211011_001	2	10	600	SW	4	ILR	4
BGR_211011_001	3	10	600	WSW	4	nil	4
BGR_211015_001	0	3	800	NNW	3	nil	5
BGR_211015_001	1	4	800	NNW	3	nil	5
BGR_211018_001	0	10	400	S	5	CHF	0.5
BGR_211018_001	1	10	500	S	5	CHF	1
BGR_211018_001	2	10	500	S	5	CLR	0.5
BGR_211015_002	0	0	-	NNW	2	nil	5
BGR_211015_002	1	0	-	NNW	3	nil	5

Watch ID	Period	Cloud (10ths)	Cloud base (m)	Wind Direction	Wind Force	Precipitation	Visibility (km)
BGR_211015_002	2	0	-	NNW	3	nil	5
BGR_211015_002	3	0	-	NNW	3	nil	5
BGR_211021_001	0	4	900	NNW	4	nil	3
BGR_211021_001	1	6	900	NNW	4	nil	4
BGR_211021_001	2	3	1000	NW	4	nil	5
BGR_211021_001	3	2	1000	NW	4	nil	5
BGR_211012_001	0	10	400	WNW	3	CLF	1
BGR_211012_001	1	10	400	WNW	3	CLF	1
BGR_211012_001	2	10	400	WNW	3	CLF	1
BGR_211012_001	3	10	400	WNW	3	CLF	1
BGR_211021_002	0	6	900	NW	4	nil	5
BGR_211021_002	1	7	700	NW	5	ILR	5
BGR_211021_002	2	3	900	NW	5	IHR	5
BGR_211021_002	3	7	800	NW	6	IHR	5
BGR_211013_001	0	10	400	NW	3	IHF	0.5
BGR_211013_001	1	10	600	NW	3	ILF	4
BGR_211013_001	2	9	600	NW	3	nil	5
BGR_211013_001	3	9	600	WNW	3	IHF	4
BGR_211020_001	0	4	900	W	5	nil	5
BGR_211020_001	1	4	900	W	5	nil	5
BGR_211020_001	2	4	800	W	5	nil	5
BGR_211020_001	3	6	800	W	4	nil	5
BGR_211013_002	0	10	500	W	3	nil	5
BGR_211013_002	1	10	400	W	4	CLR	1
BGR_211013_002	2	10	400	W	3	ILF	1
BGR_211013_002	3	8	500	W	3	ILF	3
BGR_211020_002	0	7	900	W	4	nil	5
BGR_211020_002	1	8	900	W	4	nil	5
BGR_211020_002	2	9	900	W	5	nil	5
BGR_211020_002	3	6	900	W	5	nil	5
BGR_211012_002	0	10	400	NW	3	ILF	1
BGR_211012_002	1	10	500	NW	4	ILF	2
BGR_211012_002	2	10	400	NW	3	ILF	1
BGR_211012_002	3	10	500	NW	3	ILF	3
BGR_211019_001	0	10	500	S	4	CLR	2
BGR_211019_001	1	10	500	S	4	CHR	2
BGR_211019_001	2	10	500	S	4	CLR	2
BGR_211019_001	3	10	400	S	4	ILR	2
BGR_211117_001	0	10	700	W	4	IHR	5
BGR_211117_001	1	10	700	W	5	nil	5
BGR_211117_001	2	10	700	W	5	nil	5
BGR_211125_001	0	8	900	NW	4	nil	5
BGR_211125_001	1	9	900	NW	4	nil	5
BGR_211125_001	2	9	1000	NW	4	nil	5
BGR_211117_002	0	10	700	SW	4	nil	10
BGR_211117_002	1	6	800	SW	4	IHR	10
BGR_211117_002	2	10	700	SW	4	IHR	5
BGR_211117_003	0	10	700	SW	4	IHR	5

Watch ID	Period	Cloud (10ths)	Cloud base (m)	Wind Direction	Wind Force	Precipitation	Visibility (km)
BGR_211117_003	1	10	700	W	4	IHR	5
BGR_211117_003	2	10	700	W	4	IHR	10
BGR_211115_001	0	9	800	W	1	nil	15
BGR_211115_001	1	10	800	W	3	nil	15
BGR_211115_001	2	10	800	W	3	nil	15
BGR_211124_001	0	4	700	NW	3	nil	5
BGR_211124_001	1	3	700	NW	3	nil	5
BGR_211124_001	2	6	700	NW	4	ILR	5
BGR_211116_001	0	10	500	S	4	nil	2
BGR_211116_001	1	10	500	S	4	IHR	1
BGR_211116_001	2	10	500	S	4	IHR	1
BGR_211123_001	0	9	400	W	3	CLF	1
BGR_211123_001	1	9	400	W	2	CLF	0.5
BGR_211123_001	2	9	400	W	3	ILR	0.5
BGR_211116_002	0	10	500	SW	4	IHR	1
BGR_211116_002	1	10	500	SW	4	IHR	1
BGR_211116_002	2	10	500	SW	4	CHR	1
BGR_211123_002	0	9	400	W	3	CLF	0.5
BGR_211123_002	1	9	400	W	3	ILR	1
BGR_211123_002	2	8	500	W	3	ILF	2
BGR_211118_001	0	10	600	W	5	CLR	2
BGR_211118_001	1	10	600	W	5	CLR	2
BGR_211118_001	2	10	600	W	5	CLR	1
BGR_211122_001	0	9	600	NW	3	nil	5
BGR_211122_001	1	9	600	NW	3	nil	5
BGR_211122_001	2	9	600	NW	3	nil	5
BGR_211207_001	0	10	700	SW	6	nil	2.5
BGR_211207_001	1	10	700	SW	6	ILS	1
BGR_211207_001	2	10	700	SW	7	CHS	0.5
BGR_211217_001	0	10	900	SE	1	nil	10
BGR_211217_001	1	10	800	ESE	1	nil	10
BGR_211217_001	2	10	800	ESE	2	nil	8
BGR_211209_001	0	8	700	W	3	nil	10
BGR_211209_001	1	10	700	W	3	nil	10
BGR_211209_001	2	10	700	SW	3	nil	5
BGR_211209_002	0	5	700	SW	5	nil	5
BGR_211209_002	1	8	700	S	5	nil	5
BGR_211209_002	2	8	700	S	5	nil	5
BGR_211203_001	0	10	600	W	4	nil	4
BGR_211203_001	1	9	600	W	4	ILR	4
BGR_211203_001	2	9	700	NW	3	nil	5
BGR_211210_001	0	8	700	W	2	nil	15
BGR_211210_001	1	10	700	W	6	CHS	2
BGR_211210_001	2	6	700	W	2	nil	15
BGR_211202_001	0	9	1000	NW	1	nil	5
BGR_211202_001	1	8	1000	W	2	nil	5
BGR_211202_001	2	9	1000	W	2	nil	5

Watch ID	Period	Cloud (10ths)	Cloud base (m)	Wind Direction	Wind Force	Precipitation	Visibility (km)
BGR_211208_001	0	6	800	NW	3	nil	15
BGR_211208_001	1	8	800	NW	2	nil	15
BGR_211208_001	2	9	800	NW	1	nil	20
BGR_211202_002	0	6	1000	NW	2	nil	5
BGR_211202_002	1	8	1000	SW	1	nil	5
BGR_211202_002	2	10	1000	nil	0	nil	5
BGR_211208_002	0	6	800	N	2	nil	15
BGR_211208_002	1	7	800	N	2	nil	15
BGR_211208_002	2	8	800	N	2	nil	15
BGR_211201_001	0	5	900	N	4	nil	5
BGR_211201_001	1	6	900	N	4	nil	5
BGR_211201_001	2	7	900	N	4	nil	5
BGR_211206_001	0	10	700	W	5	IHH	5
BGR_211206_001	1	8	700	W	5	IHH	5
BGR_211206_001	2	8	700	W	5	IHH	5
BGR_220121_001	0	10	400	W	3	CLR	1
BGR_220121_001	1	6	400	W	3	ILF	1
BGR_220121_001	2	8	400	W	3	CLF	1
BGR_220124_001	0	10	300	SW	3	IHR	0.5
BGR_220124_001	1	10	300	SW	3	IHR	0.5
BGR_220124_001	2	10	300	SW	3	IHR	0.5
BGR_220126_001	0	10	500	SW	4	CLR	1
BGR_220126_001	1	10	500	SW	4	CLR	1
BGR_220126_001	2	10	500	SW	5	CLR	0.5
BGR_220126_002	0	10	500	SW	5	CLR	0.5
BGR_220126_002	1	10	500	SW	5	CLR	0.5
BGR_220126_002	2	10	500	SW	6	CLR	0.5
BGR_220119_001	0	7	700	NW	5	nil	5
BGR_220119_001	1	8	600	NW	5	IHR	4
BGR_220119_001	2	8	700	NW	5	IHR	4
BGR_220127_001	0	10	700	W	4	nil	5
BGR_220127_001	1	10	500	W	4	IHR	2
BGR_220127_001	2	10	500	W	5	nil	5
BGR_220120_001	0	7	900	WNW	3	nil	5
BGR_220120_001	1	6	900	WNW	3	nil	5
BGR_220120_001	2	5	1500	WNW	3	nil	5
BGR_220125_001	0	10	400	S	5	nil	1
BGR_220125_001	1	10	400	S	5	nil	1
BGR_220125_001	2	10	400	S	5	nil	1
BGR_220120_002	0	9	1000	W	3	nil	5
BGR_220120_002	1	8	900	W	3	nil	5
BGR_220120_002	2	7	900	NW	4	nil	5
BGR_220125_002	0	10	400	S	4	nil	1
BGR_220125_002	1	10	400	S	4	ILR	0.5
BGR_220125_002	2	10	400	S	5	nil	1
BGR_220118_001	0	10	400	S	4	nil	3
BGR_220118_001	1	10	300	S	4	ILR	2
BGR_220118_001	2	10	400	S	4	ILR	3

Watch ID	Period	Cloud (10ths)	Cloud base (m)	Wind Direction	Wind Force	Precipitation	Visibility (km)
BGR_220124_002	0	10	300	SW	3	nil	2
BGR_220124_002	1	10	300	SW	3	ILR	2
BGR_220124_002	2	10	300	SW	3	IHR	2
BGR_220208_001	0	10	900	SSW	4	nil	15
BGR_220208_001	1	9	900	SW	5	nil	15
BGR_220208_001	2	9	900	SW	5	IHR	10
BGR_220208_001	3	10	900	SW	5	ILR	10
BGR_220209_001	0	10	800	W	4	ILS	5
BGR_220209_001	1	10	1000	W	4	ILS	7
BGR_220209_001	2	10	1000	W	5	ILS	7
BGR_220210_001	0	8	800	W	6	nil	20
BGR_220210_001	1	9	800	NW	6	nil	20
BGR_220210_001	2	6	800	NW	6	nil	20
BGR_220210_001	3	8	800	NW	5	nil	20
BGR_220217_001	0	10	800	NW	5	IHH	5
BGR_220217_001	1	10	800	NW	5	IHH	5
BGR_220217_001	2	4	1000	NW	6	nil	10
BGR_220217_001	3	7	1000	NW	7	nil	10
BGR_220216_001	0	10	600	E	4	ILR	5
BGR_220216_001	1	10	400	E	3	CLR	3
BGR_220216_001	2	10	600	E	3	CHR	5
BGR_220216_001	3	10	600	E	3	CHR	5
BGR_220221_001	0	4	900	NW	5	nil	5
BGR_220221_001	1	4	900	NW	5	nil	5
BGR_220221_001	2	7	800	NW	5	nil	5
BGR_220221_001	3	2	900	WNW	4	nil	5
BGR_220211_001	0	4	1000	SE	4	nil	20
BGR_220211_001	1	6	1000	SE	4	nil	20
BGR_220211_001	2	6	1000	SE	4	nil	20
BGR_220211_001	3	8	1000	SE	4	nil	20
BGR_220222_001	0	8	700	W	4	nil	5
BGR_220222_001	1	8	700	W	4	nil	5
BGR_220222_001	2	7	600	W	5	IHR	3
BGR_220222_001	3	9	600	W	5	IHS	4
BGR_220211_002	0	10	1000	SE	4	nil	20
BGR_220211_002	1	10	1000	SE	4	nil	20
BGR_220211_002	2	10	1000	SE	4	ILR	20
BGR_220211_002	3	10	1000	SE	4	nil	20
BGR_220222_002	0	10	600	WNW	5	IHH	3
BGR_220222_002	1	10	600	W	5	IHS	4
BGR_220222_002	2	10	700	W	4	nil	5
BGR_220222_002	3	10	600	W	5	IHS	4
BGR_220210_002	0	9	1000	SW	7	nil	20
BGR_220210_002	1	8	1000	SW	7	ILS	20
BGR_220210_002	2	8	1000	W	7	ILR	20
BGR_220210_002	3	8	1000	W	7	ILR	20
BGR_220214_001	0	8	800	NW	5	nil	10

Watch ID	Period	Cloud (10ths)	Cloud base (m)	Wind Direction	Wind Force	Precipitation	Visibility (km)
BGR_220214_001	1	7	1000	NW	5	nil	10
BGR_220214_001	2	9	800	NW	5	nil	10
BGR_220214_001	3	8	1000	NW	5	nil	10
BGR_220310_001	0	10	400	SE	4	CLR	0.5
BGR_220310_001	1	10	400	SE	4	CLR	0.5
BGR_220310_001	2	10	400	S	5	CLR	1
BGR_220310_001	3	10	400	S	5	CLR	2
BGR_220321_001	0	10	1000	S	3	nil	5
BGR_220321_001	1	9	1000	S	3	nil	5
BGR_220321_001	2	7	1000	S	3	nil	5
BGR_220321_001	3	6	1000	S	3	nil	5
BGR_220307_001	0	7	900	SE	4	nil	5
BGR_220307_001	1	6	900	SE	4	nil	5
BGR_220307_001	2	6	900	SE	4	nil	5
BGR_220307_001	3	6	900	SE	4	nil	5
BGR_220317_001	0	10	600	SE	3	CLS	3
BGR_220317_001	1	10	500	SE	3	CLR	2
BGR_220321_002	0	5	1000	S	3	nil	5
BGR_220321_002	1	9	1000	S	3	nil	5
BGR_220321_002	2	10	1000	S	4	nil	5
BGR_220310_002	0	10	400	S	4	CLR	2
BGR_220310_002	1	10	400	S	4	CLR	2
BGR_220310_002	2	10	500	S	4	ILF	4
BGR_220310_002	3	9	400	S	4	ILF	3
BGR_220323_001	0	5	1000	SE	3	nil	5
BGR_220323_001	1	4	1000	SE	3	nil	5
BGR_220323_001	2	3	1000	SE	3	nil	5
BGR_220323_001	3	2	1000	SSE	3	nil	5
BGR_220308_001	0	8	900	SE	6	nil	5
BGR_220308_001	1	4	900	SE	6	nil	5
BGR_220308_001	2	6	1000	SE	6	nil	5
BGR_220308_001	3	6	1000	SE	6	nil	5
BGR_220316_001	0	9	900	NW	3	nil	5
BGR_220316_001	1	9	900	NW	3	nil	5
BGR_220316_001	2	8	900	W	3	nil	5
BGR_220316_001	3	7	900	W	3	nil	5
BGR_220308_002	0	5	1000	SE	6	nil	5
BGR_220308_002	1	4	1000	SE	6	nil	5
BGR_220308_002	2	7	900	SSE	6	nil	5
BGR_220308_002	3	10	600	S	6	CLR	3
BGR_220316_002	0	7	1000	NW	2	nil	5
BGR_220316_002	1	9	900	NW	3	nil	5
BGR_220316_002	2	10	900	NW	3	nil	5
BGR_220316_002	3	9	900	NW	3	nil	5
BGR_220311_001	0	10	700	SE	4	nil	5
BGR_220311_001	1	10	600	SE	4	IHR	5
BGR_220311_001	2	10	800	SE	4	nil	5
BGR_220311_001	3	10	800	SE	5	nil	5

Watch ID	Period	Cloud (10ths)	Cloud base (m)	Wind Direction	Wind Force	Precipitation	Visibility (km)
BGR_220314_001	0	10	600	SSE	3	nil	5
BGR_220314_001	1	10	600	SSE	3	nil	5
BGR_220314_001	2	10	400	SSE	3	CLR	3
BGR_220314_001	3	10	300	SE	2	ILR	2
BGR_220411_001	0	10	1000	SE	6	nil	5
BGR_220411_001	1	10	1000	SE	6	nil	5
BGR_220411_001	2	10	1000	SE	6	nil	5
BGR_220411_001	3	10	1000	SE	6	ILR	5
BGR_220418_001	0	7	1000	SW	5	ILR	2
BGR_220418_001	1	8	1000	SW	5	IHH	1
BGR_220418_001	2	8	1000	SW	5	ILH	2
BGR_220418_001	3	7	1000	SW	4	nil	3
BGR_220422_001	0	0	-	ENE	3	nil	3
BGR_220422_001	1	0	-	ENE	3	nil	3
BGR_220422_001	2	0	-	E	4	nil	3
BGR_220422_001	3	0	-	E	5	nil	3
BGR_220413_001	0	10	500	W	3	CLR	2
BGR_220413_001	1	10	500	W	3	CLR	2
BGR_220413_001	2	10	500	W	3	CLR	2
BGR_220413_001	3	7	600	W	3	ILF	4
BGR_220420_001	0	0	-	SE	4	nil	2
BGR_220420_001	1	0	-	SE	5	nil	2
BGR_220420_001	2	1	1500	SE	5	nil	2
BGR_220420_001	3	5	1500	SE	5	nil	2
BGR_220421_001	0	10	1500	SE	6	nil	4
BGR_220421_001	1	10	1500	SE	6	nil	4
BGR_220421_001	2	10	1500	SE	5	nil	4
BGR_220421_001	3	10	1500	ESE	5	nil	4
BGR_220413_002	0	10	300	W	3	CLR	2
BGR_220413_002	1	10	400	W	3	ILR	2
BGR_220413_002	2	10	500	W	3	nil	3
BGR_220413_002	3	9	500	WSW	3	ILF	2
BGR_220420_002	0	5	1000	SSE	3	nil	20
BGR_220420_002	1	6	1000	S	3	nil	20
BGR_220420_002	2	6	1000	S	3	nil	20
BGR_220420_002	3	6	1000	S	3	nil	20
BGR_220421_002	0	10	1500	E	4	nil	4
BGR_220421_002	1	10	1500	E	4	nil	4
BGR_220421_002	2	9	1500	E	4	nil	4
BGR_220421_002	3	7	1500	ENE	4	nil	4
BGR_220419_001	0	10	400	SSE	3	nil	2
BGR_220419_001	1	10	600	SSE	3	nil	3
BGR_220419_001	2	10	700	S	3	nil	3
BGR_220419_001	3	10	800	S	3	ILR	2
BGR_220425_001	0	10	1000	W	1	nil	4
BGR_220425_001	1	9	1200	S	1	nil	5
BGR_220425_001	2	9	1200	W	1	nil	4

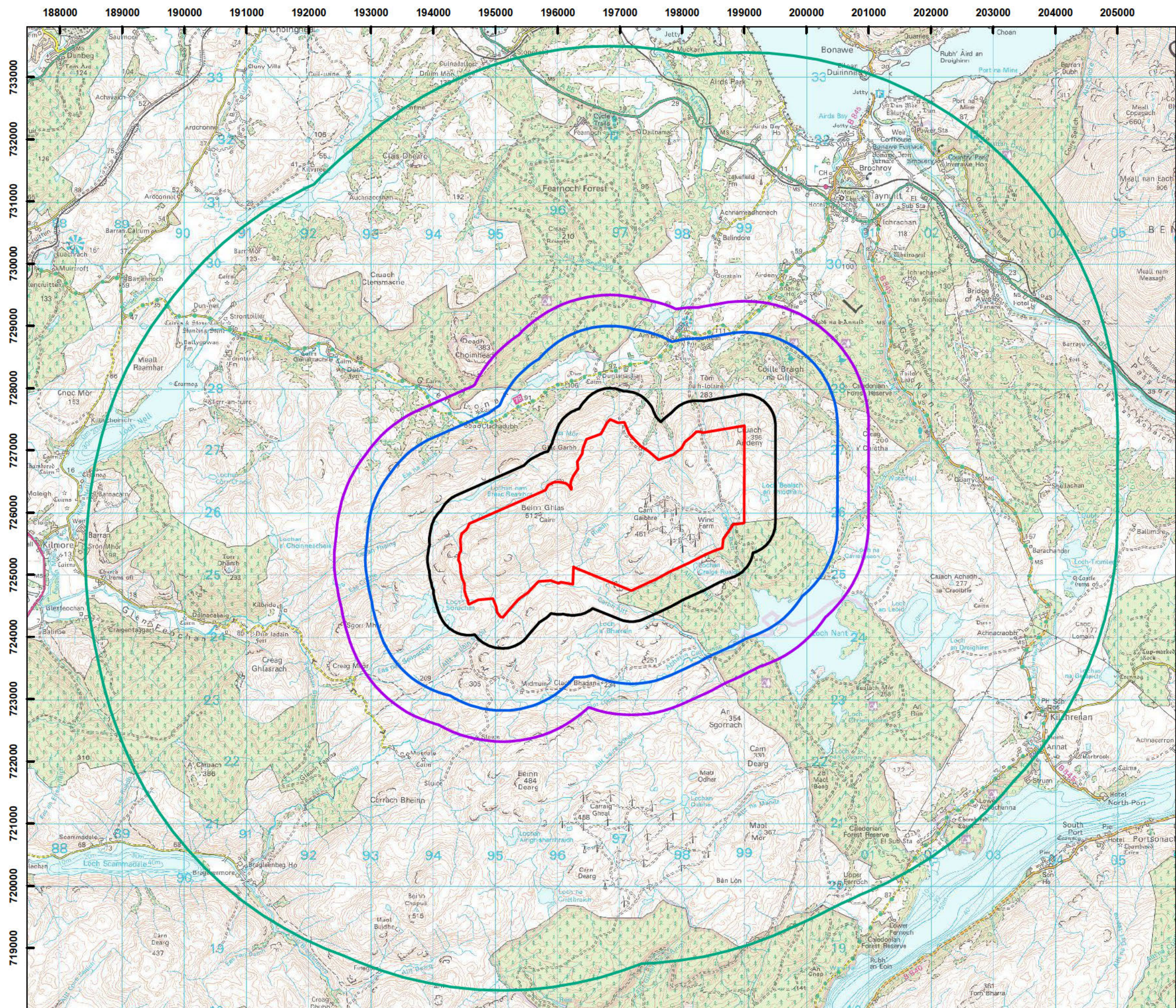
Watch ID	Period	Cloud (10ths)	Cloud base (m)	Wind Direction	Wind Force	Precipitation	Visibility (km)
BGR_220425_001	3	9	1500	W	1	nil	4
BGR_220429_001	0	2	2000	nil	0	nil	5
BGR_220429_001	1	2	2000	N	1	nil	5
BGR_220429_001	2	3	2000	N	1	nil	5
BGR_220429_001	3	2	2000	NW	2	nil	5
BGR_220419_002	0	10	900	S	3	CLR	1
BGR_220419_002	1	10	900	S	3	nil	2
BGR_220419_002	2	7	1000	SW	2	nil	3
BGR_220419_002	3	6	1000	SW	2	nil	3
BGR_220421_003	0	10	1000	E	4	nil	20
BGR_220421_003	1	9	1000	E	4	nil	20
BGR_220421_003	2	7	1000	E	5	nil	20
BGR_220421_003	3	6	1000	E	5	nil	20
BGR_220426_001	0	9	1000	SE	3	nil	5
BGR_220426_001	1	7	1000	SE	3	nil	5
BGR_220426_001	2	6	1000	SSE	3	nil	5
BGR_220426_001	3	7	1000	SSE	3	nil	5
BGR_220415_001	0	10	800	SE	3	nil	5
BGR_220415_001	1	10	800	SE	3	nil	5
BGR_220415_001	2	10	800	SE	3	nil	5
BGR_220415_001	3	9	900	SE	4	nil	5
BGR_220420_003	0	6	1500	ESE	5	nil	2
BGR_220420_003	1	6	1500	SE	5	nil	2
BGR_220420_003	2	7	1500	SSE	4	nil	2
BGR_220420_003	3	8	1500	SSE	4	nil	2
BGR_220509_001	0	10	500	S	5	CHR	1
BGR_220509_001	1	10	500	S	5	CHR	1
BGR_220509_001	2	10	500	S	5	CHR	1.5
BGR_220509_001	3	10	500	SW	6	CHR	1
BGR_220523_001	0	10	800	WNW	3	IHS	1
BGR_220523_001	1	10	800	WNW	3	ILR	2
BGR_220523_001	2	9	900	WNW	3	nil	3
BGR_220523_001	3	9	900	WNW	3	nil	3
BGR_220527_001	0	10	900	W	5	nil	2
BGR_220527_001	1	9	900	W	5	nil	2
BGR_220527_001	2	7	900	WNW	5	nil	2
BGR_220527_001	3	8	900	WNW	5	nil	2
BGR_220502_001	0	7	700	NNW	2	nil	5
BGR_220502_001	1	8	700	NW	3	nil	5
BGR_220502_001	2	9	800	NW	3	nil	5
BGR_220502_001	3	10	800	NW	3	nil	5
BGR_220524_001	0	10	1000	W	2	nil	2.5
BGR_220524_001	1	10	1000	NW	2	ILR	2
BGR_220524_001	2	8	900	WNW	2	nil	2.5
BGR_220524_001	3	9	900	W	3	nil	2.5
BGR_220525_001	0	9	900	W	5	nil	3
BGR_220525_001	1	8	900	W	5	nil	3
BGR_220525_001	2	7	900	W	5	nil	4

Watch ID	Period	Cloud (10ths)	Cloud base (m)	Wind Direction	Wind Force	Precipitation	Visibility (km)
BGR_220525_001	3	7	800	W	5	ILR	3
BGR_220511_001	0	8	700	W	4	nil	5
BGR_220511_001	1	9	700	W	4	IHR	4
BGR_220511_001	2	9	700	W	4	nil	5
BGR_220511_001	3	9	700	W	3	IHR	4
BGR_220525_002	0	10	600	W	4	ILR	10
BGR_220525_002	1	9	600	W	4	IHR	10
BGR_220525_002	2	7	800	W	4	ILR	10
BGR_220525_002	3	8	800	W	4	ILR	10
BGR_220526_001	0	10	900	SW	4	nil	3
BGR_220526_001	1	10	900	SW	4	ILR	2
BGR_220526_001	2	10	1000	SW	4	ILR	2
BGR_220526_001	3	7	1000	SW	5	nil	3
BGR_220513_001	0	10	500	W	6	IHR	1
BGR_220513_001	1	10	400	W	7	IHR	1.5
BGR_220513_001	2	10	500	W	6	IHR	2
BGR_220513_001	3	10	400	W	7	IHR	1.5
BGR_220510_001	0	8	600	SW	5	nil	5
BGR_220510_001	1	8	600	SW	5	nil	5
BGR_220510_001	2	8	600	SW	5	nil	5
BGR_220510_001	3	8	600	SW	6	nil	5
BGR_220524_002	0	10	1000	W	3	nil	3
BGR_220524_002	1	9	1000	W	3	nil	3
BGR_220524_002	2	10	1000	W	2	ILR	2
BGR_220524_002	3	10	1000	W	2	nil	2
BGR_220526_002	0	10	700	SW	3	nil	3
BGR_220526_002	1	10	700	SW	4	ILR	2
BGR_220526_002	2	10	800	SW	4	ILR	2
BGR_220526_002	3	10	900	SW	4	nil	3
BGR_220506_001	0	10	400	W	4	nil	2
BGR_220506_001	1	10	400	WNW	4	nil	2
BGR_220506_001	2	10	400	WNW	4	nil	2
BGR_220506_001	3	9	500	WNW	4	nil	4
BGR_220517_001	0	10	700	SE	2	CLR	6
BGR_220517_001	1	10	700	SE	3	ILR	4
BGR_220517_001	2	10	700	SE	3	ILR	6
BGR_220517_001	3	10	600	SE	3	ILR	3
BGR_220525_003	0	10	700	W	6	nil	2
BGR_220525_003	1	10	700	W	6	ILR	2
BGR_220525_003	2	10	700	W	6	IHR	1.5
BGR_220525_003	3	10	800	W	5	nil	2.5
BGR_220610_001	0	8	700	SW	5	nil	5
BGR_220610_001	1	8	700	SW	5	nil	5
BGR_220610_001	2	9	800	SW	5	nil	5
BGR_220610_001	3	9	800	SW	6	nil	5
BGR_220613_001	0	10	500	WSW	5	nil	4
BGR_220613_001	1	10	600	WSW	5	nil	5

Watch ID	Period	Cloud (10ths)	Cloud base (m)	Wind Direction	Wind Force	Precipitation	Visibility (km)
BGR_220613_001	2	10	600	WSW	5	nil	5
BGR_220613_001	3	10	600	WSW	4	nil	5
BGR_220606_001	0	7	1500	NW	3	nil	5
BGR_220606_001	1	7	1500	NW	3	nil	5
BGR_220606_001	2	8	1500	NW	4	nil	5
BGR_220606_001	3	8	1500	NW	4	nil	5
BGR_220629_001	0	10	700	SW	5	nil	4
BGR_220629_001	1	10	700	SW	5	ILR	4
BGR_220629_001	2	9	800	SW	6	nil	4
BGR_220629_001	3	9	900	SW	5	nil	4
BGR_220609_001	0	10	700	SE	4	nil	5
BGR_220609_001	1	10	700	SE	4	ILR	4
BGR_220609_001	2	10	400	SE	4	CLR	2
BGR_220629_002	0	9	700	SE	3	nil	5
BGR_220629_002	1	9	700	SE	4	nil	5
BGR_220629_002	2	10	700	SE	4	nil	5
BGR_220629_002	3	10	500	SE	3	ILR	3
BGR_220629_003	0	7	700	SE	3	nil	5
BGR_220629_003	1	9	700	SE	3	nil	5
BGR_220607_001	0	10	700	SE	4	nil	4
BGR_220607_001	1	10	800	SE	3	nil	4
BGR_220607_001	2	9	900	SSE	3	nil	5
BGR_220607_001	3	8	1000	SSW	4	nil	5
BGR_220614_001	0	10	600	SW	4	nil	4
BGR_220614_001	1	10	600	SW	4	nil	5
BGR_220614_001	2	9	700	SW	4	nil	5
BGR_220614_001	3	10	600	SW	4	nil	4
BGR_220607_002	0	7	1500	S	4	nil	5
BGR_220607_002	1	7	1500	S	4	nil	5
BGR_220607_002	2	5	1500	S	5	nil	5
BGR_220607_002	3	3	1500	SSE	4	nil	5
BGR_220615_001	0	9	900	SW	4	nil	5
BGR_220615_001	1	9	1000	SW	4	nil	5
BGR_220615_001	2	10	1000	SW	4	nil	5
BGR_220615_001	3	10	800	SW	3	nil	5
BGR_220608_001	0	10	700	SE	4	nil	5
BGR_220608_001	1	10	700	SE	4	nil	5
BGR_220608_001	2	10	600	SE	4	ILR	4
BGR_220608_001	3	9	700	SE	4	nil	5
BGR_220616_001	0	10	300	S	4	nil	2
BGR_220616_001	1	10	400	S	4	ILR	2
BGR_220616_001	2	10	500	S	4	ILR	3
BGR_220616_001	3	10	300	S	4	CLR	1
BGR_220704_001	0	10	500	W	5	nil	5
BGR_220704_001	1	10	500	W	5	IHR	4
BGR_220704_001	2	10	600	W	4	IHR	5
BGR_220704_001	3	10	500	W	4	IHR	5
BGR_220715_001	0	10	200	WNW	4	CHF	0.1

Watch ID	Period	Cloud (10ths)	Cloud base (m)	Wind Direction	Wind Force	Precipitation	Visibility (km)
BGR_220715_001	1	9	400	WNW	4	ILF	3
BGR_220715_001	2	9	500	WNW	4	ILF	4
BGR_220715_001	3	5	600	WNW	5	nil	5
BGR_220701_001	0	6	600	SW	2	nil	5
BGR_220701_001	1	8	700	SW	3	nil	5
BGR_220701_001	2	10	400	SW	2	ILR	2
BGR_220701_001	3	9	500	SW	3	nil	5
BGR_220711_001	0	8	700	S	5	nil	5
BGR_220711_001	1	10	700	S	5	nil	5
BGR_220711_001	2	10	800	S	5	nil	5
BGR_220711_001	3	10	900	S	5	nil	5
BGR_220705_001	0	6	800	WNW	4	nil	5
BGR_220705_001	1	6	800	WNW	4	nil	5
BGR_220705_001	2	7	800	WNW	4	nil	5
BGR_220705_001	3	6	800	W	3	nil	5
BGR_220712_001	0	9	400	WSW	4	ILF	2
BGR_220712_001	1	4	700	WSW	4	nil	5
BGR_220712_001	2	6	800	WSW	4	nil	5
BGR_220712_001	3	5	800	WSW	4	nil	5
BGR_220713_001	0	8	600	W	4	nil	5
BGR_220713_001	1	8	700	W	4	nil	5
BGR_220713_001	2	8	800	W	4	nil	5
BGR_220713_001	3	7	900	W	3	nil	5
BGR_220719_001	0	9	1500	NW	3	nil	5
BGR_220719_001	1	7	1500	NW	2	nil	5
BGR_220719_001	2	7	1500	W	3	nil	5
BGR_220719_001	3	9	1500	WNW	3	nil	5
BGR_220714_001	0	8	800	W	4	nil	5
BGR_220714_001	1	8	800	W	4	nil	5
BGR_220714_001	2	9	700	W	3	ILR	4
BGR_220714_001	3	8	800	W	4	nil	5
BGR_220719_002	0	8	2000	SW	2	nil	5
BGR_220719_002	1	8	1500	S	3	nil	5
BGR_220719_002	2	8	1500	SSE	4	nil	5
BGR_220719_002	3	5	1500	WNW	2	nil	5
BGR_220706_001	0	10	300	WNW	6	ILF	2
BGR_220706_001	1	10	400	WNW	6	ILR	2
BGR_220706_001	2	10	300	WNW	6	ILR	2
BGR_220708_001	0	10	300	SW	3	CLR	1
BGR_220708_001	1	10	300	SW	3	CLR	0.5
BGR_220708_001	2	10	200	WSW	4	CLF	0.5
BGR_220708_001	3	10	300	WSW	4	ILF	1
BGR_220708_002	0	10	300	W	4	nil	2
BGR_220708_002	1	9	300	W	4	nil	2
BGR_220808_001	0	10	600	SW	4	nil	5
BGR_220808_001	1	10	500	SW	5	nil	5
BGR_220808_001	2	10	600	SW	4	nil	5

Watch ID	Period	Cloud (10ths)	Cloud base (m)	Wind Direction	Wind Force	Precipitation	Visibility (km)
BGR_220808_001	3	10	500	SW	3	ILR	4
BGR_220830_001	0	8	700	NE	2	nil	5
BGR_220830_001	1	8	700	NNW	2	nil	5
BGR_220830_001	2	9	700	NW	3	nil	5
BGR_220830_001	3	9	700	SW	2	nil	5
BGR_220810_001	0	1	1500	SW	3	nil	5
BGR_220810_001	1	1	1500	SW	3	nil	5
BGR_220810_001	2	1	1500	SW	4	nil	5
BGR_220810_001	3	2	1500	SW	3	nil	5
BGR_220829_001	0	10	1500	SSE	2	nil	5
BGR_220829_001	1	10	1500	SSE	2	nil	5
BGR_220829_001	2	10	1500	SE	2	nil	5
BGR_220829_001	3	9	1500	SE	2	nil	5
BGR_220810_002	0	2	1500	SW	3	nil	5
BGR_220810_002	1	2	1500	SW	3	nil	5
BGR_220810_002	2	3	1500	SW	4	nil	5
BGR_220810_002	3	3	1500	SW	3	nil	5
BGR_220826_001	0	10	500	SW	2	CLR	2
BGR_220826_001	1	10	600	SSW	2	ILR	2
BGR_220826_001	2	10	500	SSW	2	nil	2
BGR_220826_001	3	10	700	SSW	2	nil	5
BGR_220824_001	0	10	600	SW	3	nil	3
BGR_220824_001	1	10	600	SW	3	nil	3
BGR_220824_001	2	10	600	SW	4	nil	4
BGR_220824_001	3	8	600	SW	4	nil	4
BGR_220831_001	0	4	900	SE	3	nil	5
BGR_220831_001	1	7	800	SE	2	nil	5
BGR_220831_001	2	8	800	E	1	nil	5
BGR_220831_001	3	6	900	nil	0	nil	5
BGR_220824_002	0	9	700	SW	5	nil	4
BGR_220824_002	1	8	900	SW	5	nil	4
BGR_220824_002	2	9	1000	SW	5	nil	3
BGR_220824_002	3	10	1000	SW	5	nil	3
BGR_220831_002	0	7	900	W	1	nil	5
BGR_220831_002	1	8	900	NW	2	nil	5
BGR_220831_002	2	8	1000	NW	1	nil	5
BGR_220831_002	3	7	1000	NW	2	nil	5
BGR_220825_001	0	10	700	SW	3	CLR	2
BGR_220825_001	1	10	700	SW	3	CLR	2
BGR_220825_001	2	10	700	SW	3	ILR	3
BGR_220825_001	3	10	700	SW	3	ILR	3
BGR_220830_002	0	8	700	SSE	2	ILF	5
BGR_220830_002	1	8	700	SE	2	nil	5
BGR_220830_002	2	9	700	SE	2	nil	5
BGR_220830_002	3	9	700	ESE	1	nil	5



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Key

- Ornithological Study Area
- 500m buffer
- 1.5km buffer
- 2km buffer
- 6km buffer

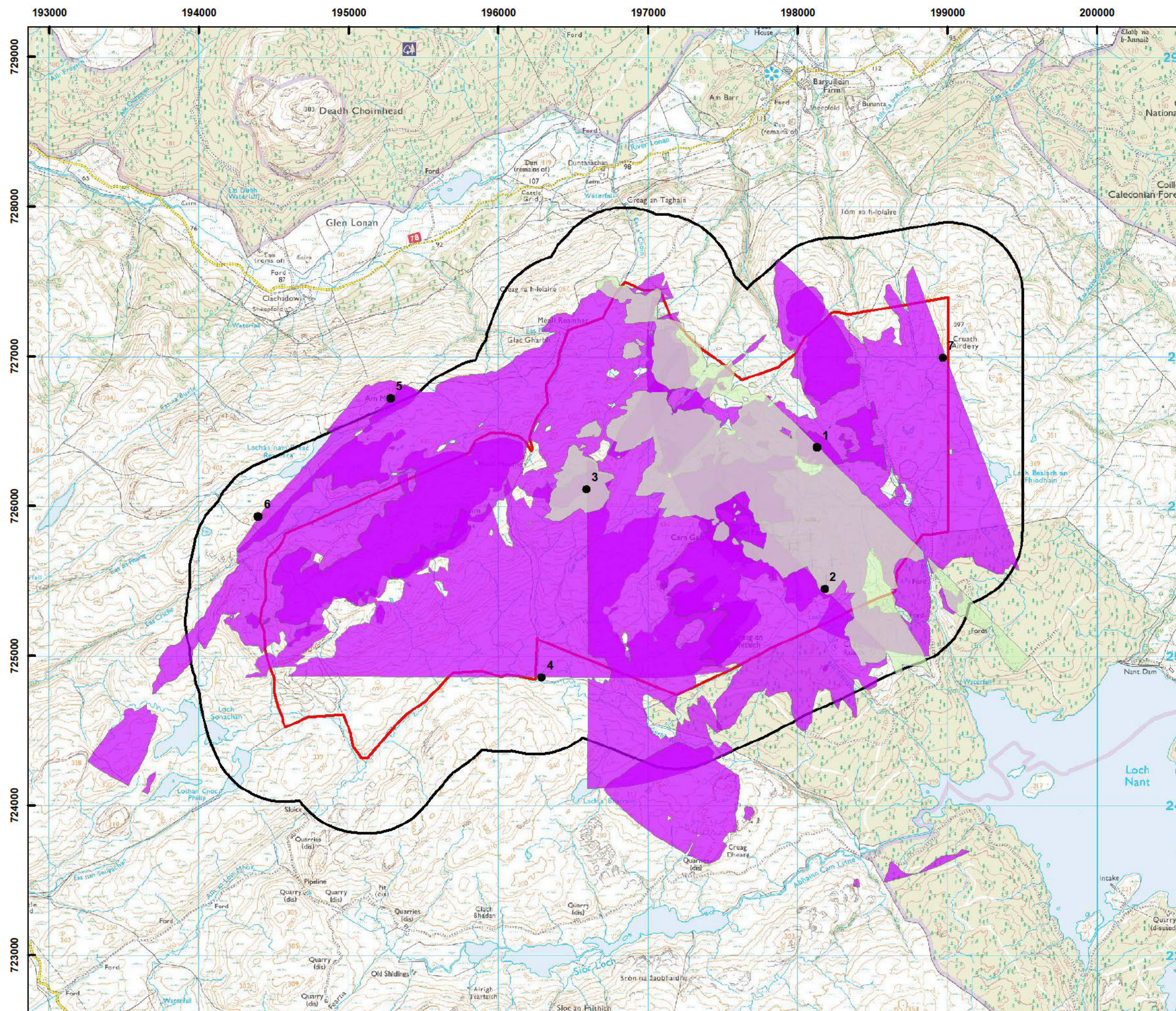
Date produced: 04/03/2024
Source: NRP LTD

0 0.5 1 2 km



Figure 1.
**Ornithological Study Area and
survey buffers**

Beinn Ghlas Repowering



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Key

- Vantage points
- Viewsheds
- VP1 viewshed
- Ornithological Study Area
- 500m buffer

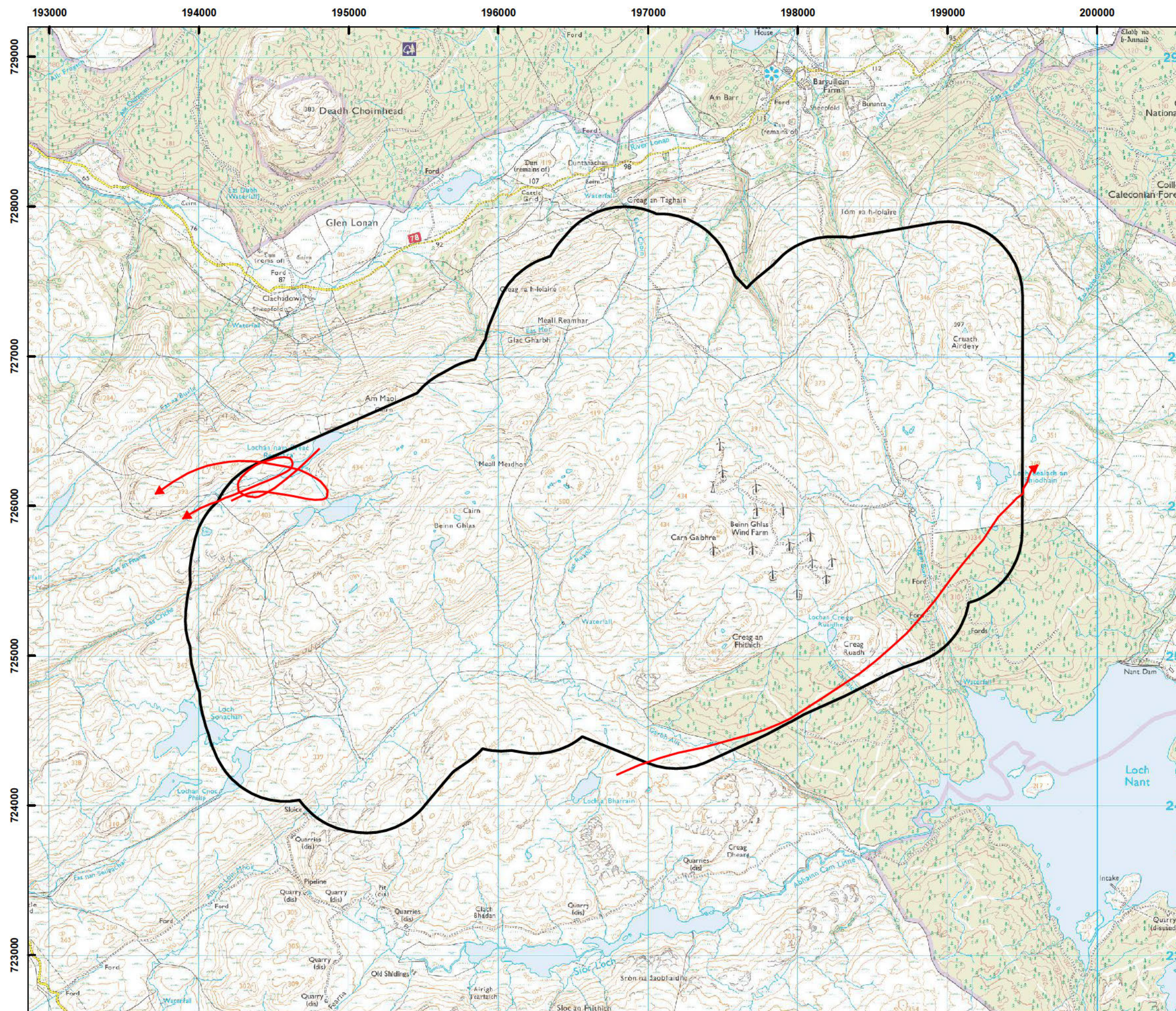
Date produced: 04/03/2024
Source: NRP LTD

0 0.25 0.5 1 km



Figure 2.
Vantage Points and viewsheds

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Key

- Red-throated diver
- 500m buffer

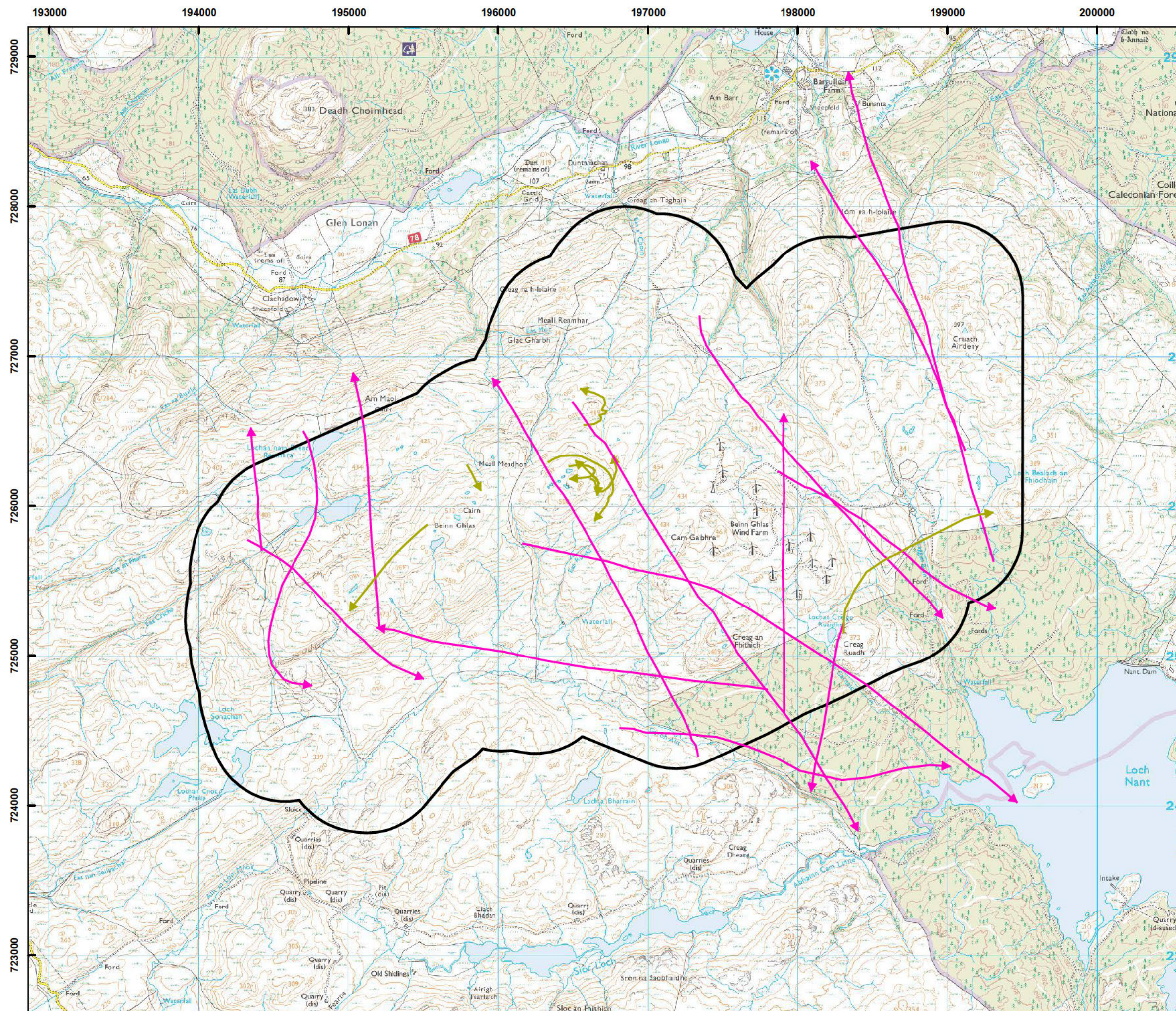
Date produced: 20/01/2023
Source: NRP LTD

0 0.25 0.5 1 km



Figure 3.
**Diver flights recorded from
Vantage Points September
2020 - August 2021**

Beinn Ghlas Repowering



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Key

— Golden plover

— Pink-footed goose

□ 500m buffer

Date produced: 12/10/2022

Source: NRP LTD

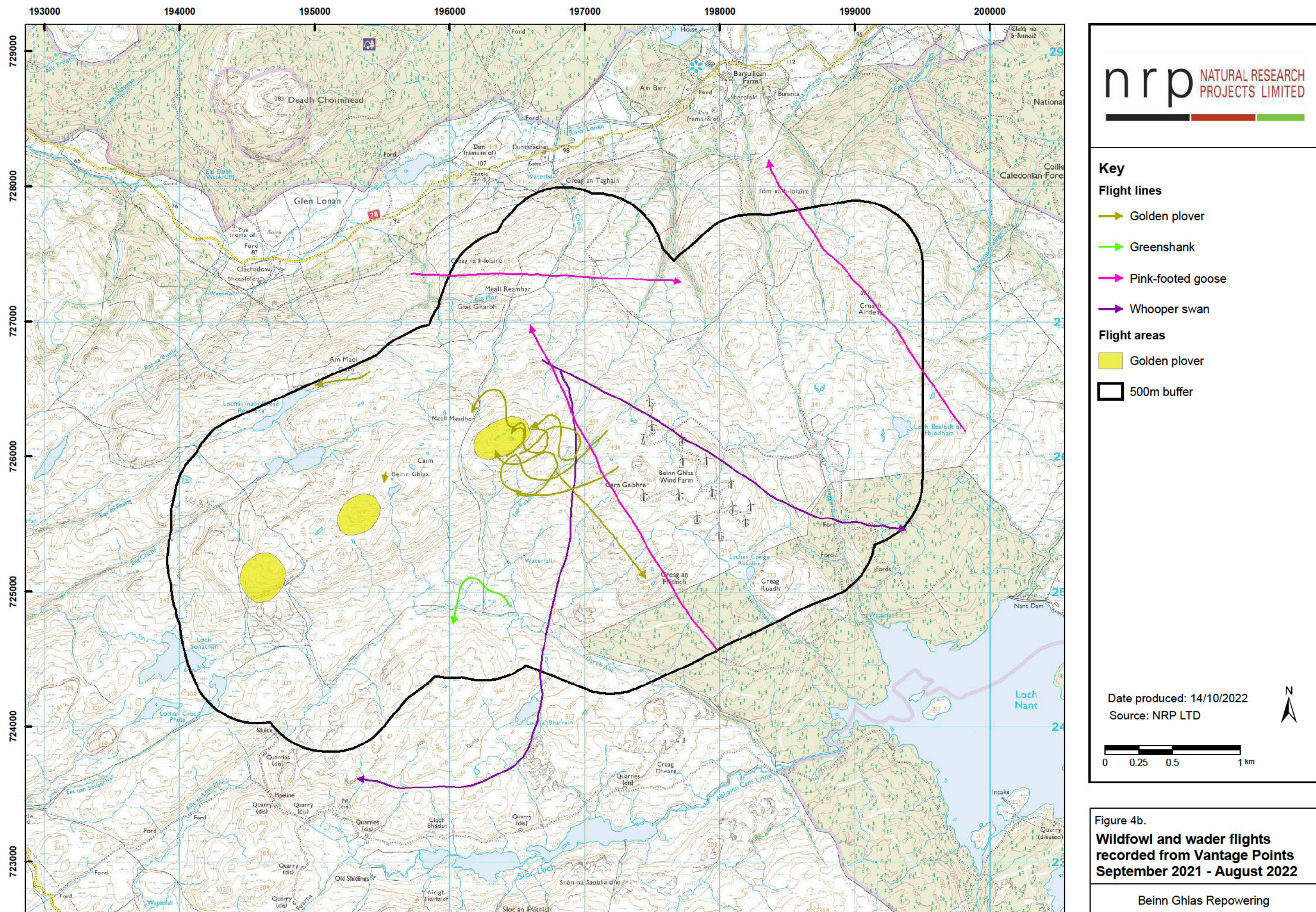
0 0.25 0.5 1 km



Figure 4a.

**Wildfowl and wader flights
recorded from Vantage Points
September 2020 - August 2021**

Beinn Ghlas Repowering



Key

- Flight lines
- 500m buffer

Date produced: 20/01/2023
Source: NRP LTD

0 0.25 0.5 1 km



Figure 5a.

**Golden eagle flights recorded
from Vantage Points September
2020 - August 2021**

Beinn Ghlas Repowering

Key

- Flight lines
- 500m buffer

Date produced: 20/01/2023
Source: NRP LTD

0 0.25 0.5 1 km



Figure 5b.

**Golden eagle flights recorded
from Vantage Points September
2021 - August 2022**

Beinn Ghlas Repowering

Key

→ Flight lines

Flight areas

500m buffer

Date produced: 12/10/2022
Source: NRP LTD

0 0.25 0.5 1 km



Figure 6a.

**White-tailed eagle flights
recorded from Vantage Points
September 2020 - August 2021**

Beinn Ghlas Repowering

Key

→ Flight lines

Flight areas

500m buffer

Date produced: 14/10/2022
Source: NRP LTD

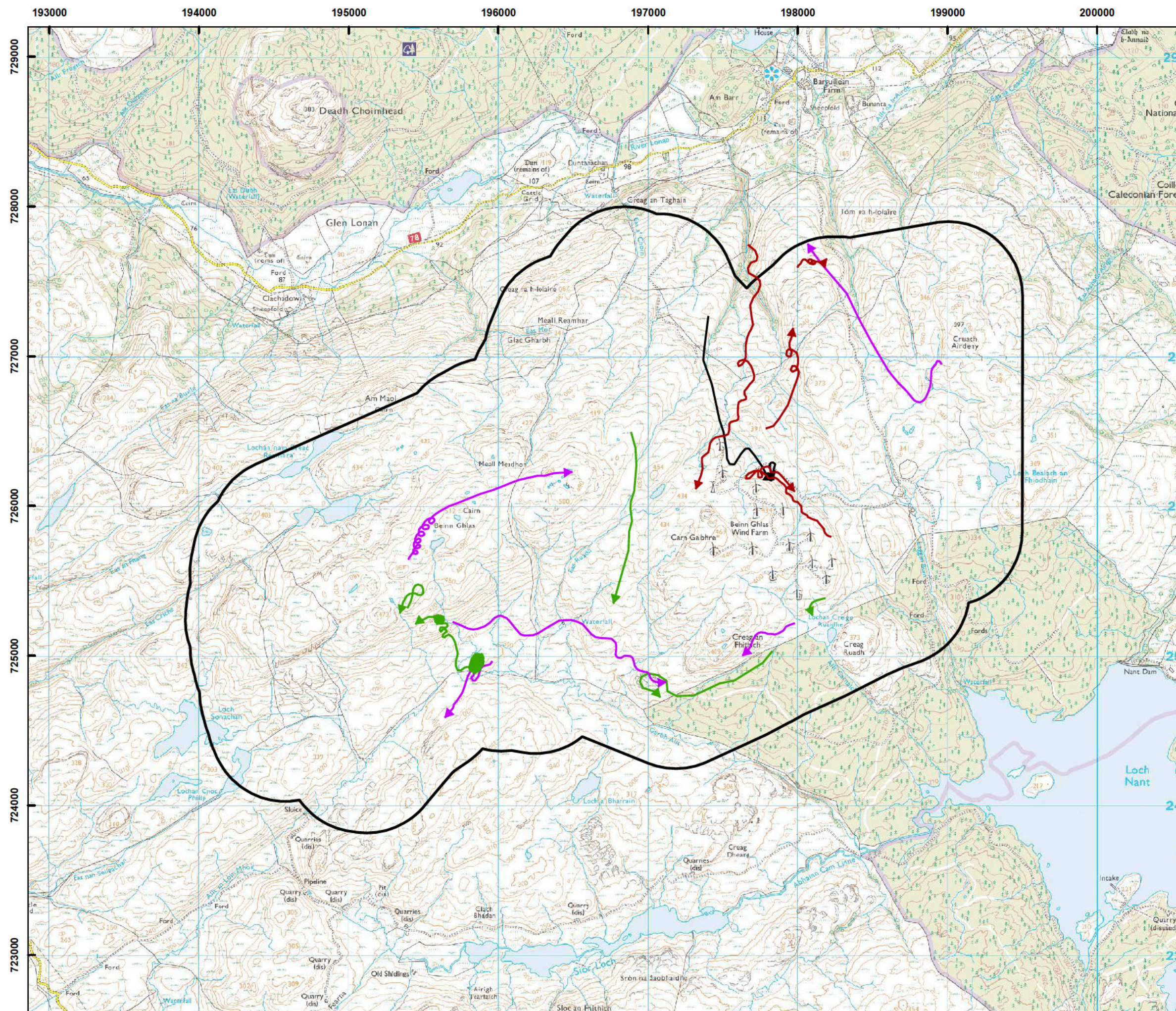
0 0.25 0.5 1 km



Figure 6b.

**White-tailed eagle flights
recorded from Vantage Points
September 2021 - August 2022**

Beinn Ghlas Repowering



n r p NATURAL RESEARCH
PROJECTS LIMITED

Key

- Hen harrier
- Merlin
- Peregrine
- Red kite
- 500m buffer

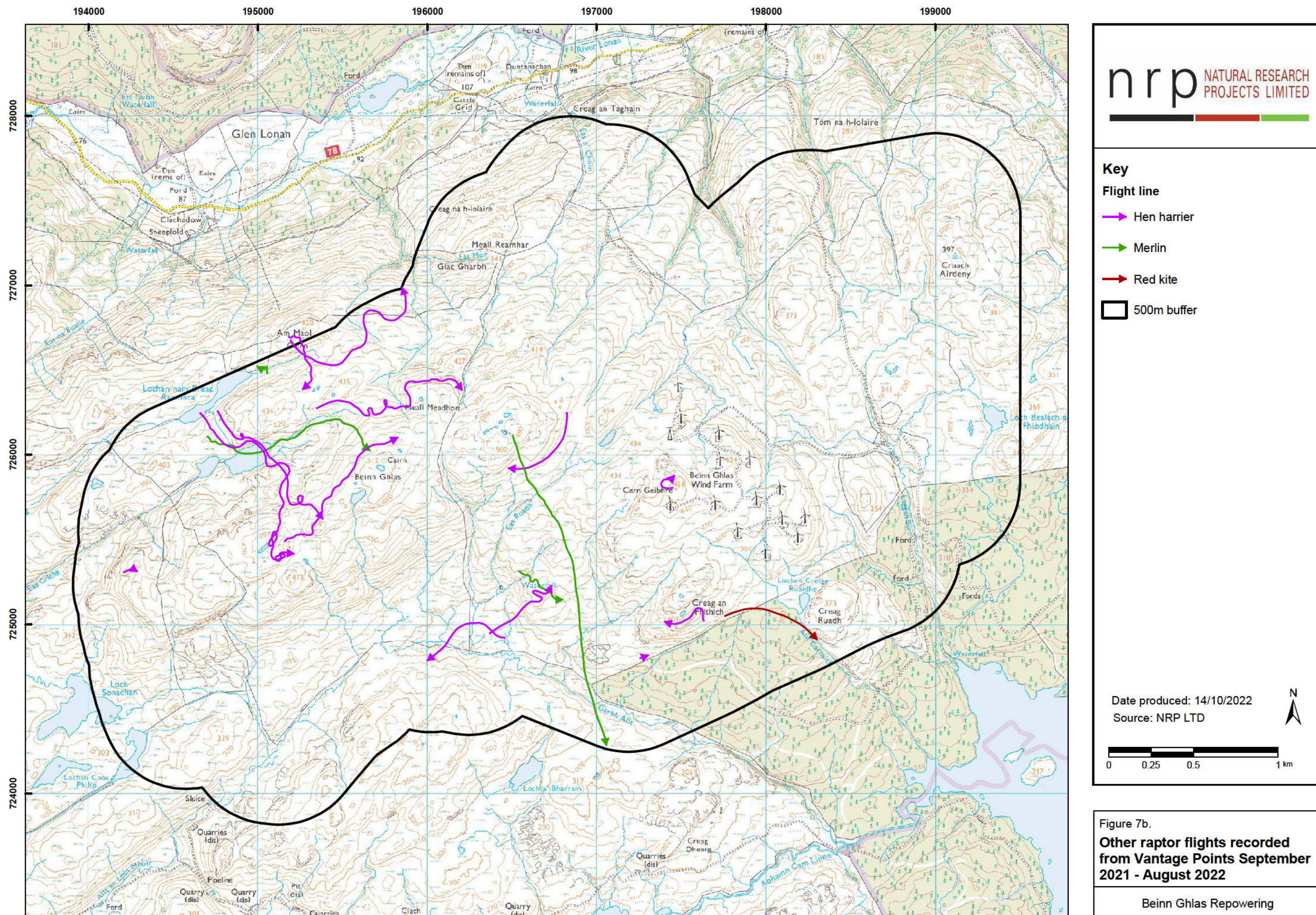
Date produced: 12/10/2022
Source: NRP LTD

0 0.25 0.5 1 km



Figure 7a.
**Other raptor flights recorded
from Vantage Points September
2020 - August 2021**

Beinn Ghlas Repowering



Key

Flight lines

→ Red-throated diver

Point records

● Black-throated diver

● Red-throated diver

□ Ornithological Study Area

Date produced: 04/03/2024
Source: NRP LTD



0 0.25 0.5 1 km

Figure 8a.

**Divers recorded during other
surveys September 2020 - August
2021**

Beinn Ghlas Repowering

Key

Flight lines

→ Red-throated diver

Flight areas

Red-throated diver

Point records

Red-throated diver

Ornithological Study Area

Date produced: 04/03/2024
Source: NRP LTD

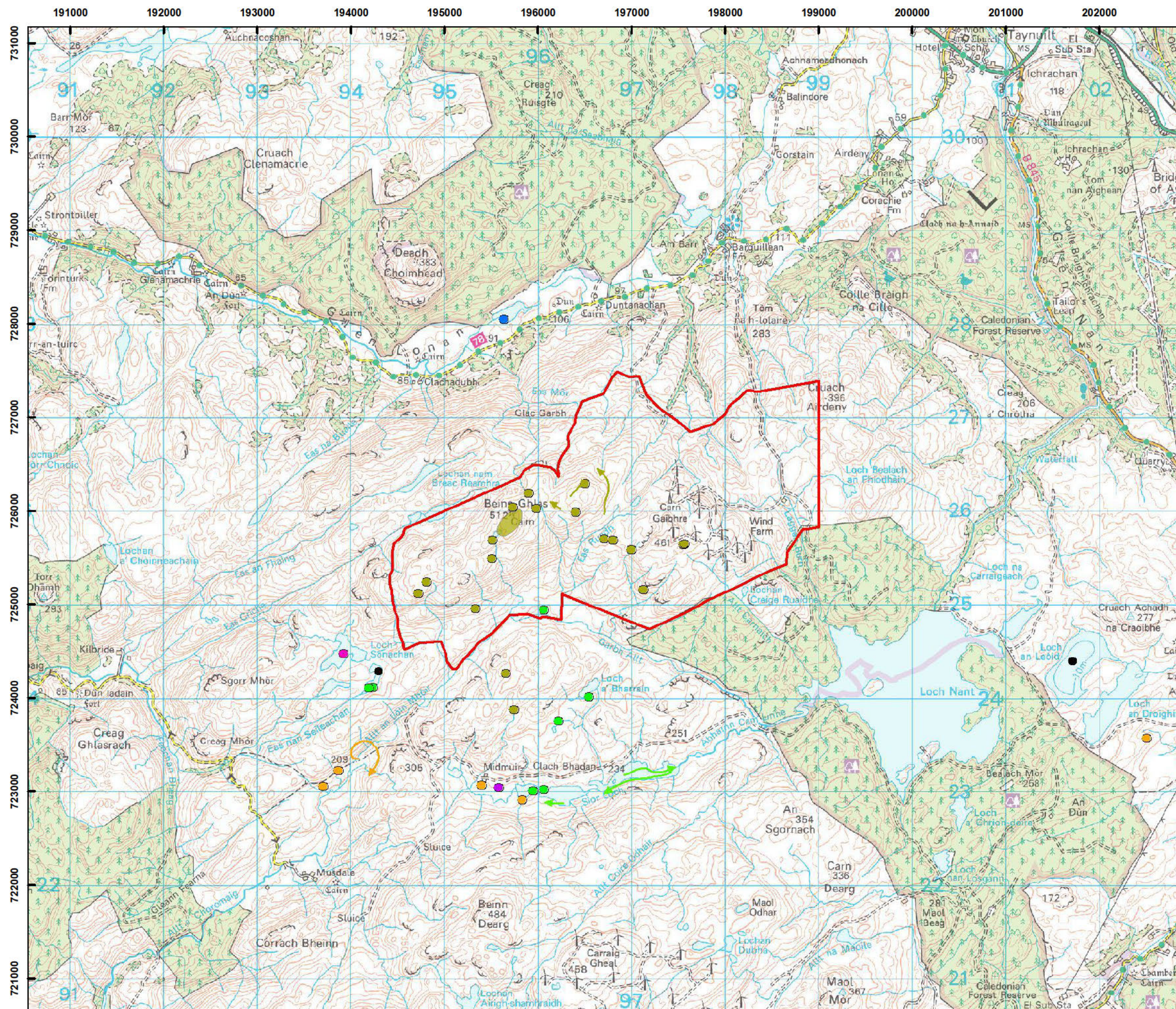


0 0.25 0.5 1 km

Figure 8b.

**Divers recorded during other
surveys September 2021 - August
2022**

Beinn Ghlas Repowering



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Key

Flight lines

- Curlew
- Golden plover
- Greenshank

Point records

- Canada goose
- Curlew
- Golden plover
- Greenshank
- Greylag goose
- Whimbrel
- Whooper swan

Flight areas

- Golden plover
- Ornithological Study Area

Date produced: 04/03/2024

Source: NRP LTD

0 0.25 0.5 1 km



Figure 9a.

**Wildfowl and waders recorded
during other surveys September
2020 - August 2021**

Beinn Ghlas Repowering

Key

Flight lines

→ Golden plover

→ Greenshank

Flight areas

■ Curlew

Point records

● Curlew

● Golden plover

● Greenshank

● Whooper swan

□ Ornithological Study Area

Date produced: 04/03/2024
Source: NRP LTD

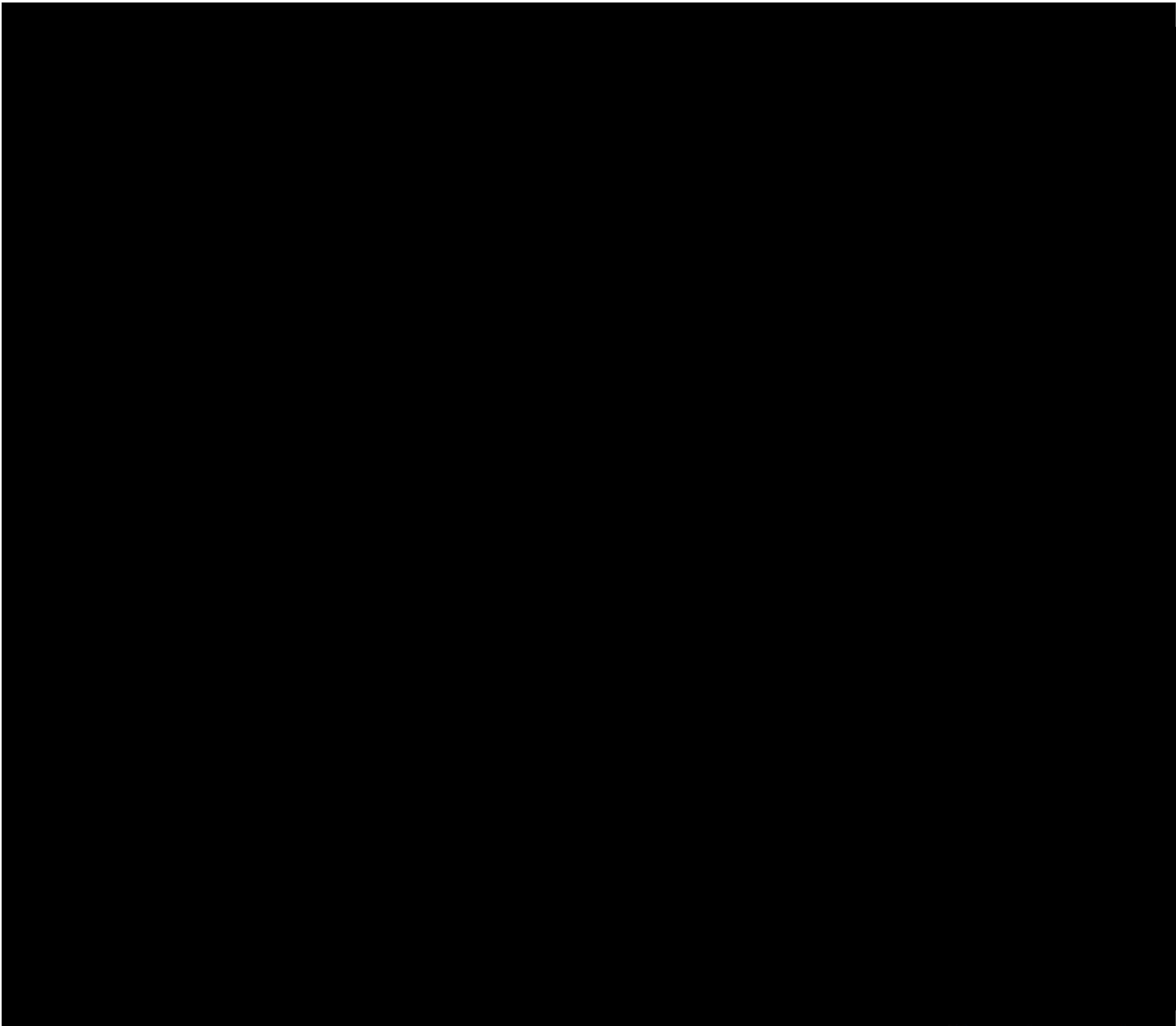


0 0.25 0.5 1 km

Figure 9b.

**Wildfowl and waders recorded
during other surveys September
2021 - August 2022**

Beinn Ghlas Repowering



Key

- Flight lines
- Flight areas
- Perched birds
- Ornithological Study Area

Date produced: 04/03/2024
Source: NRP LTD



Figure 10a.
**Golden eagles recorded during
other surveys September 2020 -
August 2021**

Key

-  Flight lines
-  Flight areas
-  Perched birds
-  Ornithological Study Area

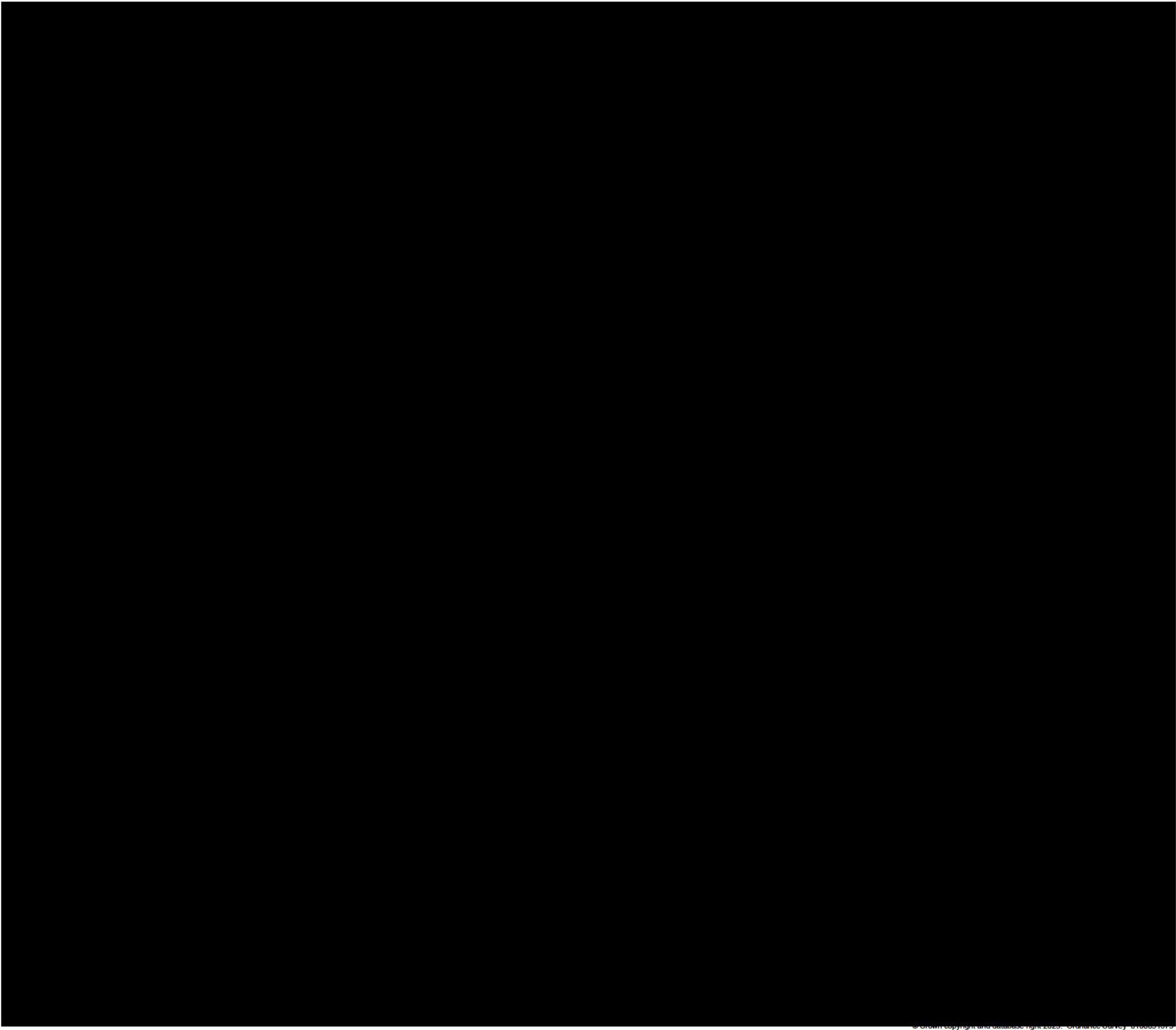
Date produced: 04/03/2024
Source: NRP LTD



Figure 10b.

**Golden eagles recorded during
other surveys September 2021 -
August 2022**

Beinn Ghlas Repowering



- Key**
- Flight lines
 - Flight areas
 - Perched birds
 - Ornithological Study Area

Date produced: 04/03/2024
Source: NRP LTD



Figure 11a.
White-tailed eagles recorded during other surveys September 2020 - August 2021

Beinn Ghlas Repowering

Key

-  Flight lines
-  Flight areas
-  Perched birds
-  Ornithological Study Area

Date produced: 04/03/2024
Source: NRP LTD

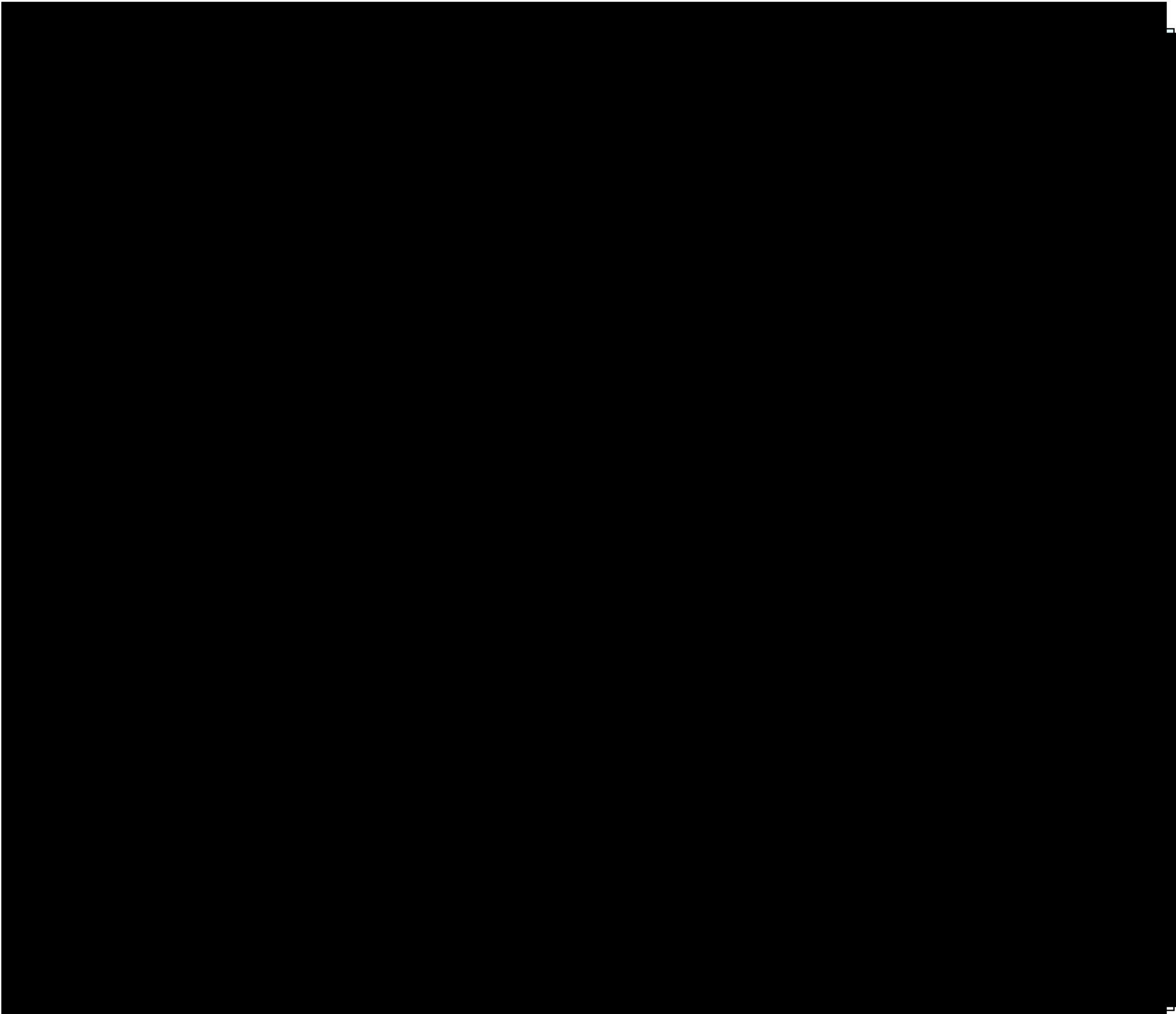


0 0.5 1 2 km

Figure 11b.

**White-tailed eagles recorded
during other surveys September
2021 - August 2022**

Beinn Ghlas Repowering



Key

Flight lines

- Goshawk
- Hen harrier
- Merlin
- Osprey
- Red kite

Perched birds

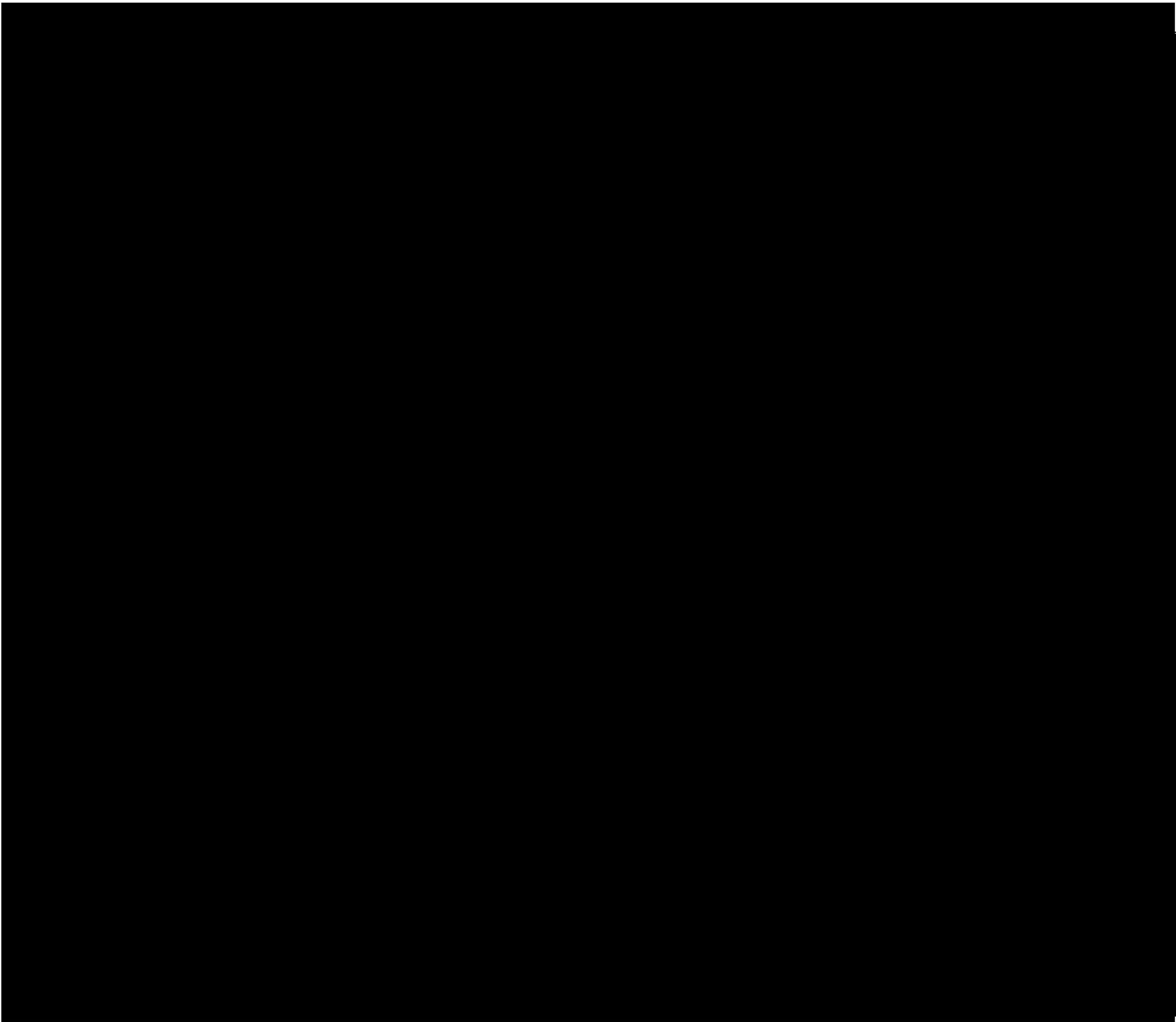
- Merlin
- Ornithological Study Area

Date produced: 04/03/2024
Source: NRP LTD



Figure 12a.
**Other raptors recorded during
other surveys September 2020 -
August 2021**

Beinn Ghlas Repowering



Key

Flight lines

- Goshawk
- Hen harrier
- Merlin
- Osprey
- Peregrine
- Short-eared owl

Flight areas

- Merlin

Perched birds

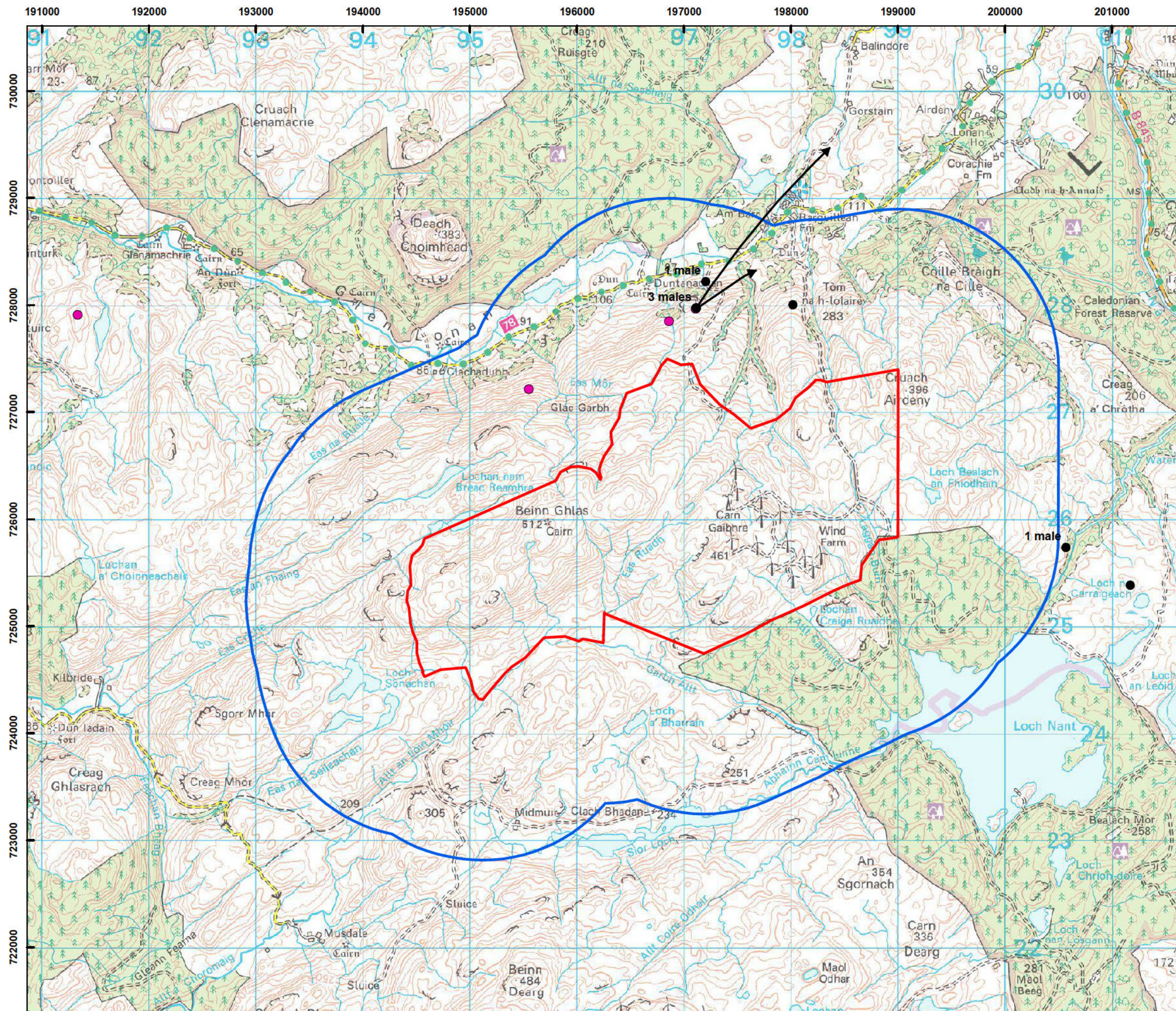
- Hen harrier
- Short-eared owl
- Ornithological Study Area

Date produced: 04/03/2024
Source: NRP LTD



Figure 12b.
Other raptors recorded during
other surveys September 2021 -
August 2022

Beinn Ghlas Repowering



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Key

-  Flight lines from lek surveys
-  Point records from lek surveys
-  Point records from other surveys
-  Ornithological Study Area
-  1.5km buffer

Date produced: 04/03/2024
Source: NRP LTD

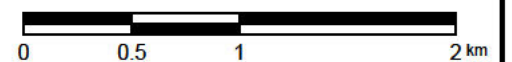
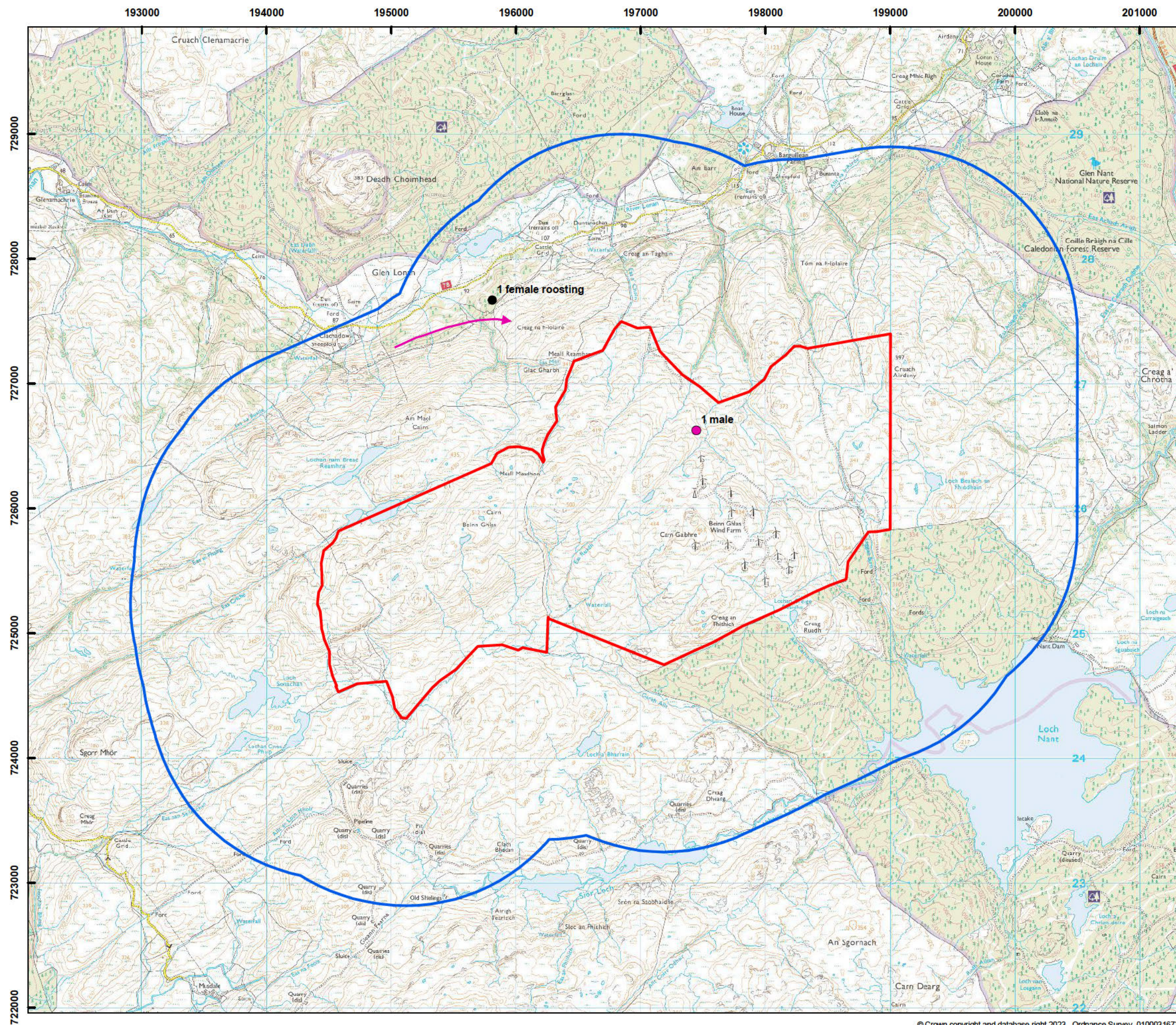


Figure 13a.

**Black grouse records September
2020 - August 2021**

Beinn Ghlas Repowering



n r p NATURAL RESEARCH
PROJECTS LIMITED

Key

- Point records from lek surveys
- Point records from other surveys
- Flight lines from other surveys
- Ornithological Study Area
- 1.5km buffer

Date produced: 04/03/2024
Source: NRP LTD

0 0.25 0.5 1 km



Figure 13b.
**Black grouse records September
2021 - August 2022**

Beinn Ghlas Repowering