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Dear Stephen,

THE ELECTRICITY WORKS (ENVIRONMENTAL IMPACT ASSESSMENT) (SCOTLAND) REGULATIONS 2017. ELECTRICITY ACT 1989 SECTION 36. APPLICATION FOR THE PROPOSED HOLLANDMEY RENEWABLE ENERGY DEVELOPMENT, EAST OF THURSO IN THE HIGHLAND COUNCIL AREA

This letter provides responses to NatureScot's concerns regarding aspects of the ornithological assessment, relating to wintering populations of Greenland white-fronted (GWF) goose, greylag goose, whooper swan and hen harrier and breeding populations of waders including golden plover for the proposed Hollandmey Renewable Energy Development. NatureScot's comments were conveyed in a letter (dated 04 March 2022) to the Scottish Government in response to the Section 36 application (ECU Reference: ECU00003353).

Below we provide NatureScot's key concerns, and our response to each.

Assessment of potential impacts to Greenland white-fronted geese

From the materials supporting the Hollandmey Renewable Energy Development application NRP believe that GWF goose has been adequately reported upon and assessed in line with the relevant guidance and best practice.

Referring to Technical Appendix 9.1 of the Environmental Impact Assessment (EIA) Report, all observations of geese and swans recorded during wider distribution surveys are presented in Table 9.1.10 with the number of birds and place names or grid references given. The Greenland white-fronted goose records are summarised in **Table 1**.

Table 1. Records of Greenland white-fronted goose recorded during Goose and Swan Distribution surveys.

Date	Time	Species	No. birds	Location	Behaviour
25/11/2017	1037	Greenland white-fronted goose	8	ND 280 727	Feeding in Stubble
11/01/2018	1226	Greenland white-fronted goose	53	West Lodge	Feeding in grass field
15/02/2018	0920	Greenland white-fronted goose	11	Mey	Feeding
15/02/2018	1210	Greenland white-fronted goose	160	ND 289 722	Feeding
20/03/2018	1200	Greenland white-fronted goose	9	Loch of Mey	
20/03/2018	1210	Greenland white-fronted goose	45	Loch of Mey	Feeding
15/03/2019	1220	Greenland white-fronted goose	135	ND 265 720	
15/01/2020	1025	Greenland white-fronted goose	2	ND 280 736	
15/01/2020	1040	Greenland white-fronted goose	6	ND 281 728	

All observations involved the regular Loch of Mey flock in fields between Loch of Mey and the West Loch area. NRP were aware of this flock prior to commencement of survey work and as a precaution, to ensure the flock's activities were adequately captured, distribution surveys to inform the EIA Report were carried out to a distance of up to 7 km from the proposed Development[1] (see Figure 9.1.6), considerably further than the 1 km survey buffer as recommended in SNH (2017)[2]. Vantage point watches recorded many greylag and pink-footed goose flights (though most were outside the survey buffer), but no GWF goose flights were observed during the study period.

Whilst NRP do not doubt that the Loch of Mey GWF goose flock may occasionally roost on other local waterbodies (for instance if they are disturbed from Loch of Mey), our observations and desk studies suggest that this must be very infrequent as during 113 hours of distribution surveys over three winter periods coupled with 288 hours of vantage point observations during winter and migration periods, we did not record this flock within 2 km of the proposed turbine layout. It is worth noting that the surveys detailed in Patterson *et al.* (2012)[3] found similar results with all observations of feeding/roosting GWF geese in the winters of 2011/2012 and 2012/2013 being north of the minor road north of Philips Mains.

Following an analysis of more recent Caithness Bird Club annual reports (2013-2020)[4], there are many documented sightings of this well recorded species. Discounting any records that are west of the A9 and associated with the West Caithness wintering flock, it is clear that the Loch of Mey flock are very faithful to the fields surrounding Loch of Mey. All records of feeding birds are from the Loch of Mey, West Mey, Charleston, Rattar, Rattar Smithy, Barrock and Skarfskerry areas which all lie to the north of the proposed Development. The only exception to this was a single bird recorded on Loch Heilen on 16/11/2019. There were also two records at Killimister, 9 km south of the proposed Development, of three birds on 20/03/2015 and 40 on 28/03/2018, but given that the dates were very late in the winter period (the 2015 record was the last record in Caithness that winter) and the paucity of sightings in this area, it seems likely these were passage migrants.

[1] Please note there is a typographic error in Technical Appendix 9.1 paragraph 1.42 where it states "…*to a distance of 500 m*…". This should have read "… to a distance of 2 km…".
[2] SNH. (2017). Recommended bird survey methods to inform impact assessment of onshore wind farms. SNH Information and Guidance Note. SNH, Battleby.
[3] Patterson, I.J., Lambie, D., Smith, J. & Smith, R. (2012). Survey of the feeding areas, roosts and flight activity of qualifying species of the Caithness Lochs Special Protection Area. Scottish Natural Heritage Commissioned Report No.523.
[4] https://www.the-soc.org.uk/about-us/online-scottish-bird-report

Francis *et al.* (2011)[5] describes how before the 1990s birds roosted and fed around Loch Heilen, but that this was abandoned following shooting of greylag geese and that they then moved to Loch of Mey. Correspondence from the Caithness Bird Club[6] also suggests that the presence of Lochend wind farm, constructed in 2016, may have also had a displacement effect on GWF geese using Loch Heilen and the surrounding fields.

There does not appear to be any recent evidence for the Loch of Mey wintering GWF goose flock feeding or roosting in any area other than Loch of Mey itself or the fields surrounding Loch of Mey north of the proposed Development. Therefore, NRP do not believe the proposed Development poses a significant risk to the Caithness population of GWF geese as a combination of field surveys and desk studies has not found any recent evidence that this species regularly commutes over the proposed Development between feeding and roosting areas.

For these reasons, described in Chapter 9 of the EIA Report, GWF goose was not included for detailed assessment as their reliance on habitats and airspace in the vicinity of the proposed Development is so low that there is no potential for an adverse effect on regional or national populations as a result of construction or operational activities. Similarly, the predicted in-isolation effects of the proposed Development are considered to have no potential to contribute to cumulative effects.

NatureScot states that '*… birds occasionally use Phillips Mains Mire SSSI which lies within the proposal boundary.*' but without any corroborating evidence or citation we have been unable to find any confirmation of this during desk studies. The Online Scottish Bird Report[3] allows users to search every annual Caithness Bird Report between 1968 and 2020, yet within the GWF goose sections there are only two references to 'Philips Mains' in 1989 (108 birds) and 1990 (110 birds) and none to Philips Mains Mire, so these were presumably birds feeding in fields at Philip Mains farm. Patterson *et al.* (2012)[3] also found no evidence that birds were using this area in the winters of 2011/2012 and 2012/2013.

Francis *et al.* (2011)[4] states that '*Flightline sightings suggest that a pool system at ND308708, surrounded since the 1980s, though not closely, by plantation, might be used at times.*' This is somewhat vague and anecdotal, and suggests that the surrounding forest has grown in height and made the area less attractive as a roost location.

Removal of forestry at Philips Mains Mire Site of Special Scientific Interest (SSSI) has potential to improve the attractiveness of Philips Mains Mire to GWF geese. However, it is known, and acknowledged by NatureScot, that this flock is very site faithful to the feeding fields to the north of the proposed Development. Therefore, should there be any commuting flights between the Phillips Main Mire pool system and the favoured feeding areas there is no reason for these commuting flights to pass through the proposed Development as GWF geese would fly directly between their feeding areas and Phillips Main Mire. It is far more likely that commuting flights will be to the north of the proposed Development and there would be no increased risk of collision (see **Figure 1**).

[5] Francis, I., Mitchell, C., Griffin, L., and Fox, T. (2011). Greenland White-fronted Geese: Land use and conservation at small wintering sites in Scotland. Wildfowl & Wetlands Trust, Slimbridge.
[6] Caithness Bird Club. Hollandmey Windfarm Proposal. A Response from Caithness Bird Club. November 2021.

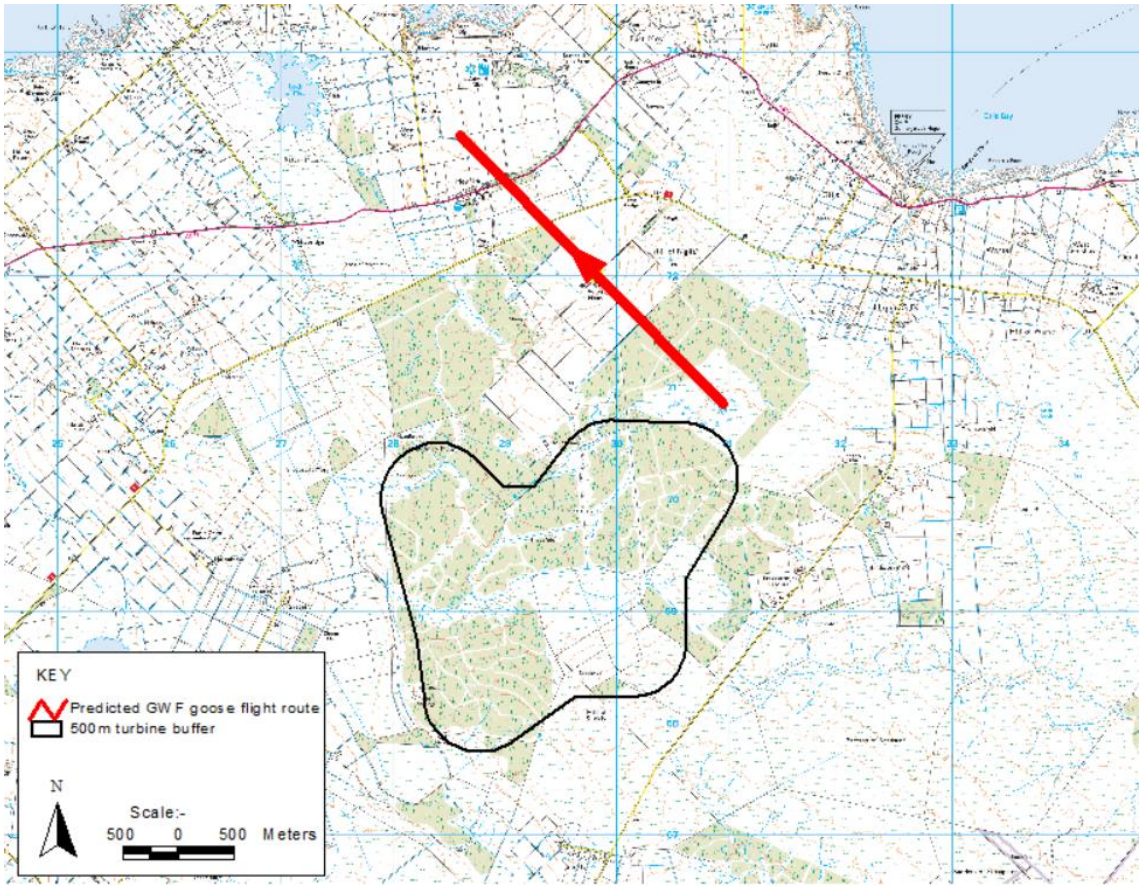

Figure 1. Theoretical preferred flight corridor for GWG geese between Phillips Main Mire and their favoured feeding and roosting area.

The records of 'goose species' in Figures 9.1.8 to 9.1.10 of the EIA Report refer to unidentified geese with no indication that these may have been GWF geese. Only three of these flights were recorded within the 500 m turbine buffer (Figure 9.1.9) during migration watches. All three flights were recorded during the same 3-hour watch on 10/10/2018. Two flights were at heights greater than 150 m above ground level, the third flight was recorded as between 100-150 m above ground level involving 40 individuals. Fourteen further flights by pink-footed and greylag goose were recorded during the same watch. The first GWF geese to arrive in Caithness during autumn 2018 was made in the morning of 11/10/18 when 15 GWF geese were seen crossing Thurso Bay into Dunnet Bay (Fox *et al.*, 2019)[7]. Therefore, on the balance of probability the three unidentified flights were likely to have been made by either pink-footed or greylag geese, two of which were at heights that would not pose a risk of collision.

Assessment of disturbance and displacement impacts to feeding and/or roosting greylag geese and whooper swans

We disagree with NatureScot that no assessment of impact has been made for feeding geese and swans within the vicinity of the proposed Development. The impacts of the proposed Development on the wintering populations of greylag geese and whooper swans have been considered within the EIA Report, including in Section 9.8 as qualifying interests of the Caithness Lochs Special Protection Area (SPA).

[7] Fox, T., Francis, I., Norriss, D. & Walsh, A. (2019). Report of the 2018/2019 international census of Greenland white-fronted geese. Report by Greenland White-fronted Goose Study and National Parks and Wildlife Service, Ireland.

Table 2 gives details of all feeding greylag geese and whooper swans recorded within a 2 km buffer of the turbine layout, these details are taken from Table 9.1.10 of Technical Appendix 9.1 and are presented in Figure 9.1.6. There were six records of feeding greylag geese and two records of feeding whooper swans within the 2 km buffer whilst only two records of greylag goose and no whooper swans were recorded within the 500 m buffer.

Table 2. Records of greylag goose and whooper swan recorded within the 500 m and 2 km turbine buffers.

Date	Time	Species	No. birds	Location	Behaviour	500 m buffer	2 km buffer
06/10/17	1350	Greylag Goose	210	ND 278 708	Feeding	N	Y
01/11/18	1420	Greylag Goose	8	ND 298 688	Feeding	Y	Y
19/11/18	1215	Greylag Goose	140	ND 295 665	Feeding	N	Y
05/04/19	1100	Greylag Goose	2	ND 312 685	Feeding	N	Y
05/04/19	1440	Greylag Goose	240	ND 293 708	Feeding	N	Y
08/02/20	1350	Whooper Swan	26	ND 271 712	Feeding	N	Y
08/02/20	1350	Greylag Goose	180	ND 270 711	Feeding	N	Y
23/02/20	1230	Greylag Goose	900	ND 299 685	Feeding	Y	Y
23/02/20	1318	Whooper Swan	6	ND 296 712	Feeding	N	Y
08/03/20	1345	Greylag Goose	25	ND 267 692	Feeding	N	Y

These were the only records of these two species in proximity to the proposed Development from 113 hours of distribution surveys designed to record feeding geese and swans but also include any incidental records of feeding birds that are routinely recorded as part of flight activity surveys over the 500 m turbine buffer.

During baseline surveys no whooper swan were recorded feeding within distances from the proposed Development that could possibly invoke an adverse effect. Rees *et al*. (2003)[8] found that feeding whooper swans are not disturbed by pedestrians or traffic (including construction traffic) at a distance greater than 500 m. Therefore, there is no requirement to consider potential effects on feeding whooper swan further and they were 'scoped out' of detailed assessment (Section 9.5.3.1, paragraphs 41 and 42).

The effects of construction, decommissioning and operation upon feeding greylag goose are discussed within the EIA Report. The EIA Report assesses the effects of the proposed Development on feeding greylag goose in Sections 9.6.4 'Construction Effects' and Section 9.6.5 'Operational Effects', and found the predicted effects to be 'not significant' under the Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 ('the EIA Regulations'). In these sections we have discussed habitat loss (Section 9.6.4.1), disturbance/displacement due to construction (Section 9.6.4.3) and decommissioning (Section 9.6.4.2, paragraph 85), displacement due to operation (Sections 9.6.5.2, paragraph 106) and barrier effects (Section 9.6.5.2, paragraph 107).

Bird Protection Plan

An outline Bird Protection Plan (BPP) has been provided and a finalised version would be incorporated into a Construction Environmental Management Plan (CEMP) upon consent. The BPP will include details of measures to safeguard breeding birds, including golden plover, wintering birds including

[8] Rees, E. C., Bruce, J.H., White, G.T., (2005). Factors affecting the behavioural responses of whooper swans (*Cygnus c. cygnus*) to various human activities. Biological Conservation 121:369–82.

geese and swans and also hen harrier roost locations following NatureScot guidance[9]. The BPP will include safe working distances including those published in Ruddock & Whitfield (2007)[10].

The records of crane concerned three reports of a single bird recorded from a Generic Vantage Point survey and then incidentally twice on the same date in November (07/11/2018). Two birds were observed in flight on 18/04/2018 during a Scarce Breeding Bird Survey. No breeding activity was observed and these records fall within a pattern of wandering, mainly continental, birds. As the British population is expanding, including a small population in north-east Scotland this species will be included in the BPP as habitat within the Habitat Management Area (HMA) may become attractive to them.

Solar Array Assessment

We disagree with NatureScot that the EIA Report does not assess the impact of the solar array on birds. The EIA Report assesses the potential effects of the solar array on wintering and breeding birds in Sections 9.6.4 'Construction Effects' and Section 9.6.5 'Operational Effects' and found the predicted effects to be 'not significant' under the EIA Regulations. In these sections we have discussed habitat loss (Section 9.6.4.1), disturbance/displacement due to construction and decommissioning (Sections 9.6.4.2 to 9.6.4.9), displacement due to operation (Sections 9.6.5.1 to 9.6.5.7), barrier effects (Section 9.6.5.2, paragraph 107) and the risk of collision (Section 9.6.5.8, paragraph 122). Furthermore, given the generally poor habitat for breeding and feeding birds we find it unlikely that any species of conservation concern would be attracted to the solar array area.

Bird Flight Deflectors

Bird flight detectors will be fitted to all meteorological mast guy wires at 5 m intervals to reduce the risk of collision to SPA bird species. Details of implementation and maintenance will be included in the CEMP.

Habitat Management Plan

A final Habitat Management Plan (HMP) will be issued for agreement with NatureScot which will include measures for vegetation height monitoring and management within the newly felled keyholes in line with NatureScot guidance to reduce suitability for foraging hen harrier and other raptors within the proposed Development footprint. Specific method statements for tree felling and restoration with regards to safeguarding the SSSI will be produced post consent. It is the intention of SPR to implement water quality monitoring and catchment modelling of the HMA prior to commencement of any restoration works. This will allow a programme of how much land can be treated by year to minimise water quality issues. Details of potential techniques for restoration works are included within the HMP however these will be refined once more information is available to inform which techniques will be suitable for which areas. SPR can clarify that all trees will be removed from the HMA and that ongoing management with relation to regenerating confer removal will be through hand clearance. Details of this technique will be provided within the final HMP.

I hope the above is sufficient in allaying any concerns you may have with regard to the comments made by NatureScot on aspects of the ornithological assessment for the proposed Hollandmey Renewable Energy Development.

If you have any further queries or comments, then please do not hesitate to contact me.

[9] NatureScot. (2014). Guidance note: Implications of Additional Protection for Hen Harrier, Red Kite and Golden Eagle under Schedules A1 & 1A of the Wildlife and Countryside Act (1981).
[10] Ruddock, M. & Whitfield, D.P. (2007). A review of disturbance distances in selected bird species. Report to Scottish Natural Heritage, NRP Ltd.

Yours sincerely,

By email

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