Scottish & Southern Electricity Networks

TRANSMISSION

Creag Dhubh to Dalmally 275kV Connection

Environmental Impact Assessment

Volume 4 | Appendix 7.1

Ornithology Methods and Results

April 2022

1 Introduction

1.1.1 This Technical Appendix (TA) presents full details of the methodology and results for the field surveys undertaken for the Proposed Development, including references to best practice, and impact assessment methodology. It should be read in conjunction with **Chapter 7: Ornithology and Chapter 2: Description of The Proposed Development (EIAR Volume 2)**.

2 Method of Baseline Data Collection

2.1 Extent of Study Area

2.1.1 The ornithology baseline was established using an Ornithology Desk Study Area and an Ornithology Field Survey Area. The Ornithology Desk Study Area was defined as a 10 km buffer on either side of the Proposed Development, as shown on **Figure 7.1: Ornithological Study Areas (EIAR Volume 3a).** The Ornithology Field Survey Area extended up to 2 km beyond the Proposed Development on either side, with smaller areas surveyed dependent on the target species of the survey methodologies used. The extent of the limits of deviation[1] (LOD) of the Proposed Development (hereafter "the LOD") falls entirely within the field Ornithology Field Survey Area.

2.2 Desk Study

2.2.1 A review of the desk study was carried out for the Environmental Impact Assessment (EIA) Scoping Report[2] in 2017. This was undertaken using the NatureScot SiteLink[3] website to identify designated nature conservation sites (10 km for sites of international[4] importance and 2 km for those of national[5] importance). Special Protection Areas (SPAs), which are of international importance and Sites of Special Scientific Interest (SSSIs) and National Nature Reserves (NNRs) of national importance. The desk study findings have been checked given the time that has elapsed since 2017 and updated to encompass the change in route from Tower 33 eastwards to the proposed Glen Lochy switching station. Additional information has been referred to that was collected during surveys for other projects in the surrounding area, namely Creag Dhubh Substation and LT194 Inveraray to Creag Dhubh 275 kV OHL. Further details on the Proposed Development can be found in **Chapter 2: Description of the Proposed Development** and **Chapter 3: Consideration of Alternatives (EIAR Volume 2).**

2.3 Field surveys 2016-2017

2.3.1 Surveys were conducted by WSP ecologists between May 2016 and September 2017. The surveys included Flight Activity Surveys (FAS) (i.e. VP Surveys), Black Grouse *Lyrurus tetrix* Surveys, Breeding Raptor Surveys, Breeding Bird Surveys (BBS) and Breeding Diver Surveys (hereafter collectively referred to as the ornithological surveys).

[1] The LOD is defined as 100 m either side of the Preferred Alignment.
[2] SSEN (2017) Scoping Request – Route Selection North Argyll 275/132KV Substation & OHL Reinforcement.
[3] https://sitelink.nature.scot/home.
[4] i.e. Special Protection Areas (SPAs) and Ramsar sites.
[5] i.e. Sites of Special Scientific Interest (SSSIs) and National Nature Reserves (NNRs).

Vantage Point Surveys

2.3.2 VP surveys undertaken by WSP consisted of watches during the breeding and non-breeding seasons between May 2016 to August 2016 and April 2017 to August 2017, and September 2016 to March 2017 (respectively); at two vantage points (VP) where the VP2 was required to be moved on two occasions to adequately cover the changing design and as agreed with NatureScot[6] (as described in the Draft Scoping Request[7]). These survey locations are shown on **Figure 7.2: Ornithology Survey Locations (EIAR Volume 3a)**.

- VP1 (British National Grid Reference [BNG]): NN 16101 28717; and
- VP2 (BNG): NN 12717 24327; NN 13710 22015, and NN 12918 23067.

2.3.3 The VP locations were designed to focus on all proposed Overhead Line (OHL) route options (between May 2016 and March 2017) with an additional survey area of 500 m (and up to 2 km for larger species, e.g. golden eagle), following methods outlined in NatureScot (previously Scottish Natural Heritage [SNH]) guidance documents[8][9]). These surveys covered the Proposed Development between towers 1 and 33.

2.3.4 Target species of the VP surveys included the qualifying interest species of Glen Etive and Glen Fyne SPA (golden eagle). Target species also included birds listed on Schedule 1 of the Wildlife and Countryside Act (WCA) 1981 (as amended)[10] and birds vulnerable to collisions with powerlines, such as geese and swans.

2.3.5 Flights were recorded as per guidance[11], with each flight divided into 15 second intervals and each interval assigned to a height band related to the configuration of wires on the OHL. At the commencement of surveys, the Proposed Development comprised towers of up to 55 m tall therefore the height bands were defined as follows:

- Band A – below collision risk height (0 – 5 m);
- Band B – at collision risk height (5 – 55 m); and
- Band C – above collision risk height (>55 m).

Black Grouse Surveys

2.3.6 Black grouse surveys included consideration of all proposed OHL route options under consideration **(See Chapter 3: Consideration of Alternatives, EIAR Volume 2)** in 2016 plus a 1.5 km buffer area (hereafter referred to as the Black Grouse Survey Area). Methods followed those outlined in Gilbert et. al. 1998[12].

Breeding Raptor Surveys

2.3.7 Breeding raptor surveys consisted of all proposed OHL route options under consideration in May 2016 **(See Chapter 3: Consideration of Alternatives, EIAR Volume 2)** plus a 2 km buffer area (hereafter

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[6] Email correspondence titled "RE: North Argyll to Taynuilt and North Argyll to Dalmally - ornithological survey methodology", dated 10th April 2017, from Stephen Austin (Stephen.Austin@snh.gov.uk) to Paul McQuillan and Claire Masson.
[7] SSEN (2017) Scoping Request – Route Selection North Argyll 275/132KV Substation & OHL Reinforcement.
[8] Scottish Natural Heritage (2014) Recommended bird survey methods to inform impact assessment of onshore wind farms. SNH Guidance Document.
[9] Scottish Natural Heritage (2016) Assessment and Mitigation of Impacts of Power Lines and Guyed Meteorological Mats on Birds.
[10] The Wildlife and Countryside Act (as amended): http://www.legislation.gov.uk/ukpga/1981/69 [17th August 2021].
[11] Scottish Natural Heritage (2016) Assessment and Mitigation of Impacts of Power Lines and Guyed Meteorological Mats on Birds.
[12] Gilbert, G., Gibbons, D.W. & Evans, J. (1998) Bird Monitoring Methods, RSPB/BTO. pp. 394-396.

the Breeding Raptor Survey Area), although areas of coniferous forestry were scoped out of the survey area. Surveys involved walking the Breeding Raptor Survey Area with occasional stops to scan for activity. Four visits were undertaken between May and August 2016 (inclusive) by experienced observers under a Schedule 1 Licence (SNH licence number 75334). Methods followed those outlined in Hardey et. al. (2009)[13].

Breeding Bird Surveys (BBS)

2.3.8 The Common Bird Census methodology[14] was adopted to survey for breeding birds. Brown and Shepherd methodology was also adopted for survey of upland waders[15] by walking to within 100 m of all points within the LOD of the Proposed Development.

2.3.9 When birds were observed or heard, their behaviour was recorded. Where this indicated territorial behaviour, e.g. singing, alarm calling, carrying food/nesting material, then it was interpreted to indicate a potential breeding territory. If territorial behaviour was recorded at the same location, by the same species on more than one survey visit, then it was considered to be a confirmed breeding territory. By combining the data and discounting records that were thought to be the same bird, the number of territories for each species could then be estimated.

2.3.10 A Breeding Bird Survey (BBS) was undertaken for the preferred route options, as they were defined in 2017 **(See Chapter 3: Consideration of Alternatives, EIAR Volume 2)**, plus a 500 m buffer (hereafter the BBS Survey Area). A total of four visits were undertaken between April and July 2017. Methods followed SNH (2014[16]) and used an adapted method of Brown and Shepherd (1993)[17].

Breeding Diver Surveys

2.3.11 Breeding diver surveys consisted of all water bodies within 1 km of proposed OHL route options under consideration in May 2016 which were surveyed three times between May and August 2016. Surveys consisted of identifying nesting locations and habitual flight routes. Surveys followed methods outlined in Gilbert et. al. (1998)[18].

2.4 2019-2020 Surveys

Vantage Point Surveys

2.4.1 A further programme of VP surveys was undertaken by Ramboll UK Ltd ornithologists between October 2019 and September 2020 to record flight activity associated with the Proposed Development from tower 33 eastwards to the proposed Scottish Power Energy Networks (SPEN) Tie-In connection at Succoth Glen. The methodology was consistent with the 2016-2017 surveys and best practice guidance[19]. Two VP locations were identified that provide a representative coverage of this section of the Proposed Development:

- VP1 (BNG): NN 14590 25065; and

[13] Hardey, J., Crick, H., Wernham, C., Riley, H., Etheridge, B. and Thompson, D. (2009) Raptors A Field Guide for Surveys and Monitoring. The Stationary Office: Edinburgh. ISBN 978 0 11 497345 2.
[14] Bibby, C. J., Burgess, N., Hill, D. & Mustoe, S.H. (2000). Bird Census Techniques (2nd Edition). Academic Press.
[15] Brown, A.F. and Shepherd, K.B. (1993). A method for censusing upland breeding waders. Bird Study 40: 189-195.
[16] Scottish Natural Heritage (2014) Recommended bird survey methods to inform impact assessment of onshore wind farms. SNH Guidance Document.
[17] Brown, A.F. and Shepherd, K.B. (1993). A method for censusing upland breeding waders. Bird Study 40: 189-195.
[18] Gilbert, G., Gibbons, D.W. & Evans, J. (1998) Bird Monitoring Methods, RSPB/BTO. pp. 394-396.
[19] NatureScot (2017) Recommended bird survey methods to inform impact assessment of onshore wind farms. NatureScot Guidance.

- VP2 (BNG): NN 18826 25230.

Breeding Raptor Surveys

2.4.2 Based on the results of the 2016-17 VP Surveys it was decided that the main species of concern for the Proposed Development, between Towers 1 and 33, were birds of prey. As discussed below, levels of flight activity for this area was low so it was not considered necessary to undertake another period of VP surveys. Instead Breeding Raptor surveys were undertaken by Ramboll UK Ltd (Ramboll) ornithologists in spring/summer 2019 and 2020 to identify potential raptor territories. Three visits were made to each location during 2019, except Creag Dhubh which was scoped out due to the lack of suitable habitat in the area around the proposed substation. Three further surveys were undertaken from Creag Bracha in 2020. These surveys were undertaken from the locations shown on **Figure 7.2: Ornithology Survey Locations (EIAR Volume 3a)** and listed below.

- BR1 (BNG): NN 14333 26078 – (Dun Athaich Monument);
- BR2 (BNG): NN 11654 22137 (Creag Bracha)[20]; and
- BR3 (BNG): NN 08177 18880 (Creag Dhubh).

3 Analysis

3.1 Qualitative Collision Risk Assessment

3.1.1 The flight data collected was digitised using ArcGIS which was then used to undertake a qualitative CRA. All flights by a particular species crossing[21] the Proposed OHL at collision risk height were counted giving the total number of bird crossings[22] of the Proposed Development per species. The proportion of those bird crossings at collision height was then calculated and this was used to assess the level of flight activity.

3.1.2 Once the flight activity level was established then the CRA was undertaken considering the following factors about each bird species:

- Species group (e.g. raptor, wildfowl);
- Species abundance;
- Typical flight style/height; and
- Agility/Manoeuvrability.

3.1.3 Using professional judgement and considering the above calculations and factors, a classification of collision risk of high, moderate, or low was reached in line with the Likelihood of Impact scale[23] (also set out in **Table 6.3**) as follows:

- High: likely, very likely, extremely likely, and virtually certain to occur (67% to 100%);
- Moderate: possible and more than likely to occur (34% to 66%); and
- Low: extremely unlikely, very unlikely, and unlikely to occur (0% to 33%).

[20] Alternate location close by at NN 12474 22652 used in July 2020 to allow improved visibility.
[21] Including flights entering and leaving the LOD without fulling crossing.
[22] A "bird crossing" being a count of one for every individual bird flying over the LOD, e.g. a flight by a group of 50 birds would count as 50 bird crossings.
[23] https://www.ipcc.ch/publications_and_data/ar4/wg1/en/ch1s1-6.html.

3.2 Assessment of Impacts

3.2.1 This assessment has been completed following CIEEM Guidelines (2019)[24].

Criteria for Evaluating Importance of Features

3.2.2 The ornithological features (designated sites, habitats, and species) identified have been assigned an ornithological importance using the guidance set out by CIEEM which refers to a geographic scale of importance. The classification of importance assesses ornithological features in relation to their population size, diversity, rarity, fragility, typicalness, connectivity with surroundings, intrinsic value, recorded history, and potential value. **Table 6.2** describes how the valuation of nature conservation features has been applied at different geographical scales and to different populations of species.

Table 6.2: Geographic Conservation Importance

Importance	Example
International	Internationally designated sites including Special Protection Areas (SPA), Ramsar sites, potential SPAs and potential Ramsar sites; discrete areas which meet the published selection criteria for international designation, but which are not themselves designated as such, or smaller areas which are essential to maintain the viability of a larger whole. Important Bird Areas (IBA) are included here as they are designations based on international population levels and trends though they are not statutory designations. Resident or regularly occurring populations of species which may be considered at an International / European level[1], the loss of which would adversely affect the conservation status or distribution of the species at an International / European level. Resident or regularly occurring populations that contribute >1% of the international (European or worldwide) population.
National	Nationally designated sites including Sites of Special Scientific Interest (SSSI), National Nature Reserves (NNR), Marine Nature Reserve; discrete areas which meet the published selection criteria for national designation, but which are not designated as such; or areas of habitat types identified in the UK Biodiversity Action Plan (BAP). Resident or regularly occurring populations of species which may be considered at the UK or National level[2], the loss of which would adversely affect the conservation status or distribution of the species across Britain or the Country. Resident or regularly occurring populations that contribute >1% of the national population.
Regional	Areas of a key habitat type identified in Regional BAPs; viable areas of key habitat identified as being of Regional importance in the appropriate Natural Heritage Zone (NHZ); or smaller areas of such habitat which are essential to maintain the viability of a larger whole. Resident or regularly occurring populations of species which may be considered at the Regional level, the loss of which would adversely affect the conservation status or distribution of the species across the Region. Resident or regularly occurring populations that contribute >1% of the regional population.
County	Designated sites at the local authority level in Scotland including statutory Local Nature Reserves and non-statutory Local Nature Conservation Sites; or discrete areas which meet the published selection criteria for designation, but which are not designated as such.

[24] CIEEM (2019) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine (Version 1.1) . Chartered Institute of Ecology and Environmental Management, Winchester.

Table 6.2: Geographic Conservation Importance	
	Resident or regularly occurring populations of species which may be considered at the local authority level, the loss of which would adversely affect the conservation status or distribution of the species across the local authority area.
Local	A population of a species or assemblage considered locally important in the context of the immediate surrounding area. Resident or regularly occurring populations and supporting habitats of any bird species of conservation importance in the context of the immediate surrounding area.
Notes: [1]: Species protected at a European level means: bird species listed within the Birds Directive. [2]: Species protected, or which may be considered at the UK or National level means: birds listed within Wildlife and Countryside Act 1981 (as amended) Schedule 1 and / or listed for their principal importance for biodiversity in accordance with the Nature Conservation (Scotland) Act 2004 Section 2(4); species listed within the UKBAP or UK Red Data Books.	

Criteria for Characterising Impacts

3.2.3 The parameters set out in **Table 6.3** have been adopted to characterise impacts.

Table 6.3: Impact Characterisation	
Parameter	**Description**
Direction	Impacts are either adverse (negative) or beneficial (positive).
Magnitude	This is defined as high, medium, low or negligible, with these being classified using the following criteria: High: Total/near total loss of a bird population due to mortality or displacement or major reduction in the status or productivity of a bird population due to mortality or displacement or disturbance. Medium: Partial reduction in the status or productivity of a bird population due to mortality or displacement or disturbance. Low: Small but discernible reduction in the status or productivity of a bird population due to mortality or displacement or disturbance. Negligible: Very slight reduction in the status or productivity of a bird population due to mortality or displacement or disturbance. Reduction barely discernible, approximating to the 'no change' situation.
Extent	The geographical area over which an impact occurs.
Duration	The time for which the impact is expected to last prior to recovery of the feature or replacement of the feature by similar resource (in terms of quality and / or quantity). This is expressed as a short term, medium term, or long-term effect relative to the ornithological feature that is impacted.
Frequency	The number of times an activity occurs will influence the resulting effect. For example, a single person walking a dog would likely be a low magnitude impact on nearby waders using wetland habitat, but numerous walkers would subject the waders to frequent disturbance, which might be an impact of medium or even high magnitude and could affect feeding success, leading to displacement of the birds and knock-on effects on their ability to survive.
Timing	The timing of an activity or change. This may result in an impact if it coincides with critical life-stages or seasons e.g. bird nesting season.

Table 6.3: Impact Characterisation

Parameter	Description
Reversibility	Irreversible impacts: permanent changes from which recovery is not possible within a reasonable time scale or for which there is no reasonable chance of action being taken to reverse it. Reversible impact: temporary changes in which spontaneous recovery is possible or for which effective mitigation (avoidance / cancellation / reduction of effect) or compensation (offset / recompense / offer benefit) is possible.
Likelihood of Impact	The likelihood of an impact occurring. The following convention, adapted from the Intergovernmental Panel on Climate Change (IPCC)[25], is adopted: Virtually certain > 99% probability of occurrence Extremely likely 96 - 99% Very likely 91 - 95% Likely 67 - 90% More likely than not 51 - 66% Possible 34 - 50% Unlikely 11 - 33% Very unlikely 6 - 10% Extremely unlikely < 5% While not a parameter defined in the CIEEM Guidance, likelihood has been used in this assessment where the chances of an effect resulting could vary. The percentages quoted are to give context for each of the likelihoods defined. The evaluation of likelihood has been undertaken qualitatively based on experience and professional judgement.

Criteria for Assessing Cumulative Impacts

3.2.4 Cumulative impacts have been assessed following guidance from NatureScot on assessing cumulative impacts from wind farm developments (NatureScot, 2018)[26]. No guidance specific to powerlines has been produced[27]. Cumulative impacts are assessed by considering the impacts of the Proposed Development at the same time as the impacts arising from another development. This is done additively; i.e. adding the impacts of the two developments together and assessing if the new cumulative impact is significant. Further details are provided in **Chapter 5: Methodology (EIAR Volume 2).**

Significance Criteria

3.2.5 Significant effects are assessed with reference to the geographical importance of the ornithological feature. However, the scale of significance of an effect may not be the same as the geographic context in which the feature is considered important. For example, a significant effect on a species which is protected by national legislation, does not necessarily equate to a significant effect on its national population.

[25] https://www.ipcc.ch/publications_and_data/ar4/wg1/en/ch1s1-6.html
[26] NatureScot (2018) Assessing the Cumulative Impacts of Onshore Wind Farms on Birds. Guidance Series.
[27] This research is incorporated into the collision risk or impacts assessments.

3.2.6 For the purposes of Environmental Impact Assessment, apart from in exceptional circumstances, a significant effect, as defined by the Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017[28] is only considered to be possible where the feature in question is considered to be of regional, national, or international importance. That is not to say that impacts from the Proposed Development cannot result in ornithologically significant effects on features of county or local importance, simply that those effects are not likely to be significant under EIA Regulations, unless the effect is likely to undermine the conservation status or distribution of the species. Whether an effect at local or county importance is considered to be significant or not significant under the EIA Regulations is made clear in the impact assessment of each ornithological feature.

3.2.7 Mitigation and/or compensation is proposed for all effects considered significant under the EIA Regulations. Where appropriate, as part of additional good practice, mitigation and/or compensation may be proposed for ornithologically significant effects on features of county or local importance.

4 Limitations and Assumptions

4.1.1 Bird surveys are based on sampling techniques, not absolute *censi*. Results give an indication of numbers and activities of birds at the particular times that surveys were carried out. The surveys for the Proposed Development were distributed by time of day and by date throughout the year sufficient to give a representation of the range of activity, but were limited occasionally by inclement winter weather, though this did not compromise the overall survey effort. The full scope of the 2016-2017 surveys was discussed and agreed with NatureScot in advance of commencement and adjusted following further comments from NatureScot[29]. The 2019-2020 surveys were designed to cover areas which had not been surveyed previously (Towers 33 to 47a) and areas were surveys had been completed in 2016-2017 and could potentially need updating.

4.1.2 There are not considered to be gaps in the baseline data that would prevent assessments being undertaken for the purposes of determining likely significant effects as is required by the EIA Regulations. NatureScot guidance suggests that a survey corridor width of 500 m either side of a proposed route is appropriate for moorland sites or protected areas with bird qualifying features, both of which apply in the case of the Proposed Development. The guidance also suggests that VP watches are not required along the whole length of the route corridor but should focus on sensitive sites and areas used by target species, which has occurred in the case of the Proposed Development. Between the Desk Study and the VP and Breeding Raptor surveys a number of raptor territories and black grouse leks have been identified upon which the Impact Assessment has been undertaken.

5 Results

5.1 Desk study

5.1.1 As a result of the information provided by the desk-based study and field surveys, the following ornithological features are considered to be of sufficient sensitivity to warrant inclusion in the EIA:

- Designated sites, where qualifying species have potential connectivity with the Proposed Development and where surveys recorded flights of qualifying species within the Proposed Development, i.e. Glen Etive and Glen Fyne SPA. This area is protected under the European

[28] http://www.legislation.gov.uk/ssi/2017/101/contents/made.

[29] Email correspondence titled "RE: North Argyll to Taynuilt and North Argyll to Dalmally - ornithological survey methodology", dated 10th April 2017, from Stephen Austin (Stephen.Austin@snh.gov.uk) to Paul McQuillan and Claire Masson.

Commission Council Directive 2009/147/EC (Birds Directive), which places importance on the protection of habitats for endangered and migratory species. Designated sites are also protected under Council Directive 92/43/EEC (Habitats Directive);

- Golden eagle *Aquila chrysaetos*, included on Schedule 1 of the Wildlife and Countryside Act 1981;
- Hen harrier *Circus cyaneus*, included on Schedule 1 of the Wildlife and Countryside Act 1981 and are a red-listed species of bird of conservation concern;
- Peregrine *Falco peregrinus*, included on Schedule 1 of the Wildlife and Countryside Act 1981;
- Merlin *Falco columbarius* included on Schedule 1 of the Wildlife and Countryside Act 1981 and are a red-listed species of conservation concern;
- Osprey *Pandion haliaetus*, included on Schedule 1 of the Wildlife and Countryside Act 1981 and are an amber-listed species of conservation concern;
- White-tailed eagle *Haliaeetus albicilla*, included on Schedule 1 of the Wildlife and Countryside Act 1981 and are a red-listed species of conservation concern;
- Wintering wildfowl and waders, susceptible to collision with powerlines, several species which are included on Schedule 1 of the Wildlife and Countryside Act 1981, such as greylag goose. Several species of which are amber listed species of conservation concern (Greylag goose *Anser anser*, mallard *Anas platyrhynchos*, oystercatcher *Haematopus ostralegus*, snipe *Gallinago gallinago*, common sandpiper *Actitis hypoleucos*, great black-backed gull *Larus marinus*) and curlew *Numenius arquata* are a red-listed species of conservation concern; and
- Black grouse are a red-listed species of conservation concern.

5.1.2 Further data obtained is described in **TA 7.2: Confidential Results (Confidential Volume**).

5.2 Field Survey Results

Vantage Point Survey Results

Survey results are shown on Figure 7-3: 2016-17 Survey Results and Figure 7.4: 2019-20 Survey Results.

Hen Harrier

2016-2017 Surveys

5.2.1 Seven hen harrier flights were recorded, comprising a single bird each time that was seen from VP 2. Six of the birds were males apparently hunting. Five of the flights occurred at potential collision height and one flight crossed the Proposed Development.

2019-2020 Surveys

5.2.2 During VP surveys a single flight by a male hen harrier was recorded. This observation was recorded from VP2 in February 2020. The individual was noted approximately 200 m from VP2, flying at potential collision height. It did not cross the Proposed Development.

Merlin

2016-2017 Surveys

5.2.3 Two merlin flights were recorded both from VP2. One flight occurred briefly at potential collision height and both flights were recorded more than one kilometre from the Proposed Development.

2019-2020 Surveys

5.2.4 During VP surveys a single flight by a merlin was recorded from VP1 in May 2020. The bird was seen briefly to the east of VP1, at potential collision height and crossed the route of the Proposed Development.

Golden eagle

2016-2017 Surveys

5.2.5 Only one golden eagle flight was recorded. A single adult was seen soaring at 200 m above collision risk height, approximately 2 km east of the Proposed Development.

2019-2020 Surveys

5.2.6 During VP surveys flights of golden eagle were recorded from VP 1 and VP2. In November 2019 a golden eagle was recorded above woodland to the north of VP1, within 500 m of the Proposed Development, flying towards it at collision height. In August 2020, a golden eagle was recorded over the south slope of Na Cruachan approximately 4 km north of the proposed OHL. The eagle circled to gain height then flew northwards.

White-tailed eagle

2016-2017 Surveys

5.2.7 A single white-tailed eagle flight was recorded from VP1. The bird was observed flying westwards above potential collision height, approximately 2.5 km north of the Proposed Development.

2019-2020 Surveys

5.2.8 During VP surveys, three flights of white-tailed eagle were recorded from VP1. All flights were of individual, adult birds. The first flight was recorded above woodland 1.5 km to the northwest of the Proposed Development. The second, crossed the Proposed Development twice at collision risk height before soaring southwards past Barr na h-Earba to the west of VP1. The third flight occurred 500 m south of the Proposed Development. All flights occurred at potential collision height.

Peregrine

2016-2017 Surveys

5.2.9 A single sighting of peregrine falcon was made during the surveys. A hunting male was seen close to VP1, located 2 km north of the Proposed Development and briefly flew at potential collision height as it dived towards potential prey.

2019-2020 Surveys

5.2.10 No sightings of peregrine falcon were recorded.

Greylag goose

2016-2017 Surveys

5.2.11 Six flights of greylag goose were recorded ranging from 2-40 birds in each group. Five of the six groups were recorded from VP1 close to Dalmally flying east to west at least 1.5 km north of the Proposed Development. One of the flights was at potential collision height. A group of seven greylag geese

was recorded flying above potential collision height towards Cruach Mhor and, although not observed, the line of flight indicated they crossed the proposed development.

2019-2020 Surveys

5.2.12 No sightings of greylag goose were recorded.

Black Grouse Survey Results

5.2.13 The results of all black grouse surveys are presented in **TA 7.2: Confidential Results (Confidential Volume)**.

Breeding Raptor Survey Results

5.2.14 All breeding raptor survey results are provided in **TA 7.2: Confidential Results (Confidential Volume).**

Breeding Bird Survey Results

5.2.15 Altogether, 33 breeding territories were recorded within the BBS area, comprising the following species:

- Common buzzard *Buteo buteo;*
- Common sandpiper;
- Curlew*;*
- Oystercatcher*;*
- Snipe*;*
- Mallard*;*
- Goosander *Mergus merganser*;
- Great black-backed gull*;* and
- Sand martin *Riparia riparia.*

5.2.16 In the UK, curlew are considered under the Red List of Birds of Conservation Concern (BoCC)[30].Common sandpiper, oystercatcher, snipe, mallard, and greater black-backed gull are considered Amber List BoCC, whereas common buzzard, goosander and sand martin are Green List. This UK assessment criteria is based on species conservation status at global, European and UK levels. Red list species populations are considered highly at risk or vulnerable in the UK.

Breeding Diver Survey Results

5.2.17 No observations of diver species were recorded within the survey area during breeding diver surveys. Divers may be present within the wider area, potentially crossing the Proposed Development to get to Loch Awe. There are no suitable waterbodies within the Ornithology Field Survey Area.

[30] Birds of Conservation Concern 4: the Red List for Birds | BTO - British Trust for Ornithology.