Scottish & Southern Electricity Networks

TRANSMISSION

SSEN Transmission

Bingally 400 / 132 kV Substation

Environmental Appraisal

Volume 1

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Scottish & Southern Electricity Networks
TRANSMISSION

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9. ORNITHOLOGY

9.1 Introduction

9.1.1 With reference to **Volume 1, Chapter 1 Introduction and Background, Section 1.1.10**, this Voluntary EA has been prepared based on the structure and assessment methodology of an EIA. This overall report, however, is a Voluntary EA Report and is not carried out under the EIA Regulations.

9.1.2 This chapter addresses the potential impacts and effects of the construction and operation of the Proposed Development on ornithological features. Where appropriate, it provides details of mitigation and / or enhancement measures which have been identified to avoid, minimise, reverse, or compensate for adverse effects on ornithological features.

9.1.3 This chapter concerns avian ecological features only. An assessment of impacts and effects of other ecological features are considered separately in **Volume 1, Chapter 8 Ecology**.

9.1.4 This chapter is supported by **Volume 2, Figures 9-1** to **9-4**. The "Proposed Development Site" (also referred to simply as "the Site") is as defined in **Volume 1, Chapter 3 Description of the Proposed Development**.

9.1.5 This chapter:

- Describes the key ornithological issues with the potential to be associated with construction and operation of the Proposed Development;
- Presents the survey methods used to generate ornithological baseline information;
- Presents the results of ornithological surveys;
- Includes details of any relevant consultation undertaken to date;
- Presents an assessment of likely significant effects (for ornithological features); and
- Presents consideration of the potential for cumulative effects in relation to other developments.

9.1.6 This chapter broadly follows CIEEM (2022)[1] guidance but utilises, for the purposes of integration with other disciplines, the matrix for determining significance of effect shown in **Volume 1, Chapter 5 EA Approach and Methodology**.

9.2 Consultation Undertaken to Date

9.2.1 In an email response on 21 September 2023 to a consultation request, NatureScot stated that the preferred option (and other site options) were outside any designated sites for nature conservation, and that NatureScot would not anticipate any impacts to designated sites either directly or indirectly.

9.2.2 On 11 April 2024[2], an information request was made to the Scottish Raptor Study Group (SRSG) for information on notable breeding raptors within 1 km of the Proposed Development. The SRSG responded on 12 April 2024 and stated that "*We only have one record on a Schedule 1 species which appears to be on the edge of your search area…. the site is a red kite [Milvus milvus] nest... a pair built a nest in 2022… the outcome of the breeding attempt is unknown*." The location of this record is approximately 770 m west of the Proposed Development Site at the closest possible point.

[1] CIEEM (2022). *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine* (Version 1.2, updated April 2022) Available from: https://cieem.net/wp-content/uploads/2018/08/ECIA-Guidelines-2018-Terrestrial-Freshwater-Coastal-and-Marine-V1.1Update.pdf

[2] Also on 19 August 2024 to confirm the details of the initial response.

9.2.3 On 07 May 2024, NatureScot[3] was consulted specifically on the scope of the proposed ornithological surveys. A response was received via email confirming that the surveys, including the proposal to carry out surveys along a single transect line along the access track route and more widely around the proposed substation, were "*sufficient to evaluate the potential impact of the proposal on breeding birds within the vicinity of the new substation, when combined with the required pre-works checks for nesting birds.*"

9.2.4 On 01 August 2024, an information request was made to NatureScot for information on capercaillie *Tetrao urogallus* in Glen Affric SSSI and NNR. They responded on 02 August 2024 by email that NatureScot were not aware of any capercaillie sightings or leks from recent years in this area, and that there was no longer thought to be a functioning breeding population there.

9.2.5 On 19 December 2023, THC provided pre-application advice. Relevant points made with specific regard to ecology and ornithology are briefly summarised, with responses, below:

- THC expect biodiversity enhancement, with minimum 10% biodiversity net gain, for projects such as the Proposed Development – this has been addressed in **Volume 3, Appendix E Biodiversity Net Gain Report**[4];
- A number of designated nature conservation sites were noted as potentially relevant – these have all been considered through a combination of this chapter and **Volume 1, Chapter 8 Ecology**; and
- Protected species noted to potentially be present – this has been addressed through a combination of this chapter and **Volume 1, Chapter 8 Ecology**.

9.2.6 On 04 April 2024, information was received from a landowner regarding ornithology. A *"very impressive [black grouse* Tetrao tetrix*] lek on the old re-seeds*" was mentioned, with the location indicated on an aerial map of the area. Following further communication on 25 April, the maximum count of black grouse on this lek was stated by the landowner to be 12 individuals (prior to 2023) and up to seven in recent times, plus one more bird lekking in isolation.

9.3 Assessment Methodology and Significance Criteria

Scope of the Assessment

9.3.1 CIEEM guidlines[1] recommend that only those ecological features that are 'important' and that could be significantly impacted by a development require detailed assessment, stating that "*it is not necessary to carry out detailed assessment of ecological features that are sufficiently widespread, unthreatened and resilient to project impacts and will remain viable and sustainable*".

9.3.2 Consequently, for the purposes of the desk study, field survey, and assessment of ornithological effects, 'important' ornithological features are taken to include:

- Special Protection Areas under Directive 2009/147/EC on the conservation of wild birds (the 'Birds Directive');
- Wetlands of International Importance ('Ramsar sites') designated under the *Convention on Wetlands of International Importance* (the 'Ramsar Convention');
- National designated sites (such as SSSI) with bird interests;

[3] NatureScot (2020). *Information hub* [online]. Available from Information hub | NatureScot

[4] AECOM (2024). Bingally Substation – Biodiversity Net Gain.

- Any other designated sites or nature reserves (statutory or non-statutory) with significant bird interests;
- Qualifying or notified bird species of the above designated sites;
- Annex I bird species under the EU Birds Directive*;*
- Schedule 1 bird species under the Wildlife and Countryside Act 1981 (as amended) (the 'WCA');
- Scottish Biodiversity List (SBL) species, of principal importance for biodiversity conservation in Scotland;
- Red list species under Birds of Conservation Concern 5 (BoCC5); and
- Local Biodiversity Action Plan (LBAP) bird species.

9.3.3 Other bird species that may be rare, scarce or otherwise notable have also been included where deemed appropriate through available information and / or professional judgement.

Extent of the Study Area and Method of Baseline Data Collation

9.3.4 A desk study to help establish baseline conditions has been completed. The desk study sought to identify ornithological features within the potential Zone of Influence (ZoI) of the Site that could be significantly affected by its construction and operation.

9.3.5 A stratified approach was taken when defining the desk study area based on the likely ZoI of the Site. Accordingly, the desk study searched for:

- SPA or Wetlands of International Importance (Ramsar sites) within 10 km of the Site;
- SSSI within 2 km of the Site for which birds are a designated feature;
- Locally designated nature conservation sites within 2 km of the Site for which birds are a designated feature; and
- Records of protected and / or important bird species within 1 km of the Site.

9.3.6 **Volume 2, Figure 9-1 Special Protection Areas** and **Volume 2, Figure 9-2 Other Designated Sites with Bird Interests** show the applicable desk study areas as defined in the above bullet points.

9.3.7 Several data sources were used for the desk study, as set out in **Table 9-1**.

Table 9-1 Desk Study Data Sources

Data Source	Date Accessed	Data Obtained
Highland Council website (https://www.highland.gov.uk/ downloads/file/1506/proposals_map)	21 March 2024	Highland-wide Local Development Plan policies relevant to nature conservation. Local nature conservation designations.
NatureScot SiteLink webpage (https://sitelink.nature.scot/home)	21 March 2024	Information on designated nature conservation sites.
National Biodiversity Network (NBN) Atlas Scotland (https://scotland.nbnatlas.org/)	21 March 2024	Commercially available records of protected and / or important bird species since 2000.
Ordnance Survey (OS) 1:25,000 maps and aerial photography (https://www.bing.com/maps/)	21 March 2024	Habitats and connectivity relevant to interpretation of planning policy and potential protected / notable species constraints.

Field survey

9.3.8 Following review of desk study information and subsequent approval by NatureScot of the proposed ornithological surveys, the following surveys were carried out:

- Black grouse survey – two visits, following guidelines in Gilbert *et al*. (1998)[5], included a preparatory walkover of potential lek sites within 1.5 km of the Site. Surveyors then searched for lekking black grouse from walked transects covering the area of construction for the substation and the route of the proposed access track and beyond where potential lek sites were identified. Visible or audible black grouse were recorded, with notes concerning lekking or other relevant behaviour. Incidental records of waders, raptors and other notable bird species were made;
- Moorland breeding bird survey (MBBS) – three visits using walked transects along the proposed access track and through the proposed substation area, which searched primarily for breeding waders and raptors, but also noted other species (except for meadow pipits *Anthus pratensis*, which are very numerous and recording of which would detract from searching for notable species). During these surveys, inspections were also made of the lochans close by to the east of the access route part of the Site, to check for notable species such as divers; and
- Raptor survey – carried out during the MBSS using the same transects, searching for raptors.

9.3.9 The moorland breeding bird / raptor surveys took place in spring / summer 2024. Surveys were conducted in the early morning (one hour before and after sunrise for black grouse lek counts) and the daytime in the following periods (note that although MBBS surveys were not carried out in April / May, the methodology was approved by NatureScot as mentioned above in Section 10.2):

- 22 to 25 April (Black grouse survey - Visit 1);
- 06 to 08 May (Black grouse survey - Visit 2);
- 17 to 19 June (MBBS - Visit 1);
- 01, 03 and 04 July (MBBS - Visit 2); and
- 22 to 23 July (MBBS - Visit 3).

[5] Gilbert, G., Gibbons, D.W. and Evans, J. (1998). Bird Monitoring Methods. The Royal Society for the Protection of Birds, Sandy.

9.3.10 The weather conditions during these surveys was largely optimal, with no hinderances to the surveys. Temperatures were generally between 9 and 15 °C, but with a minimum of 3 °C recorded during surveys in April. Cloud cover was between partially cloudy and full cloud cover. Wind speeds were between Beaufort 1 (light air) to 4 (moderate breeze). Conditions were mostly dry, with excellent visibility, except for a few brief and light showers with only good visibility on 03 July and heavy rain showers and poor visibility during 04 July.

Determining Magnitude of Change and Sensitivity of Receptors

9.3.11 The assessment of ornithological effects was undertaken in broad accordance with CIEEM[1], assigning geographic levels of importance (equivalent to 'sensitivity') to important ornithological features, based on conservation status, population trends and other relevant criteria (including size, naturalness, rarity and diversity).

9.3.12 For integration with other disciplines, and as per **Volume 1, Chapter 5 EA Approach and Methodology**, the following apply:

- 'Magnitude' of effect (which for ecological purposes and alignment with CIEEM guidance includes consideration of factors such as duration, frequency and reversibility, and not just 'size') has been classed as High, Medium, Low or Negligible;
- 'Sensitivity' has been treated as a geographical scale, as per CIEEM guidance – see **Section 9.3.13** below; and
- Significance of effect has been classed as Major, Moderate, Minor or Negligible, according to the matrix shown in **Volume 1, Chapter 5 EA Approach and Methodology** but for ecological purposes, and better agreement with CIEEM guidance, subject to professional judgement as necessary and considering the geographical scale set out in **Section 9.3.13** below.

9.3.13 To better align with CIEEM guidance, the geographical scale ('sensitivity') has been treated as follows:

- 'High' means an international or national scale of importance or effect;
- 'Medium' means a regional scale of importance or effect, where the region is Natural Heritage Zone 7 (NHZ 7, the 'Northern Highlands'). NHZ 7 is a biogeographical zone defined by NatureScot, encompassing the Great Glen and mountainous terrain northwards to the edge of the Caithness and Sutherland peatlands, but excluding a broad western seaboard;
- 'Low' means a local scale of importance or effect, where local means a zone of approximately 10 km radius around the Site; and
- 'Negligible' means a level of importance or effect that is less than local, i.e. ecological features that are common and widespread and / or not 'important', as per CIEEM guidance, or a level of effect that would be imperceptible or nearly so at the local scale.

Limitations and Assumptions

9.3.14 Desk study information is dependent on records having been submitted for the study area. As such, a lack of records for particular species does not necessarily mean they are absent from the study area. Similarly, the presence of records for particular species does not automatically mean they still occur within the study area or are relevant in the context of the Site.

9.3.15 The field survey for raptors and moorland breeding birds employed transects that included one transect line along the proposed access route, and a wider transect loop in the vicinity of the proposed substation. This method was approved by NatureScot, described in **Section 9.2**.

9.3.16 The exact route of the transect changed slightly in the vicinity of the proposed substation, for safety reasons arising from difficulties in traversing areas of felled plantation. This is not considered to have affected the validity of the findings and subsequent conclusions of this chapter, as the range of notable breeding birds is limited and the area around the substation is in large part felled plantation, of apparent (and expected) little value to breeding birds.

9.3.17 Baseline conditions are increasingly liable to change with increased elapsed time since the surveys informing this chapter were completed. For example, notable bird species may alter their local distribution. This assessment is based on the information collected during the desk study and field surveys. In line with NatureScot guidance, if construction takes place more than five years since the date of surveys informing this assessment, re-survey for birds is recommended.

9.3.18 In late May to early June 2023, a large wildfire damaged extensive areas of land around Cannich[6] which included RSPB Corrimony Nature Reserve and land within the Proposed Development Site. At the time of survey, most burnt habitats were already showing signs of recovery, and rarely habitats showed signs of severe impacts (e.g. bare earth, proliferation of purple moorgrass *Molinia caerulea* or bracken *Pteridium aquilinum*, altered hydrology, death of trees, etc.). The area affected by fire is detailed in **Volume 1, Chapter 8 Ecology**, and includes land in the northern section of the proposed access track. The state of the habitats within the Site affected by fire have been taken as part of the baseline conditions that support ornithological interests. It is predicted that these habitats (for the greater part) will recover in the long-term (the consequence of which is discussed further in **Section 9.4**, for future baseline below).

9.4 Baseline Conditions

Statutory Designated Sites

9.4.1 Statutory sites relevant to ornithology within the ZoI of the Proposed Development comprise one Special Protection Area (SPA, a type of European site), one SSSI and one NNR, as detailed in **Table 9-2** below and shown on **Volume 2, Figure 9-1**.

[6] BBC (2023) Cannich wildfire could be largest recorded in UK. Available at: https://www.bbc.co.uk/news/uk-scotland-highlands-islands-65765053 [Accessed: 22 August 2024]

Table 9-2 Statutory Designated Nature Conservation Sites (in order of decreasing proximity)

Site Name	Reason for Designation	Relationship to the Proposed Development
Glen Affric NNR	Mosaic of native pinewoods, lochs and moorland with various notable birds including osprey *Pandion haliaetus*, red-throated diver *Gavia stellata* and black-throated diver *Gavia arctica*. Since the NNR overlaps large parts of the SSSI and SPA listed below in this table, the ornithological interests mentioned below are presumed also to be present in the NNR.	At closest c. 200 m southwest of the Proposed Development Site, but c. 300 m from the nearest actual proposed construction activity, and a very large site, with intervening streams, moorland and woodland.
Glen Affric SSSI	Numerous interests, but including the breeding bird assemblage, which the citation states includes crested tit *Lophophanes cristatus*, Scottish crossbill *Loxia scotica*, black grouse and (reportedly in the citation) capercaillie *Tetrao urogallus* (see **Section 9.2.4** on this species now being presumed absent).	At closest c. 1.2 km northwest of the Proposed Development Site, and a large site, with intervening woodland, pasture and large river (River Glass).
Glen Affric to Strathconon SPA	Golden eagle Aquila chrysaetos.	An extremely large site, at closest c. 1.5 km northwest of the Proposed Development Site, beyond the River Glass, and mostly much more distant.

Non-statutory Designated Sites

9.4.2 There is one relevant non-statutory designated site with ornithological interests, as detailed in **Table 9-3** and shown on **Figure 9-2**.

Table 9-3 Non-statutory Designated Nature Conservation Sites

Site Name	Reason for Designation	Relationship to the Proposed Development
Corrimony RSPB Reserve	A mosaic of moorland, woodland, wetland, and montane habitats, managed by the RSPB to maintain and enhance the black grouse population.	The northern part of the access track (the proposed new section) passes through the north-western outer part of the Reserve. The bulk of the Reserve is southeast / east of the Site.

Desk Study Records of Important Bird Species

9.4.3 The desk study identified 748 records of 24 important bird species within 1 km of the Proposed Development Site, presented in **Table 9-4** below. The majority of records are located outside the Proposed Development Site, with only four records of wood warbler *Phylloscopus sibilatrix* directly within it.

Table 9-4 Notable Bird Species Identified by the NBN Atlas Data Search

Common Name	Scientific Name	No. of Records	Designation*
Barn Owl	Tyto alba	2	Sch1; SBL
Brambling	Fringilla montifringilla	2	Sch1; SBL
Bullfinch	Pyrrhula pyrrhula	12	SBL
Crossbill	Loxia curvirostra	2	Sch1
Dunnock	Prunella modularis	124	SBL
Grasshopper Warbler	Locustella naevia	5	Red list; SBL
Greenfinch	Chloris chloris	76	Red list
House Martin	Delichon urbicum	21	Red list
House Sparrow	Passer domesticus	182	Red list; SBL
Lapwing	Vanellus vanellus	1	Red list; SBL; LBAP
Lesser Redpoll	Acanthis cabaret	19	SBL
Redwing	Turdus iliacus	4	Sch1; SBL
Reed Bunting	Emberiza schoeniclus	1	SBL
Scottish Crossbill	Loxia scotica	2	Sch1; Annex I; SBL; LBAP
Siskin	Spinus spinus	124	SBL
Song Thrush	Turdus philomelos	17	SBL
Spotted Flycatcher	Muscicapa striata	26	Red list; SBL
Starling	Sturnus vulgaris	9	Red list; SBL
Swift	Apus apus	5	Red List; SBL; LBAP
Tree Pipit	Anthus trivialis	13	Red list; SBL
Twite	Linaria flavirostris	1	Red list; SBL
Whinchat	Saxicola rubetra	7	Red List
Wood Warbler	Phylloscopus sibilatrix	31	Red list; SBL
Yellowhammer	Emberiza citrinella	62	Red list; SBL

* Sch1 – listed on Schedule 1 of the Wildlife and Countryside Act (1981); Annex I – listed on Annex I of the EU Birds Directive; Red list – listed on the Red list of BoCC5 (Birds of Conservation Concern 5); SBL – priority species listed on the Scottish Biodiversity List; LBAP – listed on The Highland Council BAP.

9.4.4 The most notable of the above-listed species (excepting common crossbill *Loxia curvirostra*) are the Schedule 1 species, which are afforded special protection and are scarce as breeding species. However, the following can be stated, bearing in mind that Schedule 1 status is concerned with breeding:

- Barn owl *Tyto alba* – there is no suitable nesting habitat (suitably accessible buildings with substantial internal ledges, or large trees with large holes) in or near the Site;
- Crossbills – common crossbill, despite Schedule 1 status, is common in Scotland and not notable. Scottish crossbill is highly localised in Scotland and certainly notable. Both species breed in established conifer woodland, which is very extensive in Glen Affric, but little to none of which is liable to be impacted by the Proposed Development; and
- Redwing *Turdus iliacus* and brambling *Fringilla montifringilla* – these species are widespread wintering species (excepting very rare occurrences of breeding birds in the far

north of Scotland), that are not dependent on particular wintering sites and for which the Site would not be of any importance.

9.4.5 Of the other above-listed species, the only ones with potential to breed in or close to the Site (given the habitats present – see the field survey results below) are:

- Red-listed species – grasshopper warbler *Locustella naevia*, greenfinch *Chloris chloris*, lapwing *Vanellus vanellus*, spotted flycatcher *Muscicapa striata*, starling *Sturnus vulgaris*, tree pipit *Anthus trivialis*, twite *Linaria flavirostris*, whinchat *Saxicola rubetra*, wood warbler *Phylloscopus sibilatrix* and yellowhammer *Emberiza citrinella*; and
- SBL-only species – bullfinch Pyrrhula pyrrhula, dunnock Prunella modularis, lesser redpoll Acanthis cabaret, reed bunting Emberiza schoeniclus, siskin Spinus spinus and song thrush Turdus philomelos.

9.4.6 The following of the above-listed non-Schedule 1 species will not, or are very unlikely to, nest in the Proposed Development Site owing to lack of suitable habitat: house martin *Delichon urbicum*, house sparrow *Passer domesticus* and swift *Apus apus*.

9.4.7 Regarding the ornithological interests of the designated sites, the following are noted:

- Black grouse – the northern part of the proposed new access track runs through the outer northwestern part of Corrimony RSPB Reserve. Black grouse (a Red-listed and SBL priority species) is known to breed within and is the main interest of the Reserve, and is therefore likely (even without field survey to confirm) to occur at times within the Proposed Development Site (as found during field survey – see below);
- Golden eagle (*Aquila chrysaetos)* – although it is probable that golden eagles associated with Glen Affric to Strathconon SPA occasionally fly over or forage in the vicinity of the Site, there is no likelihood of golden eagles nesting in or near it. This is because golden eagles nest in remote and inaccessible places, mostly on suitably secure and large rock ledges, and are very sensitive to disturbance; the Site lacks suitable nesting sites and is liable to some disturbance, e.g. from forestry operations, making it unsuitable for nesting sites;
- Capercaillie – this species, if still present (given that the now-dated SSSI citation mentions very low numbers, and Scottish populations have further declined), is unlikely to occur outside of established conifer woodland, mainly established Scots pine *Pinus sylvestris*, and is therefore very unlikely to occur in the Proposed Development Site, which is largely open or (to the north, furthest from Glen Affric SSSI) locally contains Sitka spruce plantation;
- Crested tit *Lophophanes cristatus* – this species is dependent on pinewood, and may occur adjacent to the Proposed Development Site but is extremely unlikely to nest within it, and would never occur in the open habitats (the majority) of the Proposed Development Site;
- Scottish crossbill – this species is discussed in **Section 9.4.4** above;
- Osprey *Pandion haliaetus* – this species is unlikely to occur in the Proposed Development Site except whilst flying over to forage at lochs and lochans; there is little likelihood of it nesting in or close to the Proposed Development Site and no evidence of it doing so (see field survey results below); and
- Diver species – there is no habitat for diver species within the Proposed Development Site, and nearby lochans do not appear favourable for nesting and there is no evidence of nesting (see field survey results below).

9.4.8 All habitats (with the exception of existing bare ground tracks) in the Site are capable of supporting breeding populations of common and widespread birds, as found during the field survey (see **Section 9.4.9** to **9.4.18** below).

9.4.9 All black grouse were recorded east of the existing track and proposed access track, and within 500 m of the four lochans found here (Loch Caorireach, Loch Fruimh, Loch na Beinn Moire and Loch a' Ghreidlein). The locations of black grouse observations are shown on **Volume 2, Figure 9-3**.

9.4.10 The following observations were made during the first lek survey, between 22 to 25 April 2024, from north to south:

- Between the existing track and the northern tip of Loch na Beinne Moire – one bird heard (presumed male) but not seen on 24 April, and another seen lekking alone on 25 April; at closest 200 m from the existing track;
- East of the northern tip of Loch na Beinne Moire – lekking sounds heard on 24 and 25 April;
- A single male very close to the track west of Loch na Beinne Moire on 24 April, near the intersection of tracks and next to the proposed access route; no observed lekking behaviour; and
- Approximately 80 m southeast of the track and 350 m southwest of Loch a' Ghreidlein – six males seen each morning on 23, 24 and 25 April, clearly lekking (with behaviours including displays, calling, singing and fighting).

9.4.11 The following observations were made during the second lek survey, on 08 May 2024, from north to south:

- A single male lekking between Loch na Beinne Moire and the northern-most lochan, approximately 350 m east of the track; black grouse droppings were also seen nearby and a dead predated female closer to the northern tip of Loch na Beinne Moire;
- A single male lekking west of Loch na Beinne Moire, approximately 340 m east of the track, which was thought likely to be the same bird from the previous bullet point; several black grouse droppings were also seen nearby;
- Two males lekking near the track intersection west of Loch na Beinne Moire, close to the third bullet point observation in the previous paragraph, and next to the proposed access route; one of these birds could have been the bird from the previous bullet points; and
- Six males lekking at the same location described in the last bullet point of the previous paragraph, with a female bird beside the track within 50 m to the north.

9.4.12 In view of the above observations, the leks are considered to comprise (during the surveys) the following:

- One consistent major lek of six males, around 80 m east of the track and proposed access route;
- One consistent minor lek of up to two males beside the proposed access route at the existing track intersection; and
- Intermittent minor leks of single males more distantly east of the track and proposed access route, near Loch na Beinne Moire, and further intermittent leks more than 600 m east of the track and proposed access route, east of Loch na Beinne Moire.

9.4.13 In total, there are likely eight (or possibly nine) male birds in the area surveyed (excluding any additional birds, if these are separate, heard to the east of Loch na Beinne Moire during the first lek survey). This closely matches recent observations reported by the landowner of up to seven birds at the major lek and one elsewhere at the same time.

Field Survey – Schedule 1 Species

9.4.14 The following specially- protected Schedule 1 species were recorded:

- Greenshank *Tringa nebularia* – single birds recorded twice in April, on moorland east of the proposed access track, around 700 m apart. Although greenshank has not been recorded since, this does not necessarily exclude the possibility of breeding since they can move around within a fairly large territory and may simply have been beyond alert distance during later surveys. The habitat (mainly wet heath, with areas of blanket bog, occasional rocks, and several substantial scattered lochans) appears ideal habitat for this species, and the geographical location is well within the known occurrence of this scarce breeding species. Therefore, it is assumed on a precautionary basis that two pairs of greenshank may have bred in the area. However, the closest observed bird was over 400 m from the proposed access track;
- Red kite – single bird recorded on one occasion flying over the Site and not landing. No evidence was found of red kite nesting in or near the Site; and
- Crossbill *Loxia* sp. – single birds recorded twice in April, at either end of the Site, within or flying over conifer plantation. The Site is located within the zone of occurrence of Scottish crossbill *Loxia scotica*, a scarce species, however it cannot be reliably determined without sound analysis whether the observed birds were that species or common crossbill.

Field Survey – Red list / SBL species

9.4.15 The following BoCC5 Red-listed species were recorded – these are also priority SBL species with the exception of mistle thrush *Turdus viscivorus* and whinchat:

- Cuckoo *Cuculus canorus* – six observations, in or near the centre and north of the Site, all in April; this is a parasitic species and the host was likely, given its abundance on the open moorland, meadow pipit;
- Curlew *Numenius arquata* – one bird was observed, well outside of the Site in pasture, beside the road near Fasnakyle Bridge, assumed to represent one possible territory;
- Lesser redpoll – 17 observations involving 18 birds, widely scattered across the Site; however, this species forages widely from the nest and does not form individual territories but rather nests in small groups at a fairly low height in trees and shrubs, for which they could utilise occasional scattered shrubs[7] (although there was no recorded evidence of definite nesting);
- Skylark *Alauda arvensis* – 21 observations of single birds, 19 singing which were sufficiently distant (100 m or more, mostly considerably more) to treat as likely 19 separate territories;
- Tree pipit *Anthus trivialis* – 14 observations, of which one was a juvenile close to previously-recorded adults, and three were groups of three to five individuals in early June (probably family groups); other than the juvenile bird, the other observations were sufficiently far apart as to represent probable territories, therefore there are estimated to be 13 territories in the survey area;
- Mistle thrush – seven observations including five flights, all but one along the northern part of the proposed access route; two of the flights were of flocking individuals in later July which may not have been breeding-related and / or may have included birds from beyond the immediate area; however, it seems likely that there were at least two territories in the vicinity of the northern access route; and
- Whinchat – one pair of birds (male / female) only was observed near the northeastern edge of the Site; although not subsequently recorded, on a precautionary basis one territory is assumed.

[7] Forrester, R. & Andrews, A. (2007). *The Birds of Scotland*. Scottish Ornithologists' Club.

9.4.16 A small number of species that are priority SBL species but not Red-listed were also recorded, of which the most notable is golden plover *Pluvialis apricaria*:

- Golden plover – one observation of a singing individual over 800 m east of the existing track, in the edge of Corrimony RSPB Reserve;
- Kestrel *Falco tinnunculus* – two observations, one north of Loch na Beinne Moire, the other near Kerrow; there was no recorded evidence of nesting, nor are there any trees / structures that would likely be used by nesting kestrel within the Site or near it; and
- Other recorded species that are SBL – only comprised one or two observations each of bullfinch, dunnock and song thrush, and six of siskin; however it should be noted that all these species are still widespread and relatively common or very common in this region of Scotland, and that they would all nest in trees / shrubs to which there will be minimal impact.

Field Survey – other species

9.4.17 Three other more common waders were recorded:

- Oystercatcher *Haematopus ostralegus* – one sighting of a family in the pasture near Fasnakyle Bridge, over 500 m from the Site and assumed to represent a single possible territory;
- Snipe *Gallinago gallinago* – six observations, mostly drumming and in one case chipping, and all considered territorial – given separation distances of 300 m or more, they are taken as six separate probable territories; and
- Common sandpiper *Actitis hypoleucos* – one observation at Loch a' Ghreidlein, taken as one possible territory.

9.4.18 Other recorded species are common and widespread in both the region and Scotland as a whole and are of no note:

- Water birds – one little grebe *Trachybaptus ruficollis* breeding territory (at Loch a' Ghreidlein); a group of three greylag geese *Anser anser* (once on Loch na Beinne Moire in April, and not breeding); mallard *Anas platyrhynchos*(a single male on a small pond west of the existing track, with no other mallards recorded and therefore not likely to have been breeding); one flight of goosander *Mergus merganser* (not stopping in the Site and not recorded again);
- Raptors – six buzzard *Buteo buteo* observations, mostly flying, with no evidence of nesting in the Site;
- Gamebirds – one observation of non-native red-legged partridge *Alectoris rufa*;
- Corvids – two ravens *Corvus corax* seen once together (a probable pair), to the east of the Site; two small groups of hooded crow *Corvus cornix* seen in widely-separate parts of the Site; there is no evidence of these breeding in the Site; and
- Small passerines – various species that are very common in this part of Scotland; the most abundant were meadow pipit *Anthus pratensis* (not actively recorded owing to its abundance on-site and throughout upland Scotland), willow warbler *Phylloscopus trochilus*, wren *Troglodytes troglodytes*, stonechat *Saxicola rubicola*, chaffinch *Fringilla coelebs*, robin *Erithracus rubecula* and coal tit *Peripatus ater*; less frequently-recorded but also common and widespread species comprise long-tailed tit *Aegithalos caudatus*, blackcap *Sylvia atricapilla*, blackbird *Turdus merula*, chiffchaff *Phylloscopus collybita*, goldcrest *Regulus regulus*, great tit *Parus major*, blue tit *Cyanistes caeruleus*, pied wagtail *Motacilla alba*, wheatear *Oenanthe oenanthe*, whitethroat *Sylvia communis* and treecreeper *Certhia familiaris*.

Future Baseline

9.4.19 It is very unlikely that the current ornithological baseline would be significantly different at the time of construction, given that there is no likelihood of habitats supporting birds in and around the Site appreciably changing, or regional bird distribution substantially altering, prior to that time.

9.4.20 In the absence of the Proposed Development, and at a time for this purpose of 30 years in the future, habitats that suffered during the previous wildfire event (see limitations and assumptions in **Section 9.3.14 - 9.3.18**) will probably have recovered significantly, and this may result in changes to breeding bird abundances within the Site. The effects of the recovery from fire would potentially be most pronounced within the Corrimony RSPB Reserve itself (which includes an area of the northern end of the Site). It is presumed that in the summer of 2023, the fire caused the failure of numerous breeding attempts of ground-nesting birds within the reserve, which may have had a knock-on effect for 2024. This is a possible explanation of why the major black grouse lek located on Site during surveys apparently reduced from 12 individuals prior to 2023, to six males and (at most) one female in 2024, see **Section 9.2** above. In the long-term, a recovered reserve could possibly mean greater numbers of ground-nesting species using the Site. However, in the context of the habitat within the Site, given that the fire damage recorded was largely minor and already showing signs of recovery, and that only some of the northern area of the Site around the proposed access track was impacted by the fire, the effect of habitat recovery within the Site would likely be slight. Such recovery could mean possible improvements to black grouse nesting opportunities on Site, in addition to improved feeding opportunities for black grouse (e.g. from recovery of hare's-tail cottongrass *Eriophorum vaginatum*, heather *Calluna vulgaris* and bilberry *Vaccinium myrtillus*). Habitat recovery within the Site could lead to small increases in the abundance of ground-nesting birds (such as skylark and meadow pipit) from improved nesting conditions. Overall habitats would likely remain broadly the same, however, and hence the current baseline bird populations would likely remain similar. Moreover, the management of the wider site (i.e. for extensive sheep grazing and commercial plantation forestry) is predicted not to change significantly during the next 30 years, in the absence of the Proposed Development.

9.5 Issues Scoped Out

9.5.1 The following designated sites with ornithological interests are not considered further because it is clear that there can be no appreciable effect upon them:

- Glen Affric NNR – the nearest proposed construction activity is over 300 m away in the open, with intervening streams and moorland. The streams do not flow into the NNR, therefore there is no possibility of waterborne pollution reaching the NNR from the construction area even in the absence of mitigation; moreover, it is reasonable to expect standard adherence to pollution prevention measures as required by statutory authorities. Diver species associated with the NNR would be located at lochs and lochans at minimum 2 km from the Proposed Development Site, and there is no evidence that diver species use the lochans east of the existing track. Moreover, if divers associated with the NNR were located at the lochans, they would be well-protected from disturbance by intervening raised ground. Crested tit and Scottish crossbill in the NNR would only occur in conifer woodland within it and could not be disturbed with the aforementioned degree of separation. There is no evidence of osprey near the Proposed Development Site. Capercaillie are known to have existed in Glen Affric SSSI, which overlaps parts of the NNR, and capercaillie leks are known to be potentially disturbed at up to 1000 m[8];

[8] Goodship, N.M. and Furness, R.W. (2022). *Disturbance Distances Review: An updated literature review of disturbance distances of selected bird species*. NatureScot Research Report 1283. Available from: NatureScot Research Report 1283 - Disturbance Distances Review: An updated literature review of disturbance distances of selected bird species | NatureScot

however, as noted in **Section 9.2,** consultation with NatureScot indicated that there are no recent records of capercaillie in the SSSI or NNR, and there is no longer thought to be a functional breeding population there, thus there is no possibility of capercaillie disturbance. Consequently, there is no likelihood of any adverse effect on Glen Affric NNR or its interests, and they are not considered further;

- Glen Affric SSSI – for similar reasons given for Glen Affric NNR above, there is no likelihood of adverse effects on this SSSI, owing to separation distance (minimum 1.2 km), separation by the River Glass, and that extant notified bird species could not be subject to disturbance at this distance. Therefore, this SSSI or its interests are not considered further; and
- Glen Affric to Strathconon SPA – this is at closest, 1.5 km from the Proposed Development, and mostly very much further owing to the exceptionally large size of this SPA. Disturbance distance for golden eagle, the sole qualifying feature, is known to potentially extend to 1 km from nest sites[8]. Furthermore, golden eagles are very unlikely to be located at the periphery of the SPA, since this species is very sensitive to human presence and favours remote mountainous locations. Therefore, there is no possibility of nest sites of eagles associated with the SPA being disturbed. Although eagles from the SPA may occasionally fly over or even forage in the vicinity of the Proposed Development, the Proposed Development would not have any perceptible effect on prey resources (such as mountain hare (*Lepus timidus),* grouse species and deer carrion), and the area subject to disturbance during construction is miniscule compared to the foraging range of breeding golden eagle (approximately a 12 km diameter zone centred on nest sites). There is no suitable nesting habitat for golden eagle at or near the Proposed Development that could act as a means of support for the SPA population. The further degree of separation from the Proposed Development precludes pollution for the same reasons given for the designated sites above. Therefore, there is no likelihood of a significant adverse effect on Glen Affric to Strathconon SPA or its qualifying golden eagles, and they are not considered further.

9.5.2 The following bird species are also excluded from further consideration, because there is no likelihood of an appreciable adverse effect upon them:

- Waders:
  - Greenshank – the recorded locations of this species are a minimum of 400 m from the access track and shielded from it by raised ground. The disturbance distance for greenshank is 300 - 500 m when approached by a pedestrian[9], however the screening topography precludes disturbance at 500 m. It is improbable that greenshank would be subject to sufficient disturbance as to pose a risk to their local breeding success. Therefore, this species is not considered further.
  - Golden plover – this species was only heard once and distantly, within Corrimony RSPB Reserve, therefore there is no possibility of disturbance and it is not considered further.
  - Curlew – this species was only seen once in a pasture in the valley of the River Glass, far from the Proposed Development Site, therefore there is no likelihood of disturbance and it is not considered further.
  - Snipe – the six assumed territories are located at various distances from the proposed access route, which would not have a sufficient habitat impact (even if a new track were built instead of upgrading the existing one) to likely cause loss of territories. Snipe is also relatively common in the uplands including this region. Therefore, snipe is not considered further.

[9] Goodship, N.M. and Furness, R.W. (2022). *Disturbance Distances Review: An updated literature review of disturbance distances of selected bird species*. NatureScot Research Report 1283. Available from: NatureScot Research Report 1283 - Disturbance Distances Review: An updated literature review of disturbance distances of selected bird species | NatureScot

  - Common sandpiper – the one possible territory at Loch a' Ghreidlein is outside the Proposed Development Site and therefore very unlikely to be affected. This is also a common species, and is therefore not considered further; and
  - Oystercatcher – the one observed occurrence of a family was recorded in pasture in the valley of the River Glass, over 500 m from the Proposed Development Site. This is also a common species and is therefore not considered further.

- Raptors:
  - Golden eagle – as noted for Glen Affric to Strathconon SPA above, there is no possibility of a significant adverse effect on golden eagles associated with the SPA. There is no suitable nesting habitat at or near the Proposed Development, and the Proposed Development will not have a perceptible effect on prey resources. There were no observations of golden eagles during the field surveys. Therefore, although this species may nevertheless occasionally fly over the Site, there is no likelihood of any significant effect on golden eagle in general, and it is not considered further.
  - Red kite – a Schedule 1 species, was only seen once flying over the Proposed Development, with no confirmation of nesting in the vicinity. A record of nesting red kite was noted in consultation with the SRSG (see **Section 9.2**), however, the potential red kite nest is over 600 m from the Site (the maximum known disturbance distance for this species). It is therefore highly improbable that red kite would be subject to disturbance from the Proposed Development or that there would be any significant effect on this species; and
  - Other raptors and owls – the only other raptors recorded during the field surveys are buzzard and kestrel. Buzzard is a very common species and therefore not 'important' under CIEEM criteria. Kestrel remains common and widespread, despite population declines, and there is no evidence of kestrel nesting in or near the Site. Osprey is known from desk study information to exist in Glen Affric NNR, but there is no evidence of nesting osprey near the Site, and none were seen during the field surveys. Although there are desk study records of barn owl nearby, there are no suitable buildings or trees for nesting in or near the Site. The Proposed Development would have no appreciable effect on availability of prey for any these species, and no effect at all on osprey (a fish predator). Therefore, these species are not considered further.

- Divers – as noted for Glen Affric NNR above, there is no possibility of adverse effects on divers within Glen Affric NNR, and there is no evidence of divers using the lochans near the Proposed Development Site. Nor are those lochans particularly suitable for diver species (being small for black-throated diver, and lacking islands favoured by red-throated diver). Therefore, there is no likelihood of an adverse effect on divers and they are not considered further.

- Capercaillie – as noted for Glen Affric NNR and SSSI above, there is no longer thought to be a functioning breeding population of capercaillie in Glen Affric, therefore there is no likelihood of an adverse effect on this species, and it is not considered further.

- Crested tit – this very localised species breeds in established pinewood, which will not be impacted by the Proposed Development, and does not use the open habitats (including felled plantation) that dominate the Site, nor is it associated with Sitka spruce plantation as occurs at the far northern end of the Site. Although pine plantation locally occurs next to the existing access track, it is very unlikely that nest sites (which are typically in holes in rotten pine trees or stumps, or nest boxes), would occur at the very edge of their habitat. This is also a small species with a typically short disturbance distance, of only 10 - 50 m from nest sites, and it is known to become accustomed to human presence with an overall low sensitivity to disturbance[8]. Therefore, there is no likelihood of an adverse effect on crested tit and it is not considered further;

- Crossbill species – these will utilise both pine woodland / plantation and Sitka spruce plantation, however pinewood is abundant in Glen Affric (for which it is well-known) and the Proposed Development will not impact pinewood, or only negligibly. Any losses to Sitka spruce plantation would be negligible compared to the resource of other spruce woodland in Glen Affric and, more importantly, the more extensive pinewood. Consequently, there is no likelihood of an adverse effect on crossbill species, and they are not considered further;
- Other Schedule 1 species – the special protection afforded by Schedule 1 concerns breeding. Whilst there are desk study records of redwing and brambling, they would not breed in or near the Site (breeding in Scotland occurs rarely and only in the far north). They would also have no dependence on the Site in winter, when they are common and widespread. Therefore, these species are not considered further;
- Other BoCC5 Red list and SBL species, with the exception of black grouse – given the limited habitat impact of the proposed access route, and the relatively small size of the proposed substation platform and temporary compounds (situated mainly on felled forestry), there will be very little impact on breeding Red list / SBL passerine species. Small passerine species are also tolerant of disturbance at quite close range (as explained for crested tit above, which is probably one of the less tolerant small passerines). Therefore, considering the position of recorded passerines (which largely correspond to individual estimated territories), it does not seem likely that more than one or two tree pipit territories would be permanently lost, and (if works took place in the breeding season) a possible further two temporarily lost by disturbance during construction. The locations of other Red list / SBL species suggests that there would be no or little impact on other such passerines. Tree pipit is fairly common throughout the Site itself and can be expected to be widespread and common in Glen Affric, which contains plenty of ideal habitat (areas of native trees with adjacent moorland, or moorland with scattered groups of trees). As such, overall impact on other BoCC5 Red list / SBL species (excepting black grouse) would be so slight as to not require further consideration; and
- Common and widespread bird species – these are by definition not 'important' under CIEEM guidance, and do not require detailed assessment.

9.5.3 Given the above, the only ornithological features that require further detailed assessment are Corrimony RSPB Reserve and black grouse, the latter known to lek, and possibly nest, in the vicinity of the proposed access route.

9.5.4 For these features, the geographical scale of importance (equivalent to 'sensitivity', see **Section 9.2.6**) is as follows:

- Corrimony RSPB Reserve – on a precautionary basis, and assuming the black grouse population within it is significant, this designated site is considered to be important at the National scale, equating to High importance; and
- Black grouse – black grouse are a rather scarce species that has declined, but has a relatively stronghold in this vicinity, with black grouse a feature of Glen Affric NNR / SSSI, and significant populations known to occur in the wider region (e.g. near Drumnadrochit). Therefore, the black grouse in the Proposed Development vicinity are considered to be of Regional importance (i.e. important at the scale of NHZ 7), equating to Medium importance.

9.6 Assessment of Effects, Mitigation and Residual Effects

Potential Significant Effects

9.6.1 Given that all ornithological features, other than Corrimony RSPB Reserve and black grouse, have been eliminated from further consideration as explained, owing to the clear lack of

appreciable effects, potential significant effects from construction and operation of the Proposed Development on ornithological features are limited to:

- Permanent or temporary loss of habitat supporting black grouse, in or outside Corrimony RSPB Reserve;
- Temporary disturbance and / or displacement of black grouse during construction, potentially associated with Corrimony RSPB Reserve;
- Disturbance and / or displacement of black grouse during operation, potentially associated with Corrimony RSPB Reserve; and
- Direct mortality of black grouse during construction, primarily as a result of potential nest loss, potentially associated with Corrimony RSPB Reserve.

Mitigation by Design

9.6.2 Embedded mitigation, or 'mitigation by design', includes the following, which are taken account of during impact assessment:

- The proposed access track makes use of and follows the existing access track, except where it passes through the outer north-western part of Corrimony RSPB Reserve. By doing so, this ensures that habitat losses will be kept to a minimum;
- A CEMP will be prepared and its requirements fulfilled. The plan will include details of pollution control measures during construction as required by statutory authorities, and stipulating adherence to SEPA Guidance on Pollution Prevention (GPP);
- Construction runoff would be controlled as per an authorisation at the appropriate level (e.g. licence) that is granted by SEPA; and
- The design incorporates a SuDS that would ensure runoff during operation is adequately controlled, according to industry best practice.

9.6.3 Further detail and additional embedded environmental mitigation are set out in the GEMPs, and in SPPs, as set out in **Volume 3, Appendix S – GEMPs and SPPs**.

Construction Phase

<u>Corrimony RSPB Reserve – loss of habitat supporting associated black grouse</u>

9.6.4 The proposed access track cuts through the outer north-western part of Corrimony RSPB Reserve. The habitat affected is mainly wet heath, with pockets of blanket bog, much of which has been previously and sometimes heavily, burnt by wildfire previously. There are also stands of birchwood, a small amount of which would be directly impacted. No black grouse were seen in this area during the field survey, however this does not preclude possible future occurrence. The patches of blanket bog and birchwood offer hare's-tail cottongrass and tree bud foraging resources. However, the extent of habitat affected by the proposed access track would be extremely small in comparison to the great size of Corrimony RSPB Reserve which is over 15 km^2.

9.6.5 Consequently, the actual loss of habitat from the Proposed Development would have a Negligible effect on black grouse associated with the Reserve. Therefore, despite the High sensitivity (National importance) assigned to Corrimony RSPB Reserve, the effect of the loss of habitat on associated black grouse is predicted to be of **Negligible** significance.

<u>Corrimony RSPB Reserve – loss of nests of associated black grouse</u>

9.6.6 No black grouse were observed at the northern section of the proposed access route passing through the outer northwestern part of Corrimony RSPB Reserve. This does not however

preclude possible future occurrence, given that there is suitable breeding habitat, albeit partly degraded by the 2023 wildfire. If, at the time of construction of this section of access route, black grouse did occur in this part of the Reserve and were nesting, then there is a risk that black grouse nests and eggs / young could be directly lost, or (if close to works) that loss might occur by abandonment. Owing to the very large size of Corrimony RSPB Reserve, it is reasonable to assume that if loss did occur, this would be a small proportion of the black grouse nests in the Reserve, and is therefore considered a temporary Low magnitude effect.

9.6.7 Considering its High sensitivity (National importance), the effect of possible loss of black grouse nests in Corrimony RSPB Reserve would therefore be of **Moderate** significance.

Corrimony RSPB Reserve – disturbance of black grouse

9.6.8 Similarly to the previous effect, black grouse could in future occur in the northwestern outer part of Corrimony RSPB Reserve, and construction of the proposed access track at that location could therefore cause disturbance during the breeding season. It could also cause disturbance outside the breeding season, but this would be of negligible consequence since disturbed birds would be expected to simply move short distances away from the construction disturbance. However, in the event that black grouse were present and lekking near the proposed access track during construction, then construction at inappropriate times of day could result in a temporary loss of lek sites and possible reduction in breeding success. Owing to the very large size of Corrimony RSPB Reserve, it is reasonable to assume that if this did occur, other leks would remain unaffected, and since also construction disturbance would be temporary, this is considered a Low magnitude effect.

9.6.9 Considering its High sensitivity (National importance), the effect of possible disturbance of lekking black grouse in Corrimony RSPB Reserve is on a precautionary basis also treated as of **Moderate** significance.

Black grouse – loss of habitat outside Corrimony RSPB Reserve

9.6.10 All recorded black grouse occurrences (including those reported anecdotally by the landowner, as well as those identified during field survey) are near the central section of the proposed access route. This utilises the existing access track, with relatively limited works required to upgrade it for substation construction traffic. As such, loss of habitat outside Corrimony RSPB Reserve during construction would be slight and (although permanent) insignificant compared to the extents of suitable habitat either side of the existing access track.

9.6.11 Consequently, this is considered a Negligible magnitude effect, which, despite the Medium geographical importance (‘sensitivity’) assigned to black grouse, results in **Negligible** significance.

Black grouse – loss of nests outside Corrimony RSPB Reserve

9.6.12 Owing to the risk of disturbance by current users of the track, black grouse are unlikely to nest close to it and would likely instead choose locations further away that are more secure and well-hidden. It is therefore improbable that there would be any direct losses or sufficient disturbance to cause loss of black grouse nests by abandonment outside Corrimony RSPB Reserve during construction.

9.6.13 The magnitude of effect is therefore **Negligible**, and of **Negligible** significance.

Black grouse – disturbance outside Corrimony RSPB Reserve

9.6.14 As found directly from field survey, and supported by anecdotal evidence from the landowner, there is a consistent major lek (used by at least six male black grouse) close to the proposed access route, and this is the most important lek found during the field survey. There is also a minor lek (known to be used by at least two males) very close to it (a few meters) at an existing track intersection. Other leks were inconsistently used by black grouse and during the field survey contained only single males. These leks were more distant from the existing track and were visually screened from it (and the proposed access track) by intervening raised topography.

9.6.15 It is therefore possible that during construction, both the major and minor leks could be disturbed if works were undertaken in the breeding season. Disturbance would be most likely to occur in the earlier morning (especially in the few hours before and after dawn) when lekking is most frequent, and less likely to occur, if at all, later in the day. Direct disturbance of these leks could thereby impair breeding success and hence cause a temporary reduction in the breeding population. Any reduction would be temporary owing to population recovery in the subsequent post-construction years. The temporary inhibition of breeding success at this locality would not be of significance at a regional level.

9.6.16 Temporary disturbance of leks during construction is, on a precautionary basis, taken as an effect of Medium magnitude, which in combination with the Medium (Regional) importance ('sensitivity') assigned to black grouse, results in an effect of **Moderate** significance.

Construction mitigation – black grouse

9.6.17 To ameliorate the above non-negligible effects, specific mitigation will be required to:

- Avoid nest loss or disturbance of black grouse within Corrimony RSPB Reserve during construction, given that possible future occurrence there cannot be ruled out; and
- To avoid disturbance to known black grouse leks outside Corrimony RSPB Reserve.

9.6.18 This mitigation will be set out in greater detail in a Black Grouse SPP produced by the Applicant and approved by relevant stakeholders. The basic measures will comprise the following:

- Appointment of an Ecological Clerk of Works (ECoW);

Pre-construction survey by the ECoW, which is taken to mean black grouse survey including lek survey in the breeding season prior to construction (and during construction if deemed relevant);

- If possible, construction works (such as upgrading of parts of the existing track) will be undertaken outside the breeding season (March to August, inclusive); and
- Where construction works within 1 km of leks (as confirmed by the above pre-construction survey) cannot avoid the breeding season (and given that lek disturbance can potentially occur at up to 1 km[8]), then the following will apply:
  - Construction works will be restricted to start at least two hours after dawn in the lekking season, taken as March to mid-May inclusive (black grouse leks are most active pre-dawn and shortly after dawn);
  - Where works will impact possible black grouse nesting habitat in the breeding season (in particular for the new section of track through the outer northwestern part of Corrimony RSPB Reserve), the ECoW will conduct checks for active black grouse nests in the vicinity of works. In the event that the ECoW identifies active black grouse nest(s) in the path of construction or close enough to likely be abandoned, the ECoW will establish an exclusion zone of appropriate size from which works, materials and

entry will not be allowed until the ECoW judges that the breeding attempt(s) have finished. Note that this would be a legal requirement under the general protection of active nests of wild birds set out in the Wildlife and Countryside Act 1981 (as amended), regardless of the high conservation status of black grouse;

- Passage of vehicular construction traffic (and pedestrian passage if relevant) past the leks in the breeding season will also be subject to the above morning time restriction; and
- The ECoW will monitor black grouse during the breeding season and may reduce the above distance of 1 km to a shorter distance if there is evidence of (for example) black grouse moving and lekking closer to the works without any apparent ill effect. The ECoW may also be able to reduce restrictions for passage of construction traffic past active leks within two hours of dawn if the ECoW finds that black grouse are approaching and lekking nearer the active access route without ill effect.

9.6.19 Note that the proposed substation works (as opposed to track works) are well over 1 km from known black grouse leks, and this is unlikely to change following the pre-construction survey, since landowner anecdotal evidence points to the leks being in the same vicinity over a prolonged period. Therefore, the proposed substation works are unlikely to themselves be subject to black grouse restrictions, although they may be impacted by the above restrictions affecting the access track works and subsequent use during construction.

9.6.20 In view of the possible impact on the construction schedule (if exclusion zone(s) have to be established, if the ECoW finds active black grouse nests in the path of works or close enough that nest abandonment is possible – see fourth bullet point above), it is stressed that construction works in suitable habitat for black grouse would best take place outside the breeding season to avoid potential breaches of the Wildlife and Countryside Act 1981 (as amended).

Construction mitigation – unrelated to black grouse

9.6.21 Although no significant adverse impacts have been predicted for species other than black grouse, legal obligations arising from the Wildlife and Countryside Act 1981 (as amended) mean that standard nesting bird mitigation is still required since it applies to all active nests of wild birds regardless of how common they are.

9.6.22 Where any vegetation requires to be cleared (since all such vegetation in the Site is suitable for general nesting birds, including felled plantation), this should, as far as possible, be cleared outside the breeding bird season (taken to be March to August, inclusive). Where this is not possible, then the ECoW (or other appropriately experienced ecologist) will carry out checks for active nests no more than 48 hours prior to clearance of the relevant vegetation. In the event that the ECoW finds active nest(s), then the ECoW will establish exclusion zone(s) of appropriate size around the nest(s) from which works, material and entry will be prohibited until the ECoW judges that the breeding attempt(s) have finished. Note that inspection of large areas of vegetation for active nests is likely to be unfeasible, and if active nest(s) are found then significant project delays may be incurred since the exclusion zone(s) may need to be in place for several weeks at least. For these reasons, it is highly advisable to carry out clearance of vegetation outside the breeding bird season.

Residual construction effects

9.6.23 With the above specific mitigation in place and adhered to, all construction impacts that are not already Negligible would become **Negligible** in magnitude and of **Negligible** significance.

Operational Phase

9.6.24 There are not considered to be any significant operational adverse effects on ornithological features. This is primarily because operation of the proposed substation will require only infrequent maintenance attendance that would not be liable to cause significant disturbance to black grouse or other birds either within or beyond Corrimony RSPB Reserve. Additionally, the proposed substation has been designed with appropriate SuDS, and operation of such a substation does not involve significant emissions of any sort, therefore no significant effects are likely via emissions.

Cumulative Effects

9.6.25 A list of developments which are programmed to be under construction or operational at the same time as the Proposed Development, and in sufficient proximity that cumulative effects might be possible and should be considered, are set out in **Volume 1, Chapter 15 Cumulative Effects**. In summary these are:

- Bingally OHL – the installation of two new towers (including a temporary diversion requiring two temporary towers) to facilitate the tie-in of the existing Beauly-Denny overhead line into the proposed Bingally 400 kV substation;
- Bingally to Fasnakyle UGC / OHL – connection of the Proposed Development to Fasnakyle Substation;
- Tomchrasky Wind Farm OHL connection – connection of Proposed Development to Tomchrasky Wind Farm;
- Fiodhag Wind Farm – construction of wind farm comprising of 46 turbines (height to blade tip 149.9 m) – the proposed windfarm overlaps with a large area of the Proposed Development Site from the central area to the south, including the proposed substation area;
- Fasnakyle Energy Storage – A battery energy storage facility comprising access track, compound of battery and electrical equipment, stores, meter building, water tank, ancillary structures, fencing, security cameras, landscaping bunds, new trees;
- Kerrow Farm BESS – a battery energy storage system, multiple containerised storage units, associated infrastructure, control buildings, switch room, lights and associated works;
- Chrathaich Wind Farm – construction of wind farm of 14 turbines and associated infrastructure; and,
- Cnoc Farasd Wind Farm – construction of wind farm of 9 turbines and associated infrastructure.

9.6.26 All residual ornithological construction effects of the Proposed Development alone are rendered **Negligible** with the specific black grouse mitigation outlined above in place and adhered to. There is also no possibility of significant operational effects on ornithological features. As such, the Proposed Development offers no significant ornithological adverse effects that could contribute to significant in-combination effects, either between aspects of the Proposed Development itself or with other plans or developments. Additionally, the assessed cumulative developments are frequently indicated by an EIAR to have no significant residual effects, or (where EIA is not required or an EIAR has not yet been produced) it is often unlikely that there would be significant residual effects (owing to the type or small scale of the development).

9.6.27 It is therefore concluded that there is no potential for significant cumulative ornithological effects to arise from the Proposed Development in combination with the assessed cumulative

developments. This is dependent on the mitigation described in this chapter to avoid or minimise the risk on important ornithological features.

9.7 Summary

9.7.1 The desk study identified three statutory designated sites and one non-statutory site with ornithological interests. Potential adverse effects were only found for the non-statutory site (Corrimony RSPB Reserve), for which adverse effects during construction on black grouse within it might without mitigation be of Moderate significance.

9.7.2 The desk study identified a range of bird species that could occur in the vicinity of the Site, and the field survey identified several notable bird species - these notable birds are:

- Black Grouse;
- Brambling;
- Bullfinch;
- Common sandpiper;
- Crested tit;
- Crossbill;
- Cuckoo;
- Curlew;
- Dunnock;
- Golden eagle;
- Golden plover;
- Grasshopper Warbler;
- Greenfinch;
- Greenshank;
- Kestrel;
- Lapwing;
- Lesser Redpoll;
- Mistle thrush;
- Osprey;
- Red kite;
- Redwing;
- Reed Bunting;
- Scottish Crossbill;
- Siskin;
- Skylark;
- Snipe;
- Song Thrush;
- Spotted Flycatcher;
- Starling;
- Tree Pipit;
- Twite;
- Whinchat;
- Wood Warbler; and
- Yellowhammer.

9.7.3 Following an impact assessment for reasons set out in detail in this chapter, the only bird species for which significant adverse effects were considered possible is black grouse. Adverse effects during construction, without mitigation, were considered to reach potentially Moderate significance.

9.7.4 Specific mitigation (further to already-embedded design mitigation) has been proposed for black grouse, which would be set out in further detail in a Black Grouse SPP. The proposed measures include appointment of ECoW, pre-construction survey, construction works directly impacting habitat (especially in Corrimony RSPB Reserve) to be outside the breeding season (where possible), early morning restrictions on construction activity within 1 km of black grouse leks in the lekking season (March to mid-May, inclusive), and if / where required checks for black grouse nests.

9.7.5 With black grouse mitigation in place and adhered to, all adverse effects are considered to be of Negligible significance. It will, however, also be necessary to adhere to standard nesting bird mitigation in order to comply with protection of all wild bird nests under the Wildlife and Countryside Act 1981 (as amended).