VOLUME 2: CHAPTER 8 – ECOLOGY AND NATURE CONSERVATION

Figures (Volume 3 of this EIA Report)

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8. ECOLOGY AND NATURE CONSERVATION

8.1 Executive Summary

8.1.1 This chapter has described the assessment of potential impacts of the Proposed Development on non-avian ecology and nature conservation. It has identified the potential impacts and significant effects of the Proposed Development on designated sites, terrestrial habitats and protected species in addition to some aquatic receptors. The assessment is based on best practice guidance including the Chartered Institute for Ecology and Environmental Management's (CIEEM) Guidelines for Ecological Impact Assessment (EcIA) in the UK and Ireland (2018) revised in 2024.

8.1.2 The scope of the ecological assessment and baseline conditions have been determined through a combination of desk-based study, field surveys, and consultation with relevant organisations. This process identified ecological features that could potentially be impacted by the Proposed Development.

8.1.3 The Proposed Development has been designed to minimise impacts on designated sites, important habitats and protected species as far as practicable. This has been achieved through embedded mitigation and an iterative design process as detailed in **Chapter 4: The Routeing Process & Alternatives**. Further commitments to specific mitigation measures pre-construction, during construction, and during operation, has enabled potential effects on habitats and species present, for the most part, to be assessed as not significant.

8.1.4 Seventeen sites designated for non-avian ecological features were identified as having potential to be impacted by the Proposed Development. All impacts on designated sites have been mitigated through mitigation by design, embedded mitigation and additional mitigation measures.

8.1.5 Eleven protected species were assessed as having potential to be impacted by the Proposed Development. Of those assessed, all impacts on protected species, except bats, have been fully mitigated through mitigation by design, embedded mitigation and additional mitigation measures. Effects on the commuting / foraging impacts on bats are predicted to be significant on account of severed potential commuting routes. It is not possible to mitigate loss of commuting / foraging routes within the operational corridor due to safety risks associate with the Proposed Development.

8.1.6 Twenty-eight terrestrial habitats were identified as important ecological features within the footprint of the Proposed Development. Of these, significant residual effects were predicted for the following eight habitats:

- w1e Upland birchwoods;
- w1h Other woodland; mixed;
- w2b Other Scot's Pine woodland;
- w2a5 Caledonian forest (H91C0);
- h1b5 Dry heaths; upland (H4030);
- h1b6 Wet heathland with cross-leaved heath; upland (H4010);
- f1a Blanket bog; and
- f1a5 Blanket bog (H7130).

8.1.7 AWI sites were predicted to be subject to significant effects as a result of the Proposed Development. Of these woodlands, significant residual effects are predicted to be limited to Category 2b woodland.

8.1.8 Cumulative effects were assessed for the developments presented within **Table 8.25**. Significant cumulative effects are only predicted between the Proposed Development and the Beauly to Blackhillock to New Deer to Peterhead 400 kV OHL (draft EIA Report), with significant adverse effects predicted on bats. When considering

cumulative effects across all developments only those affecting blanket bog were considered relevant, with positive effects predicted resulting from habitat restoration proposals.

8.2 Introduction

8.2.1 This chapter provides baseline ecological information and assesses the potential impacts and likely significant effects of the construction and operation of the Proposed Development on non-avian ecology, including designated sites, terrestrial habitats, and protected and notable species. The assessment is based on the best practice Guidelines for Ecological Impact Assessment (EcIA) in the UK and Ireland developed by the Chartered Institute for Ecology and Environmental Management (CIEEM) (2018 rev 2024)[1].

8.2.2 The specific objectives of this chapter are to:

- Describe the scope of assessment and methodology used in completing the impact assessment;
- Summarise the ecological baseline identified through desk-based study and field surveys;
- Evaluate the importance and value of existing ecological features and determine those that need to be considered further within the impact assessment and those that can be scoped out, as following preliminary analysis it is clear there would be no significant effect;
- Identify and characterise potential impacts and their predicted effects on relevant ecological features;
- Assess the significance of predicted effects;
- Consider embedded mitigation measures and whether these remove all likely significant impacts on ecological features;
- Describe the further additional mitigation measures proposed to address any predicted significant effects;
- Assess the significance of residual effects remaining following the implementation of mitigation measures;
- Assess the significance of cumulative effects between the Proposed Development and other developments; and,
- Consider compensation and / or enhancement to offset significant effects and / or deliver a net-benefit.

8.2.3 Throughout this chapter, species are given their common name (where available); all scientific names for species referred to within this chapter are presented within **Volume 5, Appendix 8.6: Species Lists**.

8.2.4 This chapter has been prepared by Environmental Resources Management Ltd. (ERM). All staff contributing to this chapter have professional experience in EIA and ecological survey.

8.2.5 The facts and figures presented in this chapter (including areas, distances, and percentages) have been prepared with all due care and attention, however all measurements are approximate.

8.2.6 **Chapter 9: Ornithology** addresses the effects on ornithological features, including protected sites designated only for ornithological features; where other ecological interests are also present, they will be assessed within the current chapter. The effects on hydrology are addressed in **Chapter 10: Water Environment** and effects on peat and soils in **Chapter 11: Geological Environment**. Sites designated only for geological features will only be assessed in **Chapter 11: Geological Environment**; where other ecological interests are also present they will be assessed within the current chapter. Further to the hydrological assessment for the Proposed Development, **Chapter 10: Water Environment** also considers the hydrological effects on potential

[1] https://cieem.net/resource/guidelines-for-ecological-impact-assessment-ecia/ Accessed November 2024.

Groundwater Dependent Terrestrial Ecosystems (GWDTEs) identified in the baseline section of this chapter. Further detailed information on forestry and felling proposals are contained within **Chapter 13: Forestry**.

8.2.7 Confidential protected species data will not be published online with this EIA Report due to the potential persecution risk to some protected species. These documents will only be issued to the Scottish Ministers and NatureScot to inform their determination.

8.3 Scope of Assessment and Methodology

8.3.1 This chapter focuses on the potential direct and indirect impacts of the Proposed Development (**Chapter 3: Description of the Proposed Development**), including cumulative effects, on the ecological features described in **Table 8.1**.

Table 8.1: Potential Impacts of the Proposed Development and Management Felling on Ecological Features.

Feature	Impacts	
	Direct	**Indirect**
Designated nature conservation sites	Land-take, disturbance to habitats and protected species (qualifying interests).	Habitat fragmentation and / or modification, impacts to supporting systems such as groundwater or overland flow. Loss of woodland cover due to management felling out with the Operational Corridor.
Terrestrial habitats	Land-take i.e. natural habitats disturbance and lost to built infrastructure.	Habitat fragmentation and / or modification, impacts to supporting systems such as groundwater or overland flow.
Aquatic habitats	Land-take i.e. natural habitats disturbance and lost to built infrastructure.	Ecological impacts of changes in water conditions through potential pollution effect and increase in surface water run-off due to increased impermeable hardstanding. Habitat fragmentation and / or modification impacts to supporting systems such as groundwater. Changes in habitats due to changes in flow regime due to new (or improved) crossing points of watercourses.
Protected and other notable species	Mortality, loss of key habitat(s) including breeding features, displacement, barrier effects preventing movement, general disturbance at place(s) of shelter.	Loss of or changes to food resources, population fragmentation, degradation of key habitat. Disturbance at and loss of places of shelter resulting from management felling.

8.3.2 The scope of the assessment has been determined through a combination of desk-based study, field surveys, as described in **Volume 5, Appendix 8.2: Ecology Assessment Methodology** and consultation with relevant stakeholders, through a formal EIA Scoping process (**Chapter 6: Scope and Consultation**) and aligns with the best practice EcIA Guidelines developed by CIEEM.

8.3.3 Cumulative effects arising from the combination of the Proposed Development with other developments have been assessed. The cumulative developments include those at screening, scoping or having been consented and deemed reasonably foreseeable. They are shown on **Volume 3, Figure 5.1: Cumulative Developments** and listed in **Chapter 5: EIA Process and Methodology**.

8.3.4 The assessment reported in this chapter is based on the Proposed Development as described in **Chapter 3: Description of the Proposed Development** and shown in **Volume 3, Figure 3.1: The Proposed Development**, including the proposed Limits of Deviation (LoD).

Legislation, Policy and Guidance

8.3.5 This assessment has been carried out within the context of the relevant legislative instruments, planning policies and guidance documents provided in **Volume 5, Appendix 8.1: Legislation, Policy and Guidance**.

8.3.6 The fourth National Planning Framework for Scotland (NPF4), sets out new requirements for development to deliver positive effects on biodiversity, primarily under Policy 3 (Biodiversity). This states that all development will contribute to the enhancement of biodiversity, including where relevant restoring degraded habitats.

8.3.7 For national or major developments, or those subject to Environmental Impact Assessment (EIA), Policy 3b notes that these proposals will only be supported "*where it can be demonstrated that they will conserve, restore and enhance biodiversity, including nature networks, so they are in a demonstrably better state than without intervention*". The policy requires that such proposals demonstrate significant biodiversity enhancement, in addition to any proposed mitigation. NPF4 Policy 3b requires applicants to demonstrate that biodiversity will be in the "demonstrably better state" and that the five criteria of Policy 3(b) have been met. These criteria are:

- "the proposal is based on an understanding of the existing characteristics of the site and its local, regional and national ecological context prior to development, including the presence of any irreplaceable habitats;
- wherever feasible, nature-based solutions have been integrated and made best use of;
- an assessment of potential negative effects which should be fully mitigated in line with the mitigation hierarchy prior to identifying enhancements;
- significant biodiversity enhancements are provided, in addition to any proposed mitigation. This should include nature networks, linking to and strengthening habitat connectivity within and beyond the development, secured within a reasonable timescale and with reasonable certainty. Management arrangements for their long-term retention and monitoring should be included, wherever appropriate; and
- local community benefits of the biodiversity and / or nature networks have been considered."[2]

Consultation

8.3.8 Full details of the consultation process and responses are included in **Chapter 6: Scope and Consultation** and associated **Volume 5, Appendix 6.3: Scoping Matrix**. Specific scoping responses, relevant to ecology are provided in **Table 8.2**.

[2] NatureScot (2024) Planning and development: Enhancing biodiversity. https://www.nature.scot/professional-advice/planning-and-development/planning-and-development-advice/planning-and-development-enhancing-biodiversity [Accessed June 2025].

Table 8.2: Consultation Responses as Part of Scoping

Consultee	Ecology and Nature Conservation Issue Raised	The Applicant Response / Action Taken
Energy Consents Unit (ECU) Scoping Response	Marine Directorate – Science Evidence Data and Digital (MD-SEDD) provide generic scoping guidelines for overhead line development which outline how fish populations can be impacted during the construction and operation of an overhead line development and informs the Applicant as to what should be considered, in relation to freshwater and diadromous fish and fisheries, during the EIA process. In addition to identifying the main watercourses and waterbodies within and downstream of the Proposed Development, the Applicant should identify and consider any areas of Special Areas of Conservation where fish are a qualifying feature and proposed felling operations particularly in acid sensitive areas. MD-SEDD have also provided standing advice for overhead line development, which outlines what information, relating to freshwater and diadromous fish and fisheries, is expected in the EIA report. Habitat enhancement and mitigation measures should be detailed within the EIA, where available, and a draft or outline Habitat Management Plan and Species Protection Plan should be produced as part of the EIA, including any proposals for mitigation and enhancement in relation to important habitats and species, where agreed. The Scottish Ministers expect that all survey information will be up to date and include all areas of proposed construction, where confirmed. Scottish Minsters note that with regards to compensatory planting, felling and re-stocking out-with the operational corridor, full details may not be known at the time of application. Regarding cumulative assessment, it is recommended that in order to assess the full environmental impact of the Proposed Development, the Applicant include within the cumulative impact assessment, OHL and Substation infrastructure that is associated with SSEN Transmission ASTI projects. The mitigation measures suggested for any significant environmental impacts identified should be presented as a conclusion to each chapter. When finalising the EIA report, the Applicant is asked to provide a summary in tabular form of where within the EIA report each of the specific matters raised in this scoping opinion has been addressed.	The Applicant has drafted sections of this EIA Report relating to freshwater and diadromous fish and fisheries, in cognisance of the MD-SEDD scoping guidelines and standing advice. Freshwater sections of **Chapter 8: Ecology and Nature Conservation** and **Volume 5, Appendix 8.5: Watercourse Crossing Ecological Appraisal** have identified the main watercourses and waterbodies within and downstream of the Proposed Development, Special Areas of Conservation where fish are a qualifying feature and proposed felling operations particularly in acid sensitive areas. A completed checklist can be found in attachment to **Volume 5, Appendix 8.5: Watercourse Crossing Ecological Appraisal.** The Applicant has undertaken an EIA and BNG assessment based on baseline data collected during habitat and protected species surveys, undertaken in 2024 and 2025. Following the assessment of impacts on the habitat and species, within this chapter, appropriate mitigation has been applied (**Section 8.8**) where significant impacts have been assessed (**Section 8.7**). Further to this a BNG assessment has been undertaken, in line with the Applicant's BNG business commitment (**Volume 5, Appendix 8.8: BNG Report**). Outline Species Protection Plans can be found in **Volume 5, Appendix 3.4: Species Protection Plans (SPP)**. Where available or where confirmed at time of application these plans will include compensatory planting, felling and re-stocking out-with the OC. An outline Habitat Management Plan (Outline HMP) is included as an annex within **Volume 5, Appendix 8.8: Biodiversity Net Gain (BNG) Report**. A cumulative assessment has been undertaken within **Chapter 8: Ecology and Nature Conservation** (**Section 8.11**). Within this section, cumulative projects have been divided into intra and inter-project groups for assessment, this includes other associated ASTI projects. Within **Chapter 8: Ecology and Nature Conservation** (**Section 8.8**) mitigation measures considered additional i.e. over and above embedded mitigation measures or measures by design, are detailed. Mitigation items have been listed with a unique identifier which relates to **Chapter 19:**

Consultee	Ecology and Nature Conservation Issue Raised	The Applicant Response / Action Taken
		Schedule of Mitigation where all mitigation detailed within this EIA Report are summarised. **Chapter 8: Ecology and Nature Conservation** (**Section 8.3 Table 8.2**) provides a summary of all consultation responses pertaining to ecology and nature conservation and details how they have been addressed within the EIA or associated documents.
The Highland Council (THC)	An EIAR chapter covering ecology and habitats will be required. This should provide a baseline survey of the fauna interest on site. It needs to be categorically established what species are present on the site, and where. Further the EIAR should provide an account of the habitats present on the Proposed Development site, identifying rare and threatened habitats, and those protected by European or UK legislation, or identified in national or local Biodiversity Action Plans. Habitat enhancement and mitigation measures should be detailed. Details of any habitat enhancement programmes for the proposed site should be provided. It is expected that the EIAR will address whether or not the development could assist or impede delivery of elements of relevant Biodiversity Action Plans. An ecological impact assessment for the site and should be considered alongside the development EIAR. This should follow the CIEEM guidance on ecological impact assessment and be proportionate to the scale of development. It should cover the ecological resources of the site including protected species within the Highlands Nature Biodiversity Action Plan. It is expected that the proposal shall demonstrate compliance with NPF4 Policy 3b and that using the DEFRA metric, a minimum of 10% of biodiversity enhancement overall, can be brought about. The EIAR should cover Highland Nature Biodiversity Action Plan species and habitats, as well as SBL species. THC's ecology officer stated that the survey buffer for protected species should only include protected species and should not be limited to 30m. All surveys should adhere to the relevant NatureScot Standing Advice Any relevant SPPs should be made available as part of the EIA report. It is expected that all survey information submitted with the application will be up to date, in line with NatureScot professional guidance and will include all areas of proposed construction, including areas considered temporary. The EIAR should also include any cumulative assessments for the proposal, taking into consideration any bigger projects that may affect the same ecological receptors. The EIAR should address the likely impacts on the nature conservation interests of all the designated	The Applicant has undertaken an EIA and BNG assessment based on baseline data collected during habitat and protected species surveys, undertaken in 2024 and 2025. Baseline surveys for protected species recorded field signs digitally and records were geolocated, with photographs recorded as appropriate. Methods and results of the protected species surveys are presented in **Volume 5, Appendix 8.4: Protected Species Technical Report**. Protected species field surveys were supplemented by desk-based study records (**Chapter 8: Ecology and Nature Conservation**) to categorically establish what species were present on site and where. A similar approach to habitat survey was undertaken and is presented in **Volume 5, Appendix 8.3: Habitat Technical Report**. Within **Chapter 8: Ecology and Nature Conservation**, protected species and habitats identified within the survey area are presented, with their protection or conservation status e.g. SBL or HNBAP noted. Following the assessment of impacts on the habitat and species, within this chapter, appropriate mitigation has been applied (**Section 8.8**) where significant impacts have been assessed (**Section 8.7**). Further to this a BNG assessment has been undertaken, in line with the Applicant's BNG policy (**Volume 5, Appendix 8.8: BNG Report**). The Applicant has developed their own BNG toolkit based on the DEFRA metric, adjusted to better suit a Scottish context. **Chapter 8: Ecology and Nature Conservation** has been written in cognisance of CIEEM guidance on ecological impact assessment and fulfils the requirements of EcIA. Details of the survey methods employed to inform baseline data collection are detailed in **Volume 5, Appendix 8.4: Protected Species Technical Report**. For protected species an appropriate survey buffer has been applied to the Proposed Development (which include all areas of proposed construction, including areas considered temporary), in many cases a 30 m

Consultee	Ecology and Nature Conservation Issue Raised	The Applicant Response / Action Taken
	sites in the vicinity of the proposed development. It should provide proposals for any mitigation that is required to avoid these impacts or to reduce them to a level where they are not significant. The EIAR needs to address the aquatic interests within local watercourses, including downstream interests that may be affected by the development. The EIAR should evidence consultation input from the local fishery board(s) where relevant. The EIAR should include a map and assessment of impacts upon Groundwater Dependent Terrestrial Ecosystems (GWDTE) and buffers, these habitats are easily damaged by insensitive drainage. NPF4 Policy 3 states that, 'Development proposals for national, major and of EIA development should only be supported where it can be demonstrated that the proposal will conserve and enhance biodiversity, including nature networks within and adjacent to the site, so that they are in a demonstrably better state than without intervention, including through future management.' A draft or outline Habitat Management Plan (HMP) and Species Protection Plan (SPP) should be produced as part of the EIA, including any proposals for mitigation and enhancement in relation to important habitats and species. Any compensatory planting plans should be carefully considered and included in the HMP. It is noted that the application will be supported by a Biodiversity Net Gain Metric, this is supported, and it is expected that any proposed enhancement to comply with NPF4 policy 3 and Highland Council 'Biodiversity Enhancement Planning Guidance' May 2024. The completed metric and any associated information used to populate the metric should be provided with the application. NatureScot's Developing with Nature guidance has been prepared, in discussion with Scottish Government, to support major development applications. It sets out several common measures to enhance biodiversity. For national, major and EIA developments, more detailed assessment and more ambitious measures are likely to be required. The applicant should explore and identify opportunities for biodiversity enhancement as early as possible, including through discussion with key stakeholders. Within the EIA report, information on predicted losses, proposed compensation and delivery of additional positive effects should be clearly summarised. The information must be sufficient to allow the consenting authority and relevant stakeholders to see clearly how effects will be addressed, and compensation and enhancement delivered.	buffer has been applied (to a Proposed Development corridor) as per guidance (including but not limited to NatureScot Standing Advice), however, should the Proposed Development be built as presented this will cover an area up to 130 m from the Proposed Development. For certain species e.g. otter and wildcat, a greater buffer (200 m) of the Proposed Development has been applied, again, when considering the size of the Proposed Development corridor this will cover an area up to 300 m from the Proposed Development. The Applicant has developed a suite of SPPs in consultation with NatureScot, which are included in **Volume 5, Appendix 3.4: SPPs**, of this EIA Report. A cumulative assessment is present within **Section 8.11** which includes all EIA projects, within the planning system and within an appropriate Zone of Influence (ZoI), that may affect the same ecological receptors. Within **Chapter 8: Ecology and Nature Conservation**, designated sites are identified within defined ZoIs. These designated sites are subject to impact assessment in **Section 8.7** of this chapter and where significant impacts are identified additional mitigation is proposed (**Section 8.8**). An appraisal of freshwater crossing points has been undertaken in **Volume 5, Appendix 8.5: Watercourse Crossing Ecological Appraisal,** to identify in stream works to be undertaken and the likely effects these will have on fish and / or freshwater pearl mussels. Further to this, a proportionate approach to FWPM surveys was undertaken across the Proposed Development in consultation with, and under licence issued by NatureScot, with the results of these surveys detailed in full within **Volume 5, Appendix 8.9: Freshwater Pearl Mussel Survey Report (Confidential)**. Both this EIA chapter and supporting technical appendices detailed above have included consultation with DSFBs, and evidence of consultation with DSFBs is recorded within appropriate section. **Volume 5, Appendix 8.3: Habitat Technical Report**, details the results of habitat surveys inclusive of GWDTEs. Mapping of the results are presented in **Volume 3, Figure 8.5**. Surveys for GWDTE were undertaken in line with SEPA LUPs Guidance with survey buffers of 250 m applied to the Proposed Development to account for potential indirect effects. Outline SPPs can be found in **Volume 5, Appendix 3.4: SPPs**. Where available or

Consultee	Ecology and Nature Conservation Issue Raised	The Applicant Response / Action Taken
		confirmed at time of application these plans include compensatory planting, felling and re-stocking out-with the OC. The BNG assessment for the Proposed Development has been undertaken to comply with NPF4 policy 3 and Highland Council 'Biodiversity Enhancement Planning Guidance' May 2024 and the completed BNG report (and associated toolkit) is appended in **Volume 5, Appendix 8.8: BNG Report**. Through the impact assessment, identification of significant impacts (**Section 8.7**), the associated mitigation measures (**Section 8.8**) and the BNG report, enhancement measures have been identified.
NatureScot (NS)	NS believe the scale and nature of the Proposed Development is such that its effects on important natural heritage have potential to be significant. The Applicant's Scoping Report recognises this and sets out clearly the scope of assessment. NS agree with the issues the Applicant intends to scope in and out. NS recognise that the proposal falls within the National Planning Framework (NPF4) list of national developments and will consider objecting if the impacts raise issues of national interest that cannot be adequately mitigated. The proposal will affect many natural heritage interests but NS focus in response to the Scoping Report is on the issues where it is considered that there is greater risk, that impacts on important natural heritage interests may raise issues of national interest. The Applicant has been unable to identify a route that avoids crossing the Caithness and Sutherland Peatlands SAC and Ramsar site, and the Flow Country WHS. Direct and indirect effects on priority peatland habitats and its associated flora and fauna are therefore likely and could be significant. The protected areas listed below are those that NS currently consider are at greatest risk of significant effects, and where standard mitigation alone may be insufficient to avoid adverse effects. • Caithness and Sutherland Peatlands SAC • Caithness and Sutherland Peatlands Ramsar site • Flow Country WHS There is still a risk of indirect effects on other protected sites which, it is hoped, that the Applicant's suite of GEMPs and SPPs and CEMP would largely mitigate significant effects.	The Applicant has made every effort to identify an alignment which minimises impacts on protected sites, habitats (including peatland habitats) and species, whilst balancing environmental impacts with constructability and operational safety constraints (**Chapter 4: The Routeing Process and Alternatives**). Despite this process, direct and indirect impacts on features of ecology and nature conservation have been identified. Impacts assessed within this chapter extend to designated sites with cited biological features relating to habitats and species. Ornithological interest will be covered in **Chapter 9: Ornithology,** and Geological features are covered in **Chapter 11: Geological Environment,** as such they are not considered within this chapter. During the routeing process for the Proposed Development, both this and the Study Area has narrowed and impacts on designated sites have been removed to reflect the likely ZoI of any potential impact pathway. Impacts on SACs and Ramsar sites have been subject to HRA screening in line with Habitats Regulations and where Likely Significant Effects (LSE) have been identified or cannot be ruled out these have been taken through to Appropriate Assessment as reported in **Volume 5, Appendix 8.7: Report to Inform Habitats Regulations Appraisal (HRA)**. Embedded mitigation takes the form of General Environmental Management Plans (GEMPs) (**Volume 5, Appendix 3.3: GEMPs**), SPPs (**Volume 5 Appendix 3.4: SPPs**) and the Construction Environmental Management Plan (CEMP). These documents are considered to be embedded mitigation as they are applied on SSEN Transmission projects

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	NS have provided the Applicant with details of any specific species records they are aware of and directed them to NS online Standing Advice. NS agree with their proposed scope of assessment. Where the proposal has potential to affect SACs, the requirements of the Conservation (Natural Habitats, &c.) Regulations 1994 as amended (the 'Habitats Regulations') apply. Consequently, The Scottish Government Energy Consents Unit is required to consider the effect of the proposal on the SACs before it can be consented (commonly known as Habitats Regulations Appraisal). Under the Habitats Regulations, all competent authorities must consider whether any plan or project could affect a European site before it can be authorised or carried out. This includes considering whether it will have a 'likely significant effect' on a European site, and if so, they must carry out an 'appropriate assessment' (AA). This process is known as Habitats Regulations Appraisal (HRA). A competent authority must not authorise a plan or project unless it can show beyond reasonable scientific doubt – through an appropriate assessment – that the plan or project will not adversely affect the integrity of a European site. NS advice on developments and Special Sites of Scientific Interest (SSSIs) will depend on the criteria set out in NPF4 Policy 4(c). In addressing these criteria NS consider; ▪ impacts on the natural features of a site (direct and indirect); ▪ the extent to which impacts of a development might affect the condition of the site's natural features; ▪ the permanence of the impacts; ▪ impacts in combination with other proposals or activities; and, ▪ NS's balancing duty. There are sections of the Proposed Development within the Flow Country WHS. The site was inscribed as a WHS due to it being the most outstanding example of a blanket bog ecosystem globally. The Outstanding Universal Value (OUV) of the site encompasses several attributes including the blanket bog habitats and ecosystem processes. Where a proposal affects one or more of these attributes, this could result in impacts on the site's OUV. The Highland Council has produced a toolkit for developers to use in assessments to consider impacts to the WHS. Assessment of impacts to the WHS only needs to consider criterion (ix) for peatland ecosystem quality, as this reflects UNESCO's decision. To help assess when a proposal could have a significant effect on Peatland and carbon-rich soils (out with protected areas) that NatureScot will consider as raising issues of	as standard and are included when considering the impacts on ecological receptors. Protected species surveys are reported in **Volume 5, Appendix 8.4**: **Protected Species Technical Report**, including the results of desk-based assessment and data searches, including data provided by NatureScot. NatureScot Standing Advice has been considered and is included within **Volume 5, Appendix 8.1: Legislation, Policy and Guidance**. The Flow Country WHS has been subject to impact assessment across a range of technical disciplines including but not limited to **Chapter 11: Geology Environment** and **Chapter 10: Water Environment**. The assessment is accompanied by THC's WHS assessment toolkit (**Volume 5, Appendix 8.10: The Flow Country World Heritage Site (WHS) Impact Assessment Report**) which has been completed and consolidates the relevant chapter assessments. Assessment of the WHS has only included criterion (ix), the only criterion for which the site was inscribed. The Applicant has completed the NatureScot template and include mapped figures to illustrate where proposed development infrastructure (including a 250 m buffer) meets the criteria in the template (**Volume 5, Appendix 8.10: The Flow Country World Heritage Site (WHS) Impact Assessment Report**). The Applicant notes that the framework is a tool to assess the quality and therefore the sensitivity of a peatland affected by a proposal, and that the peatland does not need to meet all the criteria to be considered of a quality and sensitivity sufficient for impacts to raise issues of national interest.

Consultee	Ecology and Nature Conservation Issue Raised	The Applicant Response / Action Taken
	national interest, an assessment framework has been developed based on guidelines for the selection of SSSI for bogs NS request that the Template is completed by the Applicant. We also request that if the development infrastructure (including a 250 m buffer) meets the criteria in the template, an additional map is provided showing these locations (e.g. *Sphagnum* species) in relation to the development, including where available, shape files showing the location of infrastructure, NVC communities and peat depths at the application stage or before. The framework is a tool to assess the quality and therefore the sensitivity of a peatland affected by a proposal. NS emphasise that the peatland does not need to meet all the criteria to be considered of a quality and sensitivity sufficient for impacts to raise issues of national interest. The combination of responses to these criteria will inform this assessment. The framework will also be used by NatureScot to consider if mitigation is sufficient to overcome the impacts.	
Ardgay District Community Council (A&DCC)	The competency of any in the field surveys which are undertaken is called into question when the LoD is considered. For example, A&DCC note that in terms of surveys of watercourses 200 m upstream and downstream is to be added to the LoD for habitat survey for otters. A&DCC questions how this survey work can possibly be undertaken given the degree of work that is required to undertake the survey work as detailed in this report along the route within the LoD of that route. In addition, given that the sites of the compounds and borrow pits is NOT known. This calls into question the accuracy and validity of any survey work undertaken and therefore the validity of the findings presented. A&DCC disagree with ZoI identified for hydrological connectivity in relation to the two aspects of cumulative impact as stated within the scoping report. The ecological impacts of development sites should be assessed on a whole catchment, from source to outfall and beyond, survey. In respect of nature conservation, A&DCC welcome the Applicant's commitment to producing a BNG report, however, A&DCC have concerns regarding the impacts on irreplaceable habitat. These concerns relate to which species habitat will be lost and how the Applicant proposes to replace irreplaceable habitat. There have been some concerns raised in respect of this concept in regard to what it actually means in reality. Will badger setts be lost but the net gain be more deciduous woodland which is appreciated by squirrels? Or will the sea eagle bird strikes on the powerlines be compensated by bat	Ecology and Nature Conservation baseline studies have been carried out following relevant best practice guidance and where appropriate to do so NatureScot have been consulted on the approach undertaken. Further to this NatureScot are statutory consultees and have provided a response to the scoping report as can be found within this table. Baseline reporting can be found within **Volume 5**, **Appendix 8.3, 8.4, 8.5** and **8.9**, where methods and results can be found with associated mapping. Ecological surveys for the Proposed Development have been underway since Spring 2024 with teams of surveyors walking over the Proposed Development and in some cases alternative alignment options (options that at the time had not yet been ruled out in favour of a proposed alignment option). Surveyors have collected evidence of protected species presence through identification of field signs and shelters, as reported in this chapter and further detailed in **Volume 5, Appendix 8.4: Protected Species Technical Report**. Further to this, habitats along the alignment have been mapped in line with industry recognised habitat survey methods **Volume 5, Appendix 8.3: Habitat Technical Report**. By following industry recognised guidance, the results of surveys are considered robust and proportionate.

Consultee	Ecology and Nature Conservation Issue Raised	The Applicant Response / Action Taken
	boxes randomly placed along the pylon route? We remain unconvinced regarding BNG when ANY mention is made to impacting on irreplaceable habitat such habitats should be identified and excluded from encroachment by the development or by the enabling works for said development or any cumulative impact of this development and any other development (whether by the applicant or a third party). A&DCC do not agree with the methodology proposed given the degree of inaccuracy likely to be a consequence of the LoD and its impact on survey findings. A&DCC do not agree with the issues that are considered to be out of scope. A&DCC have serious concerns regarding the potentially critical cumulative impact of the development.	Accurate survey findings are presented within the technical appendices of this EIA Report specifically **Volume 5** and mapped within **Volume 3**. The Applicant recognises that an assessment can only be undertaken of elements where design is known. Where there is insufficient information at time of submission for elements such as borrow pits, separate planning applications for these works will be sought by the Principal Contractors. Should further consent applications be required, similar surveys will need to be undertaken to inform the applications. The ZoI for hydrological connectivity is considered proportionate to the development proposed and the associated risks related to its construction and operation. The ZoI for hydrological connectivity has been further refined from 2 km to 1 km since the production of the EIA Scoping Report, based on updated information from hydrological specialists and to maintain consistency with **Chapter 10: Water Environment** and **Volume 5, Appendix 8.7: Report to Inform Habitats Regulations Appraisal (HRA)**. The revised ZoI accounts for the dilution effects of pollutants such as silt as it migrates downstream and is cognisant of the potential sources of pollution arising from specific activities associated with the Proposed Development. Hydrological connectivity is not considered upstream. SEPA LUPS Guidance Note 31 has been used in respect to groundwater, to determine impacts up to 250 m from ecological features, this is further detailed within **Volume 5, Appendix 8.3: Habitat Technical Report**. In addition to the impact assessment to identify the impacts of the Proposed Development, a cumulative assessment has been undertaken to identify in combination effects of the Proposed Development with other developments in the planning system, as detailed in **Section 8.11** of this chapter and summarised in **Chapter 17: Cumulative Assessment**. Developments that are already constructed will form part of the baseline environment on which the assessment is based. The Applicant is committed to Net Gain on all projects with results published within a Biodiversity Net Gain report (**Volume 5, Appendix 8.8: BNG Report**). Through the routeing selection process (**Chapter 4: The Routeing Process and Alternatives**) and into the post consent detailed design, the

Consultee	Ecology and Nature Conservation Issue Raised	The Applicant Response / Action Taken
		Applicant aims to minimise the impacts of their developments on the environment; this approach includes minimising (where possible) impacts on “irreplaceable habitats”. Indeed, as these habitats cannot be replaced within the lifespan of the Proposed Development, they are reported on in an addendum to the BNG report (**Volume 5, Appendix 8.8: BNG Report**). Whilst “irreplaceable habitats” cannot be replaced it may in some circumstances be possible to provide habitat planting, which replicates the functionality of the habitat lost and provides connectivity to similar habitats, for example, planting woodland of a similar type to join fragmented pockets of woodland listed on the ancient woodland inventory (AWI). This, whilst not replacing the ancient woodland lost, provides habitat for the diversity of species which occupy that habitat. BNG is a purely habitat-based metric which does not (yet) consider the species which inhabit the habitats assessed. As such a net gain must be achieved by providing greater biodiversity value through habitat provision, effectively overcompensating for those habitats lost as detailed in **Volume 5, Appendix 8.8: BNG Report**. Mitigation measures proposed within this chapter (**Section 8.8**) are designed to mitigate specific effects resulting from the Proposed Development, so whilst bat boxes may be proposed to mitigate the loss of structures used by bats as roosts, it would not be appropriate to propose bat boxes to mitigate bird strikes, or woodland planting to mitigate the loss of protected species shelters - unless a direct link could be made between the identified impact and the proposed mitigation. The Applicant notes A&DCC’s position on the issues scoped out of the Ecology and Nature Conservation Assessment as detailed within the Scoping Report and reported in this table.
Golspie Community Council (GCC)	GCC understand there is deep local concern about the impact of the pylons on the immediate environment in terms of flora and fauna and believe the Applicant should make available results from all the surveys commissioned into wildlife and birds particularly across the whole area; not just those in the selected corridors.	The methods deployed when undertaking surveys and the results of surveys undertaken and used to inform this impact assessment are detailed within **Volume 5, Appendix 8.3, 8.4 and 8.9.** The impact assessment method is detailed within **Section 8.3**. Further to this specific detail on the method of EcIA is detailed within **Volume 5, Appendix 8.2: Ecology Assessment Methodology**. Within the impact

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	GCC suggest the criteria for choosing the organisations conducting such surveys and their impartiality must be accessible for public scrutiny to ensure they are unbiased and meet the highest scientific standards. GCC believe it is not possible for communities to comment effectively on the 'significance assessment' for the long list of designated sites, without a detailed set of standards against which the results will be analysed. GCC want to understand what mitigation measures will be taken to reduce the damage to fragile ecosystems and soils.	assessment (**Section 8.7**) detail on value of receptors and magnitude of impact are provided so readers can understand the process followed and justification for the values assigned. Mitigation measures proposed to mitigate impacts identified as a result of the impact assessment are detailed in **Section 8.8**.
Scottish Environment Protection Agency (SEPA)	SEPA highlight that Groundwater Dependent Terrestrial Ecosystems (GWDTE) are protected under the Water Framework Directive and that excavations and other construction works can disrupt groundwater flow and impact on GWDTE and existing groundwater abstractions. They state the layout and design of the development must avoid impacts on such areas. SEPA request a National Vegetation Classification (NVC) survey is submitted which includes the following information: • A set of drawings demonstrating all GWDTE and existing groundwater abstractions are out with a 100 m radius of all excavations shallower than 1 m and out with 250 m of all excavations deeper than 1 m and proposed groundwater abstractions. The survey needs to extend beyond the site boundary where the distances require it. • If the minimum buffers cannot be achieved, a detailed site specific qualitative and/or quantitative risk assessment will be required. Please refer to Guidance on Assessing the Impacts of Development Proposals on Groundwater Abstractions and Groundwater Dependent Terrestrial Ecosystems for further advice and the minimum information we require to be submitted. SEPA note that due to discrepancies in habitat definition and ambiguity in correspondence with NVC types they do not accept the use of The UK Habitat Classification System (UKHab) as an alternative to NVC.	**Chapter 8: Ecology and Nature Conservation** addresses issues in respect to GWDTEs and in respect to SEPA's area of interest. Through the routeing selection process (**Chapter 4: The Routeing Process and Alternatives**) and into the post consent detailed design, the Applicant aims to minimise the impacts of their developments on the environment balanced against constructability and safety issues. **Volume 5 Appendix 8.3: Habitat Technical Report**, details the habitat survey methodology, including the use of NVC, and baseline findings for the Proposed Development including mapped results of the potential GWDTEs identified (**Volume 3, Figure 8.5**). SEPA LUPS Guidance Note 31[3] has been used in respect to groundwater, to determine impacts up to 250 m from the Proposed Development corridor (generally assumed to be up to 100 m either side of the Proposed Alignment) this is further detailed within **Volume 5, Appendix 8.3: Habitat Technical Report**. **Chapter 8: Ecology and Nature Conservation** presents the results of the NVC survey for GWDTE. The assessment of the impacts of the Proposed Development on GWDTEs found during the baseline survey can be found in **Chapter 10: Water Environment**.

[3] Land Use Planning System SEPA Guidance Note 31 https://www.sepa.org.uk/media/144266/lups-gu31-guidance-on-assessing-the-impacts-of-development-proposals-on-groundwater-abstractions.pdf

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Royal Society for the Protection of Birds (RSPB) Scotland	RSPB believe that due to the location, large scale and timeline of the Proposed Development, there would be likely significant adverse impacts on habitats and species as well as significant effects on the qualifying interests of sites of national importance, SSSIs, and international importance. This includes extensive SACs, Ramsar sites, the Flow Country UNESCO World Heritage Site (WHS). As the Proposed Development is not directly connected with the management of any of the designated sites local to it, Scottish Ministers must, as the competent authority, make an Appropriate Assessment (AA) of the implications of the Proposed Development on the integrity of these sites in light of their site conservation objectives, as required by the Conservation of Habitats and Species Regulations 2017 (the 'Habitats Regulations'). RSPB Scotland recommends habitat surveys are undertaken along all proposed routes to inform the final alignment deviation choices. RSPB expect selection of the alignment of the Proposed Development be fully justified including where it coincides with designated sites and the consideration of alternatives are presented. RSPB support the Applicants commitment to assessment of the impacts on the WHS through completion of THCs toolkit. RSPB Scotland expects that protected sites including SACs, Ramsar sites and SSSIs are considered within the impact assessment. RSPB Scotland expect that an appropriate cumulative assessment is undertaken as part of the EIAR. RSPB Scotland believes that developments should leave nature in a better state than before and welcomes the requirement in Policy 3 of NPF4 that all developments must deliver biodiversity enhancement. The Proposed Development therefore needs to offer 'significant biodiversity enhancements' that can be 'secured within a reasonable timescale and with reasonable certainty' as required by policy 3iv) of NPF4. RSPB Scotland is pleased to read the Applicant's biodiversity ambition; however, any plans need to clearly set out what elements are proposed as mitigation and/or compensation and what is considered enhancement. RSPB Scotland does not believe that existing metrics, including DEFRA's BNG metric for England, represent the best approach for determining the most appropriate focus and location of enhancement, because they aren't designed to protect and invest in Scotland's nature restoration priorities. RSPB Scotland believes that the best method to ascertain the most appropriate type and location of biodiversity enhancement is to use a qualitative approach, administered by	The Applicant has undertaken an extensive alignment and route selection process to minimise the environmental impacts, whilst balancing these with the technical constraints associated with constructability and safe operation of the Proposed Development. Part of this process has been the routeing and alignment selection process and micro-siting of towers to achieve a sufficient standoff from protected sites to minimise potential impacts from construction and operation. Details of the route and alignment selection process are provided in **Chapter 4: The Routeing Process and Alternatives**. Where it has not been possible to avoid impacts on protected sites and the World Heritage Site, the appropriate reporting of impacts has been undertaken. In the case of SACs, an HRA screening exercise has been undertaken to identify Likely Significant Effects (LSEs). Where LSEs are identified or cannot be ruled out these have been subject to Appropriate Assessment. The Report to Inform HRA can be found in **Volume 5, Appendix 8.7**. As detailed in the Scoping Report, the World Heritage Site toolkit as issued by THC has been completed for Criteria ix, for which the site has been inscribed (**Volume 5, Appendix 8.10: The Flow Country World Heritage Site (WHS) Impact Assessment Report**). The themes raised within the toolkit have been identified in the appropriate chapters of this EIA Report, including but not limited to; this chapter (**Chapter 8**), **Chapter 10: Water Environment** and **Chapter 11: Geological Environment**. Habitat surveys have been undertaken along the Proposed Alignment and are reported within **Volume 5, Appendix 8.3**: **Habitat Technical Report**, impacts on sensitive habitats have been assessed in **Section 8.7** and where designated sites have habitat features subject to impact these are also assessed in **Section 8.7**. Following the impact assessment process in this chapter and in collaboration with **Chapter 7: Landscape and Visual**, appropriate landscape and ecological mitigation has been developed as described in **Section 8.8**. A cumulative assessment has been undertaken and is presented in **Section 8.11**, this considers impacts common to given ecological

Consultee	Ecology and Nature Conservation Issue Raised	The Applicant Response / Action Taken
	ecological experts with an understanding of the ecology of the site. Using an EIA-like or ecological assessment process to assess the scale and value of biodiversity lost, the ecological context and the relevant opportunity for enhancement means that enhancement measures can be designed to maximise value. It is RSPB Scotland's belief that enhancements must be measurable, with the required amount of enhancement being proportionate to the scale, impact, and duration of the development.	receptors from a range of EIA developments currently within the planning system, and within an appropriate ZoI. A summary of the cumulative assessment for all technical chapters is presented in **Chapter 17: Cumulative Assessment**. Alongside this EIA, a BNG report (**Volume 5, Appendix 8.8: BNG Report**) has been developed to identify and quantify the value of the losses of habitats along the Proposed Alignment. Whilst the metric used to quantify and evaluate Net Gain of Biodiversity Units (BU) by the Applicant is based on the DEFRA metric it has been adjusted to make it more relevant to habitats found in Scotland. The BNG assessment has been undertaken by competent professionals with experience delivering BNG assessments on similar types of development (**Volume 5, Appendix 8.8: BNG Report**). In line with CIEEM's EcIA guidelines mitigation (and by association enhancement) success must be measurable. Mitigation / enhancement measures are proportionate to the scale, impact, and duration of the Proposed Development, in the context of the requirements of NPF4.
Kyle of Sutherland District Salmon Fishery Board (KSDSFB)	KSDSFB is increasingly critical of the EIA process with a number of areas where it feels there are shortfalls. Further to this KSDSFB are critical of the enforcement of planning conditions with the belief it is often too weak to protect the environment and that by the time any remedial action is initiated in response to issues, significant damage has already occurred. KSDSFB highlight the Atlantic salmon as endangered in Great Britain and suggest it features as a key potential receptor as part of any assessment, emphasising the perceived fragility of salmon populations, and the aquatic environment in general. It is KSDSFB's expectation that any environmental assessment includes: • Fish habitat data in any potentially affected watercourse both within and out with the physical boundary of the Proposed Development. • Fish presence, distribution and abundance data in all potentially affected watercourses. • Macro-invertebrate data in all potentially affected watercourses. • Freshwater pearl mussel (FWPM) abundance and distribution data in all potentially affected watercourses.	The Applicant has conducted an extensive route and alignment selection process to minimise the environmental impacts whilst balancing these with the technical constraints associated with constructability and safe operation of the Proposed Development. Part of this process has been the micro-siting of towers to achieve a sufficient standoff from watercourses so as to minimise potential impacts from construction and operation and in line with SEPA's Recommended Riparian Corridors. Details of the site selection process are provided in **Chapter 4: The Routeing Process and Alternatives**. Further details of the Water Environment impact assessment are provided in **Chapter 10: Water Environment**, where impacts associated with hydrology and water quality are assessed. This chapter reports on the ecological impacts undertaken in line with the CIEEM Guidelines for EcIA in the UK and Ireland, an industry recognised standard for EcIA. In the context of the ecology of the rivers affected by the Proposed Development a 1 km ZoI has been assessed (in line with the **Chapter 10: Water Environment)**, in acknowledgement of potential downstream effects. Within the ecology chapter, salmon have been identified as a key ecological receptor on account of their international

Consultee	Ecology and Nature Conservation Issue Raised	The Applicant Response / Action Taken
	• Hydrology data, including for any artificial drainage watercourses. Any artificial or modified drainage channels need to be fully mapped as part of the assessment process. • Water quality data (i.e. turbidity, pH, dissolved organic carbon, acidneutralising capacity etc.) in all potentially affected watercourses. From the maps provided it would appear that the proposal has the potential to impact Kyle of Sutherland watercourses and we anticipate that the applicant will take full cognisance of this.	protection, pressures their populations face in Scotland and their status as qualifying features of designated sites that coincide or are adjacent to the Proposed Development. An appraisal of freshwater crossing points has been undertaken in **Volume 5, Appendix 8.5: Watercourse Crossing Ecological Appraisal** to identify in-stream works to be undertaken and the likely effects these will have on fish (including salmon) and freshwater pearl mussels, in particular. This has been informed through desk-based appraisal looking at the crossing locations and types in the context of the species recorded inhabiting those watercourses. The desk-based appraisal included consultation with fisheries organisations along the route of the Proposed Development and open-source online data, looking at fish habitat, presence and distribution. Further to this, to inform impacts on FWPM's a proportionate approach to FWPM surveys was undertaken across the Proposed Development in consultation with, and under licence issued by NatureScot. The finding of the surveys are detailed in a confidential appendix (**Volume 5, Appendix 8.9: Freshwater Pearl Mussel Survey Report (Confidential)**) due to the sensitivity of the species and their susceptibility to persecution. At this stage in the Proposed Development , macro-invertebrate data has not been collected but may be included, where appropriate, as part of a suite of construction phase monitoring.
Woodland Trust (WT)	WT would like to ensure that ancient woodland, and ancient and veteran trees, are appropriately considered as part of the EIA for this development. WT consider that the development has the potential to give rise to significant impacts on several areas of woodland designated on NatureScot's Ancient Woodland Inventory as provided. WT have specified the AWI classification of the woodlands, in addition to whether they are recorded on the Native Woodland Survey of Scotland. It is not clear to WT whether it is the applicant's intention to consider woodlands adjacent to the proposed boundary in addition to those situated within the boundary. In view of the potential for root encroachment and indirect impacts where woodlands are in close proximity to the Proposed Development, WT consider that the assessment should include woodlands that are within 30 metres of the Proposed Development boundary. WT note the applicant's reference to identifying woodlands that are "within the SSEN Transmission definition of irreplaceable habitat" and that only ASNO designated woodlands	The Applicant has identified a Proposed Alignment as illustrated in **Volume 3, Figure 3.1: The Proposed Development**, following a thorough route and alignment selection process (**Chapter 4: The Routeing Process and Alternatives**). One element considered during this process was the location of woodland listed on the AWI and ancient, veteran or over-mature trees. Applied to the alignment is a buffer of approximately 100 m, an area for which, if necessary and where justified the alignment may be micro sited within the LoD. Where no unforeseen constraints arise, it is considered that the Proposed Development will be built as presented. As presented within this chapter, a Proposed Development corridor of up to 100 m either side of the Proposed Alignment has been applied (greater in some locations as necessary to accommodate specific infrastructure), and as such a 100 m

Consultee	Ecology and Nature Conservation Issue Raised	The Applicant Response / Action Taken
	are considered irreplaceable habitat. As detailed within the AWI, LEPO woodland can develop important characteristics and be considered as rich as ancient woodland. WT consider that, where LEPO woodland sites are also recorded on the Native Woodland Survey of Scotland (NWSS), it is likely that such sites will have a majority native canopy cover and should therefore be protected in line with national planning policy. The list of woodlands WT provided include LEPO designated woodland that is also on the NWSS. The Scoping Report links to further detail in the applicant's 'BNG Toolkit'. WT note that the Toolkit refers to the need for an initial assessment of woodlands on the AWI by a suitably qualified ecologist to determine whether there is reason to doubt the validity of the woodland's classification, followed if necessary, by a specialist ecological assessment to determine whether the woodland should be considered ancient, and thus irreplaceable habitat. The Toolkit also refers to separate assessments for LEPO woodland to determine whether they can be considered as ecologically rich as ancient woodland. The Toolkit does not appear to address the approach to assessing Roy woodland. WT note the presence of four trees within the site boundary which are registered on the Ancient Tree Inventory as provided. WT consider that the applicant should ensure that the Proposed Development does not adversely impact ancient, veteran or over-mature trees.	study area for the Proposed Development has been considered. Further to this the Applicant has an operational responsibility to maintain a safe operational area; this take the form of an Operational Corridor (OC), that is an area kept clear of trees to prevent damage to the line. The OC is determined by the upper limits of the tree species height adjacent to the line, with the OC adjacent to coniferous plantation being up to 45 m either side of the line. To manage tree removal and prevent damage to trees to be retained following construction, the Applicant has developed a GEMP for forestry works. In respect to the protection of retained trees the Applicant's GEMP for forestry states the following; • Avoid damaging those standing trees which are to be retained. • A root protection zone should be identified and enforced around all trees to remain on site that are within close proximity to the works area to ensure that no accidental damage is caused to the tree roots. Root protection zones should be defined in line with the British Standard 5837. • No material arising from site works are to be stored within the root protection zone or stacked against trees. The Applicant recognises that whilst category 1a and 2a AWI are considered irreplaceable, all listed AWI woodland does have inherent value in respect to biodiversity and as such are considered within this chapter. The Applicant also recognises the value of woodland listed on the NWSS, and where this coincides with AWI it is likely such sites will have a majority native canopy cover; the inclusion of such sites as listed in WT's response is welcomed and has been used to inform the assessment (**Section 8.7**). The Applicant's BNG toolkit recognises ancient and veteran trees in addition to the categories of woodland listed on the AWI, with appropriate consideration also given to Roy woodland (**Section 8.7**) and within the BNG Report (**Volume 5, Appendix 8.8**). Further arboricultural assessment and other forestry matters are assessed within **Chapter 13: Forestry**.

Issues Scoped out of Assessment at Scoping

8.3.9 The following section summarises the scoping exercise undertaken with the Scottish Ministers through submission of a Scoping Report and the subsequent delivery of their Scoping Opinion in response.

8.3.10 Ecology and nature conservation features identified within the Scoping Chapter could be affected by lighting, noise, dust, visual disturbance, and pollution (associated with direct release of construction related contaminants to habitats, in particular aquatic / wetland habitats) caused by construction activities. It is anticipated that these issues will be controlled through implementation of embedded mitigation (**Volume 5, Appendix 8.2: Ecology Assessment Methodology**). It is considered that there is no potential for significant residual effects, and these are scoped out of the assessment. No further assessment of disturbance impacts on ecological and nature conservation receptors is proposed outside of protected species at their place of shelter.

8.3.11 Wetland habitats identified as potential GWDTEs during habitat surveys have been subject to further assessment on the basis of the hydrogeological conductivity calculations undertaken as part of the Water Environment assessment (**Chapter 10: Water Environment**). Impacts on any confirmed GWDTEs are assessed as part of **Chapter 10: Water Environment** and therefore scoped out of this chapter.

8.3.12 Hydrological connectivity to sites designated for nature conservation is not expected to exceed 2 km based on distances identified in the hydrology assessment (**Chapter 10: Water Environment, Section 10.3)**; as such designated sites beyond this threshold are scoped out of the assessment on the grounds of hydrological connectivity.

8.3.13 Due to the nature of the works, impacts on protected sites designated only for habitat interest features, at distances of more than 250 m from the Proposed Development are scoped out in line with SEPA guidance[4] due to a lack of impact pathway. Impacts on peat and peatland will be covered in the Geological Environment assessment (**Chapter 11: Geological Environment**). Similarly, sites designated for ornithological features will be covered in the Ornithology assessment (**Chapter 9: Ornithology**).

8.3.14 Due to the nature of the works, impacts to ecology and nature conservation via emissions to air have been scoped out on account of the embedded mitigation detailed in **Volume 5, Appendix 8.2: Ecology Assessment Methodology**, controlling e.g. dust within the construction footprint. Operation of the Proposed Development will not generate emissions to air on account of its purpose being electricity transmission alone.

Issues Scoped into Assessment at Scoping

8.3.15 Potential adverse effects identified as a result of the desk-based study:

- Loss of habitat within nationally and internationally designated sites leading to a loss of condition or a reduction of available habitat for cited species;
- Direct mortality to fauna through e.g. construction traffic collisions and other construction related operations (e.g. open trenches and woodland felling operations);
- Disturbance / displacement of protected species and their places of shelter through construction related operations;
- Habitat loss both temporary and permanent associated, for example, with temporary and permanent infrastructure;

[4] SEPA (2024) Guidance on Assessing the Impacts of Developments on Groundwater Dependent Terrestrial Ecosystems.

- Habitat fragmentation and severance e.g. through removal of woodland listed on the AWI creating isolated and fragmented pockets of woodland. Effects may be temporary and permanent associated, for example, with temporary and permanent infrastructure;
- Hydrological change resulting in drying of habitats, or excessive wetting of dryer habitats; and
- Biosecurity risks (spread of invasive species and transmissible plant and animal diseases) resulting in biodiversity loss from the site due to indirect mortality or species being out competed.

Sensitive Ecological Receptors Identified at Scoping

8.3.16 The key sensitive receptors associated with this chapter of this EIA Report are:

- Nationally and internationally designated sites and their associated features;
- Habitats of value including Annex 1 habitats, those identified as GWDTEs or those classed as irreplaceable (DEFRA guidance[5]) such as grade 1a and 2a AWI; and
- Species protected under National and International law (mammals (including bats) and herptiles) and where relevant those listed within the Scottish Biodiversity List and Highland Biodiversity Action Plan.

Post-Scoping Refinements to Scope

8.3.17 As further survey and assessment were progressed, following the scoping exercise, new information came to light leading to the need to refine the scope of assessment, the new information and associated changes are summarised below.

Statutory Designated Sites

- Hydrological connectivity (downstream) has been reduced to 1 km to bring in line with best practice for hydrological impact assessment (**Chapter 10: Water Environment**) and maintain consistency of approach across this EIA.
- Effects upon freshwater pearl mussel with regards to the Caithness and Sutherland Ramsar are scoped out of this assessment. Following further investigation, mussel populations were found to be linked to the River Navar SAC and the River Borgie respectively. The River Navar is located 40 km to the north west of the Proposed Development with no hydrological connection; the River Borgie is located 50 km west of the Proposed Development with no hydrological connection. Therefore, no effects to the freshwater pearl mussel populations within the Caithness and Sutherland Ramsar are likely.

Terrestrial Habitats

- Construction impacts on habitats that are assessed as low conservation value and / or are a common habitat types are scoped out of this assessment, as it is unlikely that impacts on these habitats will be significant in cognisance of CIEEM methodology. These habitats include (but are not limited to): conifer plantation, clear-fell, dense / continuous scrub, upland acid grassland, modified grassland, marshy grassland, bracken, tall ruderal and non-ruderal, other exposure – acid / neutral and bare ground. Loss of these habitats will be addressed through the Applicant's BNG assessment for the Proposed Development in order to achieve a biodiversity net gain.
- Impacts to GWDTEs are scoped out from the Ecology and Nature Conservation assessment (paragraph 8.4.14), however they are assessed in **Chapter 10: Water Environment** and associated **Volume 5, Appendix 10.3 GWDTE Assessment**. This change to scoping arises as the impact is characterised by

[5]DEFRA (2024) https://www.gov.uk/guidance/irreplaceable-habitats [Accessed June 2025]

changes to groundwater flow. The results of the NVC survey to inform the baseline are presented in **Volume 5, Appendix 8.3: Habitats Technical Report**.

Aquatic Habitats and Species

- The upper limit of SEPA's Recommended Riparian Corridor maps has been used as the basis to provide a buffer beyond which potential effects upon aquatic habitats and species are unlikely. Therefore, where no works are required within 30 m of the top of the banks (of both rivers and lochs), including all temporary, permanent works and any vegetation management works, it is understood that these potential effects will be managed and risk minimised through standard construction methods and guidance, routinely deployed on the Applicant's projects (Embedded Mitigation Measure paragraph 8.6.3). As such impacts to watercourses (and lochs) where works are situated out with 30 m of the banks are scoped out of this assessment. Otters are considered within the protected species section of the assessment and not assessed as an aquatic feature.
- *Oreodytes alpinus* is a nationally rare water beetle and is an interest feature of the Caithness and Sutherland Peatlands Ramsar. Effects to the water beetle *Oreodytes alpinus* have been scoped out of this assessment due to the species only being recorded upstream of projected crossing points, except for a single record near Dunbeath. For the population near Dunbeath, it is understood that effects to watercourses will be managed through mitigation by design (paragraph 8.6.4) e.g. siting Proposed Development infrastructure away from watercourses (including lochs) and best practice construction methods and guidance, routinely deployed on the Applicant's projects (Embedded Mitigation Measure paragraph 8.6.3). As such impacts on *Oreodytes alpinus* are scoped out of this assessment.

Protected Species

- Direct mortality of protected species through construction related operations and traffic movements will be managed through embedded mitigation detailed within the SPPs, for example capping of pipes, escape routes from excavations; these will be implemented through the CEMP and CTMP which will manage items such as traffic movements and speed limits when accessing work sites. As such direct mortality of protected species (excluding amphibians and reptiles) is scoped out of this assessment.
- A scheduled programme of works will mean works do not take place across the whole site simultaneously and construction works in a given locality will be temporary and of relatively short duration, approximately three months, allowing species to move around work areas, whilst remaining within their territory. As such barrier and disturbance effects (except in relation to protected species shelters) are scoped out of this assessment. The assumption species can move around work sites but within their territory arises as a result of more detailed construction information being released post scoping.
- Badgers have a wide-ranging diet, which they adapt throughout the year to utilise a range of food sources often occupying large territories. Due to the limited habitat loss to be felt by individual social groups, badgers' loss of foraging habitat has been scoped out of this assessment. Throughout the construction and operational phases, badgers will be able to move throughout the wider landscape, with works restricted to tower compounds and construction activities not being present throughout the whole alignment at once; as such, barrier effects are scoped out of this assessment. The assumption that habitat losses for badgers will be insignificant arises as a result of more detailed construction information being released.
- Species where legal protections are not directly related to construction activities, for example, protections against trade (i.e. sale, barter, exchange, transport for sale, or advertise for sale or to buy) including but not limited to, common amphibians, are scoped out of this assessment.

Other

- Management felling areas lie outwith the OC and thus the Applicant has no mechanism for felling and / or replanting these areas as part of any Section 37 consent. However, the Applicant is committed to liaising with landowners to agree that these areas be felled to mitigate the risk of forest damage through

windthrow. The felling of these areas will require the agreement of the landowner, and will be delivered under a felling license to be applied for by the landowner. The replanting of areas felled on account of management felling (only), are therefore considered to be included as part of the embedded mitigation for the Proposed Development. Where management felling is to be undertaken by the Applicant on behalf of the landowner all relevant SPPs and GEMPs will be adhered to.

Study Area

8.3.18 The Proposed Development extends approximately 173 km south from the hamlet of Spittal in Caithness to the village of Beauly in Inverness-shire, within The Highland Council (THC) area of northern Scotland. The Proposed Development has been split into five sections as illustrated in **Chapter 3: Description of the Proposed Development**, **Volume 3, Figure 3.1: The Proposed Development** and listed below:

- Section A: Spittal to Brora;
- Section B: Brora to Loch Buidhe;
- Section C: Loch Buidhe to Dounie;
- Section D: Dounie to Near Strathpeffer; and
- Section E: Near Strathpeffer to Beauly.

8.3.19 The Study Area encompasses the Proposed Development footprint plus a 2 km area within which to identify potential effects.

8.3.20 The extent of the ecological survey areas throughout the Proposed Development varies depending on survey and species-specific buffers as described in **Volume 5, Appendix 8.3: Habitat Technical Report** and **Volume 5, Appendix 8.4: Protected Species Technical Report** and shown on **Volume 3, Figure 8.2 and 8.4**.

Zone of Influence

8.3.21 The ZoI for a project is the area over which ecological features may be affected by biophysical changes as a result of the proposed project and associated activities. This is likely to extend beyond the project site, for example where there are ecological or hydrological links beyond the site boundaries. A ZoI has been identified over which impacts on sensitive ecological receptors have been considered. The ZoI varies based on the perceived impact pathways identified as detailed below:

- Hydrological connectivity (surface water) downstream, is limited to 1 km, aligned with best practice measures outlined in **Section 10.3** of **Chapter 10: Water Environment**;
- Groundwater connectivity is considered out to 250 m as this is the limit of extent to which GWDTEs are considered to be impacted in line with SEPA guidance[6]; and,
- Impacts associated with construction related emissions to air and noise will be controlled to avoid significant effects through standard measures detailed within **Chapter 15: Noise and Vibration**, the dust GEMP (**Volume 5, Appendix 3.3: GEMPs**) and the CEMP, and are therefore only considered with 30 m of work areas.

[6] Due to the potential for excavation required for the Proposed Development to be greater than 1 m deep. SEPA (2014). *Land Use Planning System (LUPS) SEPA Guidance Note 31: Guidance on Assessing the Impacts of Windfarm Development Proposals on Groundwater Abstractions and Groundwater Dependent Terrestrial Ecosystems*. SEPA, North Lanarkshire, Scotland. Available online [Accessed March 2025]: https://www.sepa.org.uk/media/143868/lupsgu31_planning_guidance_on_groundwater_abstractions.pdf

Determining Baseline

8.3.22 In order to characterise the ecological baseline for this EIA Report, a combination of desk-based study and field surveys have been used in addition to feedback from consultees. Detailed methodologies are described in **Volume 5, Appendix 8.3: Habitat Technical Report** and **Volume 5, Appendix 8.4: Protected Species Technical Report**.

Methodology for the Assessment of Impacts

8.3.23 This chapter has been completed in accordance with the CIEEM Ecological Impact Assessment Guidance. The assessment uses the ecological baseline to identify the sensitive ecological receptors that are of importance based on their national, regional, and local conservation status, and population / assemblage trends and other relevant criteria (including size, naturalness, rarity, and diversity). The full impact assessment methodology is detailed within **Volume 5, Appendix 8.2: Ecology Assessment Methodology** and summarised below.

8.3.24 The approach to EcIA outlined in the CIEEM Guidance avoids and discourages the use of a matrix approach and categorisation, in an effort to avoid spurious quantification, in which numerical scores or significance rankings / categories are used without a clear definition of the criteria and thresholds that underpin them. Whilst a matrix approach is commonly used EIA by disciplines, other than ecology, to assign significant residual effects to categories (e.g. major, moderate, minor), the approach taken for ecology is to identify effects that are either 'not significant' or 'significant' at a defined geographic level.

8.3.25 Sensitive ecological receptors identified at scoping were initially subject to valuation. Assignment of levels of importance for designated sites is guided by their protection level whereas, habitats and species valuation is based on professional judgement informed by factors detailed in **Volume 5, Appendix 8.2**. A receptor's value (as used in the impact assessment) is rated high, medium, low or negligible.

8.3.26 Impacts on sensitive ecological receptors are then characterised identifying whether an impact is direct or indirect, permanent or temporary. The magnitude of effect is then assigned a value of high, medium, low or negligible.

8.3.27 The significance of effects has been determined using standard impact assessment methods and criteria (see below):

- the magnitude of both positive and negative effects, as determined by intensity, frequency and by the extent of the effect in space and time;
- the vulnerability of the habitat or species to the changes likely to arise from the Proposed Development;
- the ability of the habitat, species, or ecosystem to recover, considering both fragility and resilience;
- the viability of component ecological elements and the integrity of ecosystem function, processes, and favourable condition;
- value within a defined geographic frame of reference (e.g., UK, national, regional, local);
- the biodiversity value of affected species, populations, communities, habitats, and ecosystems, considering aspects such as rarity, distinct subpopulations of a species, habitat diversity and connectivity, species-rich assemblages and species distribution and extent;
- designated sites, and where a site has multiple designations the effects on the features of each designation; and
- protected species status.

8.3.28 Value and magnitude of effect are weighed using professional judgement and impacts are reported as either 'significant' at a particular geographical level (e.g. internationally, nationally, locally), or 'not significant'. A

'significant effect' is an effect "…*that either supports or undermines biodiversity conservation objectives for important ecological features, or for biodiversity in general*."[7]

8.3.29 Where significant effects are predicted, additional mitigation is applied to reduce or eliminate effects (where possible). Following application of mitigation, effects are reappraised and residual effects reported. This approach strives to make the EcIA more transparent and demonstrate the adequacy / necessity of proposed additional mitigation.

8.4 Baseline Conditions

8.4.1 The following sets out the baseline conditions for each section of the Proposed Development, describing statutory and non-statutory designated sites, protected and invasive species, and terrestrial and aquatic habitats, including woodlands listed on the AWI. Reference should also be made to **Volume 3, Figures 8.1** to **8.4** in respect of the location of the sensitive receptors described.

Desk-based Study Results

Statutory Designated Sites

8.4.2 Statutory designated sites with biological feature(s) located within 1 km of each section of the Proposed Development are considered relevant to the assessment in this chapter and are detailed in **Table 8.3 and Figure 8.1**. Designated sites with no perceived ZoI connecting them to the Proposed Development have been excluded from **Table 8.3**, however, these are presented within **Appendix 8.4: Protected Species Technical Report**. Sites with ornithological features are presented and assessed in **Chapter 9: Ornithology**; those of geological significance are presented and assessed in **Chapter 11: Geological Environment**.

Table 8.3: Statutory Designated Sites Within 1 km of Sections A, B, C, D, and E.

Site Name	Approximate Distance to Proposed Development	Qualifying Interests / Notified Natural Features	Connectivity with Proposed Development
Section A			
Berriedale and Langwell Waters SAC	0 m	Qualifying Interests: • Atlantic salmon	The Proposed Development passes through this designated site and is therefore likely directly connected to it.
Caithness and Sutherland Peatlands SAC	0 m	Qualifying Interests: • Blanket bog • Depressions on peat substrates • Otter • Acid peat-stained lochs • Wet heath • Clear water lakes / lochs • Marsh saxifrage • Very wet mires	The Proposed Development passes through this designated site and is therefore likely directly connected to it.

[7] CIEEM (2024). GUIDELINES FOR ECOLOGICAL IMPACT ASSESSMENT IN THE UK AND IRELAND Terrestrial, Freshwater, Coastal and Marine https://cieem.net/wp-content/uploads/2018/08/EcIA-Guidelines-v1.3-Sept-2024.pdf

Site Name	Approximate Distance to Proposed Development	Qualifying Interests / Notified Natural Features	Connectivity with Proposed Development
River Thurso SAC	653 m	Qualifying Interests: • Atlantic salmon	This designated site is located within 1 km of the Proposed Development and may be hydrologically connected through the Burn of Tacher.
Caithness and Sutherland Peatlands Ramsar Site	0 m	Interest Features: • Blanket Bog • Mire • Oligotrophic lochs in addition to dystrophic lochs, lochans & pools, and wet heath • *Sphagnum lindbergii* and *S. majus*. (moss species) • Bog orchid • *Oreodytes alpinus* (water beetle) • Otter • Freshwater pearl mussel.	The Proposed Development passes through this designated site and is therefore likely directly connected to it.
Dunbeath Water SSSI	0 m	Notified Natural Features: • Upland birch woodland	The Proposed Development passes through this designated site and is therefore likely directly connected to it.
Langwell Water SSSI	0 m	Notified Natural Features: • Upland birch woodland	The Proposed Development passes through this designated site and is therefore likely directly connected to it.
Shielton Peatlands SSSI	0 m	Notified Natural Features: • Blanket bog	The Proposed Development passes through this designated site and is therefore likely directly connected to it.
Berriedale Water SSSI	0 m	Notified Natural Features: • Upland birch woodland	The Proposed Development passes through this designated site and is therefore likely directly connected to it.
World Heritage Sites Scotland: The Flow Country	0 m	Inscribed under criterion ix as an outstanding example representing significant on-going ecological and biological processes in the evolution and development of terrestrial, fresh water, coastal and marine ecosystems and communities of plants and animals. Attributes under this criterion include; • a) most extensive near continuous example of natural, actively accumulating, blanket bog ecosystem found globally.	The Proposed Development passes through this designated site and is therefore likely directly connected to it.

Site Name	Approximate Distance to Proposed Development	Qualifying Interests / Notified Natural Features	Connectivity with Proposed Development
		• b) climatic, topographic gradients and geological diversity: bog macroform diversity. • c) archive it stores (4th dimension). • d) natural laboratory – ongoing scientific and educational use. • e) carbon sequestration and storage. • f) water filtration and the impact on the water quality of associated riverine habitats.	
Section B			
Mound Alderwoods SAC	4 m	Qualifying Interests: • Alder woodland on floodplains	This designated site is located within 250 m of the Proposed Development and may be connected to it through groundwater.
Dornoch Firth and Loch Fleet Ramsar Site	4 m	Interest Features: • Wetland types: Mound Alderwoods - estuarine alder woodland • Estuaries • Sand dunes • Vascular plants: Baltic rush; Seaside centaury; and Dwarf eelgrass and eelgrass. • Mammals: harbour seal; and otter.	This designated site is located within 250 m of the Proposed Development and may be connected to it through groundwater.
Mound Alderwoods SSSI	4 m	Notified Natural Features: • Wet woodland • Intertidal marine habitats and saline lagoons.	This designated site is located within 250 m of the Proposed Development and may be connected to it through groundwater.
Strathfleet SSSI	0 m	Notified Natural Features: • Upland oak woodland • Vascular plant assemblage	The Proposed Development passes through this designated site and is therefore likely directly connected to it.
Carrol Rock SSSI	14 m	Notified Natural Features: • Upland birch woodland	This designated site is located within 250 m of the Proposed Development and may be connected to it through groundwater.
Section C			

Site Name	Approximate Distance to Proposed Development	Qualifying Interests / Notified Natural Features	Connectivity with Proposed Development
River Oykel SAC	0 m	Qualifying Interests: • Freshwater pearl mussel • Atlantic salmon.	The Proposed Development passes through this designated site and is therefore likely directly connected to it.
Kyle of Sutherland Marshes SSSI	0 m	Notified Natural Features: • Flood-plain fen • Wet woodland • Vascular plant assemblage	The Proposed Development passes through this designated site and is therefore likely directly connected to it.
Section D			
Allt nan Caorach SSSI	0 m	Notified Natural Features: • Upland birch woodland • Subalpine dry heath	The Proposed Development passes through this designated site and is therefore likely directly connected to it.
Section E			
No designated sites have been identified within a ZoI of Section E.			

Non-statutory Designations

8.4.3 No non-statutory designated sites were identified within 1 km of any sections of the Proposed Development.

Ancient Woodland

8.4.4 Ancient woodland is defined as currently wooded land that has been continually wooded since at least 1750. It is not related to the age of the trees that are currently growing there – they do not have to be ancient or elderly; it is the historical continuity of the woodland habitat that makes a woodland ancient. The AWI holds information on the provisional location and extent of ancient woodland within Scotland, categorised as follows:

- **Ancient Woodland (1a and 2a)** - Interpreted as semi-natural woodland from maps of 1750 (1a) or 1860 (2a) and continuously wooded to the present day. If planted with non-native species during the 20th century they are referred to as Plantations on Ancient Woodland Sites (PAWS).
- **Long-established woodlands of plantation origin (LEPO) (1b and 2b)** - Interpreted as plantation from maps of 1750 (1b) or 1860 (2b) and continuously wooded since. Many of these sites have developed semi-natural characteristics, especially the oldest stands, which may be as rich as ancient woodland.
- **Other woodlands on Roy maps (3)** - Shown as un-wooded on the 1st Edition of the Ordnance Survey maps (produced in circa 1850) but as woodland on the Roy maps (produced in circa 1750). Such sites have, at most, only had a short break in continuity of woodland cover and may still retain features of ancient woodland.

8.4.5 Sites listed on the AWI[8] within 250 m (to account for groundwater impacts) of the Proposed Development are detailed in **Table 8.4**, where a tick indicates presence, and a cross indicates absence. Categories of woodland not found in proximity to the Proposed Development (Category 1b and 3) are excluded from **Table 8.4**. These sites are mapped in **Volume 3, Figure 8.1**.

[8] https://data.gov.uk/dataset/c2f57ed9-5601-4864-af5f-a6e73e977f54/ancient-woodland-inventory-scotland

Table 8.4: AWI Sites Present Within 250 m of the Proposed Development

AWI Category	Section				
	A	B	C	D	E
1a – Ancient (of semi-natural origin)	✓	✓	✓	✓	✓
2a – Ancient (of semi-natural origin)	✓	X	✓	X	✓
2b – Long-established (of plantation origin)	✓	X	✓	✓	✓

Aquatic Habitats

8.4.6 There are 19 surface water catchments within the Study Area (**Volume 5, Appendix 8.5: Watercourse Crossing Ecological Appraisal**), which are traversed by the Proposed Development. Each of these catchments are classified by SEPA as part of their Water Framework Directive (WFD) classification[9]. The Proposed Development will feature a total of 175 proposed watercourse crossings of which 84 would be permanent access tracks and 91 temporary access tracks. **Table 8.5** summarises the surface water catchments which are traversed by the Proposed Development in each section; as well as detailing the number of temporary and permanent watercourse crossings in each section. Some river catchments will be affected more than others, but **Table 8.5** simply summarises the catchments affected and total number of crossings in each section, with full details of the surface water catchments affected found in **Section 10.4** of **Chapter 10: Water Environment**, with the position of these catchments relative to the Proposed Development shown on **Volume 3, Figure 10.3: Surface Water Catchments.** Detailed information on watercourse crossings is found in **Volume 5, Appendix 10.1: Schedule of Permanent Watercourse Crossings** and **Volume 5, Appendix 8.5: Watercourse Crossing Ecological Appraisal.**

Table 8.5: Surface Water Catchments and Number of Watercourse Crossings

Surface Water Catchment	Number of Watercourse Crossings and Description of Duration (Temporary / Permanent)
Section A	
River Thurso	This section will feature 66 watercourse crossings of which 15 are permanent and 51 are temporary.
Wick River	
Wick Coastal	
Dunbeath Water	
Berriedale Water	
Brora Coastal	
River Helmsdale	
Section B	
Brora Coastal	This section will feature 45 watercourse crossings of which 15 are permanent and 30 are temporary.
River Brora	
River Fleet	
Section C	

[9] www.sepa.org.uk/data-visualisation/water-environment-hub/ [Accessed April 2025]

Surface Water Catchment	Number of Watercourse Crossings and Description of Duration (Temporary / Permanent)
River Fleet	This section will feature four watercourse crossings of which two are permanent and two are temporary.
Dornoch Central	
River Shin	
Dornoch Firth	
River Carron	
Section D	
River Carron	This section will feature 53 watercourse crossings of which 45 are permanent and eight are temporary.
Dornoch Coastal	
River Alness	
River Glass	
Cromarty Coastal	
Section E	
Cromarty Coastal	This section will feature seven watercourse crossings, all of which are permanent.
River Conon	
River Beauly	

Protected Species

8.4.7 Data from NatureScot and Highland Biological Recording Group (HBRG) obtained as part of the desk study include protected species recorded in the last 15 years within 2 km of the Proposed Development, shown in **Table 8.6** by section. Species included are protected through European or national legislation or are species listed on the Scottish Biodiversity list or Highland Local Biodiversity Action Plan. Detailed interpretation of the results can be found in **Volume 5, Appendix 8.4: Protected Species Technical Report** and **Volume 3, Figure 8.4**.

Table 8.6: Protected Species Presence / Absence from Desk-based Study Results

Species		Section				
		A	B	C	D	E
Mammals	Badger	✓	✓	✓	✓	✓
	Brown hare	X	X	✓	✓	✓
	Mountain hare	X	✓	X	✓	✓
	Otter	✓	✓	✓	✓	✓
	Pine marten	✓	✓	✓	✓	✓
	Red squirrel	✓	✓	✓	✓	✓
	Scottish wildcat[10]	X	✓	✓	✓	✓

[10] Records before the year 2011 were excluded from NBN search

Species		Section				
		A	B	C	D	E
	Water vole	✓	✓	✓	✓	✓
Bats	Pipistrelle species	✓	✓	✓	✓	✓
	Brown long-eared	X	✓	✓	✓	✓
	Nyctalus spp.	X	X	X	✓	✓
	Myotis spp.	✓	✓	✓	✓	✓
Reptiles	Adder	✓	✓	✓	✓	✓
	Common lizard	✓	✓	✓	✓	✓
	Slow worm	✓	✓	✓	✓	✓
Amphibians	Great crested newt	X	X	X	✓	✓

Fish and Freshwater Pearl Mussel

8.4.8 The returned records of five protected and / or priority fish and invertebrate species within 2 km of the Proposed Development on NBN Atlas Scotland, as shown in **Table 8.7** by section. **Table 8.7** shows that Atlantic salmon, brown trout and lamprey can be found within all sections of the Proposed Development, whereas eel was not recorded within Section B. *Oreodytes alpinus* has only been recorded within Section B. It should be noted that only data that can be used for commercial use (open licenses CC0, CC-BY and OGL) was searched.

Table 8.7: Summary of Desk-based Study Results for Aquatic Protected Species

Species		Section				
		A	B	C	D	E
Fish	Atlantic salmon	✓	✓	✓	✓	✓
	Brown trout	✓	✓	✓	✓	✓
	European eel	✓	X	✓	✓	✓
	Lamprey (river, brook and sea lamprey)	✓	✓	✓	✓	✓
Invertebrates	*Oreodytes alpinus* (water beetle)	X	✓	X	X	X

8.4.9 Locations of freshwater pearl mussel are confidential; study information on freshwater pearl mussel is detailed in **Volume 5, Appendix 8.9: Freshwater Pearl Mussel Survey Report (Confidential).**

8.4.10 Study data were also collected through consultation with the District Salmon Fisheries Boards (DSFB) in proximity to the Proposed Development. This data is detailed in full in **Volume 5, Appendix 8.5: Watercourse Crossing Ecological Appraisal**; information on the presence of fish and *O.alpinus* is summarised in **Table 8.8.**

Table 8.8: Summary of DSFB Consultation - Aquatic Ecology

Species		Section				
		A	B	C	D	E
Fish	Atlantic salmon	✓	✓	✓	✓	✓
	Brown trout	✓	✓	✓	✓	✓

Species		Section				
		A	B	C	D	E
	European eel	✓	X	✓	✓	✓
	Lamprey (river, brook and sea lamprey)	✓	✓	X	✓	✓
Invertebrates	*Oreodytes alpinus* (water beetle)	X	✓	X	X	X

Invasive Non-Native Species (INNS)

8.4.11 Records of INNS were identified during the desk-based study in proximity to the Proposed Development as presented in **Table 8.9**.

Table 8.9: Desk-based Study INNS Records Per Section.

Invasive Non-native Species		Section				
		A	B	C	D	E
Mammals	American mink	X	X	✓	✓	✓
	Sika deer	✓	✓	✓	✓	✓
Plants	Japanese knotweed	✓	X	X	X	X
	Montbretia	✓	X	X	X	✓
	Garden lady's mantle	✓	✓	✓	✓	X
	Japanese rose	✓	X	X	X	X
	Rhododendron	✓	X	✓	✓	✓
	Buddleia	X	✓	X	X	X
	Cotoneaster sp.	X	✓	✓	✓	X
	Thornapple	X	✓	X	X	X
	Hybrid bluebell	X	✓	✓	X	X
	Canadian golden rod	X	X	✓	X	X
	Bridal spray	X	X	✓	X	X
	Lesser periwinkle	X	X	✓	X	X
	Green alkanet	X	X	X	X	✓
	White butter burr	X	X	X	X	✓
	Yellow archangel	X	X	X	X	✓

Field Surveys – Results

Terrestrial Habitats

8.4.12 The results of the terrestrial habitats field surveys are summarised in **Table 8.10**, listed in alphanumeric order according to the UKHab classification, not by ecological value. Full descriptions are provided in **Volume 5, Appendix 8.3: Habitat Technical Report** and **Volume 3, Figure 8.2**.

Table 8.10: Habitats Identified Within the Proposed Development Presented by Section.

Broad Habitat Type	UKHab Classification *Habitats in bold text with an asterisk (*) are SBL Priority Habitats*	Section				
		A	B	C	D	E
Grassland	g1a6 – Other lowland dry acid grassland	✓	X	X	X	X
	g1b - Upland acid grassland	✓	✓	✓	✓	✓
	g1b6 - Other upland acid grassland	✓	✓	✓	✓	✓
	g1c - Bracken	✓	✓	✓	✓	✓
	g3c - Other neutral grassland	✓	✓	✓	✓	✓
	g3c5 - *Arrhenatherum* neutral grassland	X	✓	X	X	✓
	g3c6 - *Lolium-Cynosurus* neutral grassland	✓	✓	X	X	✓
	g3c7 - *Deschampsia* neutral grassland	✓	✓	X	✓	X
	g3c8 - *Holcus-Juncus* neutral grassland	✓	✓	✓	✓	✓
	g4 - Modified grassland	✓	✓	X	✓	✓
Woodland	w1d - Wet woodland	X	✓	X	✓	X
	w1d5 - Alder woodland on floodplains (H91E0)*	✓	X	X	X	X
	w1e - Upland birchwoods*	✓	✓	✓	✓	✓
	w1f - Lowland mixed deciduous woodland*	✓	✓	X	✓	✓
	w1g - Other broadleaved woodland	✓	✓	✓	✓	✓
	w1h - Other woodland; mixed	✓	✓	✓	✓	✓
	w1h5 - Other woodland; mixed; mainly broadleaved	✓	✓	X	✓	✓
	w1h6 - Other woodland; mixed; mainly conifer	✓	✓	X	✓	✓
	w2a5 - Caledonian forest (H91C0)*	X	X	✓	✓	✓
	w2b - Other Scot's Pine woodland*	✓	✓	✓	✓	✓
	w2c - Other coniferous woodland	✓	✓	✓	✓	✓
Heathland and Shrub	**h1b - Upland heathland***	✓	✓	X	✓	✓
	h1b5 - Dry heaths; upland (H4030)*	✓	✓	✓	✓	✓
	h1b6 - Wet heathland with cross-leaved heath; upland (H4010)*	✓	✓	✓	✓	✓
	h2a – Native hedgerow	✓	X	X	X	X
	h3e - Gorse scrub	✓	X	X	✓	✓
	h3h - Mixed scrub	✓	X	✓	✓	✓
	h3j - Willow scrub	✓	X	X	✓	X
Wetland	**f1a - Blanket bog***	✓	✓	✓	✓	✓
	f1a5 - Blanket bog (H7130)*	✓	✓	✓	✓	✓
	f1a6 - Degraded blanket bog*	✓	✓	✓	✓	X
	f1b5 - Active raised bogs (H7110)*	X	X	X	X	✓
	f2b - Purple moor-grass and rush pastures*	✓	✓	✓	✓	✓

Broad Habitat Type	UKHab Classification *Habitats in bold text with an asterisk (*) are SBL Priority Habitats*	Section				
		A	B	C	D	E
	f2c - Upland flushes, fens and swamps*	✓	✓	✓	✓	✓
Cropland	**c1a - Arable field margins***	✓	X	X	X	X
	c1b - Temporary grass and clover leys	X	X	X	X	✓
	c1c - Cereal crops	X	X	X	X	✓
	c1d - Non-cereal crops	✓	X	X	X	✓
Urban	u1b - Developed land; sealed surface	✓	✓	✓	✓	✓
	u1b5 - Buildings	✓	X	X	X	X
	u1b6 - Other developed land	✓	✓	✓	X	X
	u1c - Artificial unvegetated, unsealed surface	✓	✓	X	X	✓
	u1d - Suburban mosaic of developed and natural surface	X	X	X	X	✓
	u1e - Built linear features	✓	✓	✓	✓	✓
Sparsely Vegetated Land	s1d – Other inland rock	X	X	X	✓	X
Rivers and Lakes	r – Rivers and Lakes	✓	X	X	X	X
	r1a - Eutrophic standing waters*	X	X	✓	X	X
	r1g - Other standing water*	X	✓	X	✓	X
	r2 - Rivers and streams*	✓	X	X	✓	X
	r2a - Rivers (priority habitat)*	✓	✓	X	✓	X

Groundwater Dependent Terrestrial Ecosystems

8.4.13 Habitats with the potential to be GWDTE were assigned to an NVC community during the field surveys. The NVC results were referenced against SEPA guidance[11] to identify habitats which may potentially be groundwater dependent, depending on the hydrological setting. Full descriptions of potential GWDTE NVC communities are provided in **Volume 5, Appendix 8.3: Habitat Technical Report** and **Volume 3, Figure 8.2**. The results are summarised in **Table 8.11**, listed in alphanumeric order according to the NVC, not by ecological value.

8.4.14 GWDTE status is related to groundwater dependency and not to nature conservation value, as such GWDTEs do not factor into the identification of Important Ecological Features (IEFs) within ecological impact assessments. GWDTEs are therefore not considered further within this chapter, however the NVC survey data has been used to inform an assessment of impacts to groundwater in **Chapter 10: Water Environment** and **Volume 5, Appendix 10.3 GWDTE Assessment**.

[11] Scottish Environmental Protection Agency (2014). *Land Use Planning System (LUPS) SEPA Guidance Note 31: Guidance on Assessing the Impacts of Windfarm Development Proposals on Groundwater Abstractions and Groundwater Dependent Terrestrial Ecosystems.* SEPA, North Lanarkshire, Scotland

Table 8.11: Potential GWDTE Identified Within the Proposed Development by Section.

NVC Code	NVC Name	Section				
		A	B	C	D	E
M10	*Carex dioica - Pinguicula vulgaris* mire	X	✓	X	✓	X
M15	*Trichophorum cespitosum - Erica tetralix* wet heath	✓	✓	✓	✓	X
M16	*Erica tetralix - Sphagnum compactum* wet heath	✓	X	✓	✓	✓
M21	*Narthecium ossifragum - Sphagnum papillosum* valley mire	✓	X	X	✓	X
M23	*Juncus effusus/acutiflorus - Galium palustre* rush-pasture	✓	✓	✓	✓	✓
M25	*Molinia caerulea - Potentilla erecta* mire	✓	✓	✓	✓	✓
M26	*Molinia caerulea - Crepis paludosa* mire	✓	X	X	X	X
M27	*Filipendula ulmaria - Angelica sylvestris* mire	X	✓	X	X	X
M28	Iris *Pseudacorus - Filipendula ulmaria* mire	✓	✓	X	X	X
M32	*Philonotis fontana - Saxifraga stellaris* spring	✓	X	X	X	X
M6	*Carex echinata - Sphagnum recurvum* mire	✓	✓	✓	✓	✓
MG10	*Holcus lanatus - Juncus effusus* rush-pasture	✓	✓	X	✓	✓
MG8	*Cynosurus cristatus - Caltha palustris* lowland neutral grassland	X	X	✓	X	X
MG9	*Holcus lanatus - Deschampsia cespitosa* grassland	✓	✓	X	✓	X
S2	*Cladium mariscus* swamp and sedge beds	✓	X	X	X	X
S27	*Carex rostrata - Potentilla palustris* tall-herb fen	✓	✓	X	X	X
U6	*Juncus squarrosus - Festuca ovina* grassland	✓	X	✓	✓	X
W3	*Salix pentandra - Carex rostrata* woodland	X	✓	X	X	X
W5	*Alnus glutinosa - Carex paniculata* woodland	X	X	X	X	✓
W6	*Alnus glutinosa - Urtica dioica* woodland	X	X	X	X	✓
W7	*Alnus glutinosa - Fraxinus excelsior - Lysimachia nemorum* woodland	X	✓	X	✓	✓

Peatland Condition

8.4.15 A desk study assessment of peatland condition was carried out based on the results of habitat and peat depth surveys carried out for the Proposed Development. The results of the desk study are presented in **Volume 5, Figure 8.7 Peatland Condition Desk Study**.

Protected Species

8.4.16 The results of the protected species field surveys (including FWPM) are summarised in **Table 8.12** below, with full descriptions provided in **Volume 5, Appendix 8.4: Protected Species Technical Report** and **Volume 5 Appendix 8.9: Freshwater Pearl Mussel Survey Report (Confidential)** and **Volume 3, Figure 8.4** and **8.6**.The results presented are restricted to recognised disturbance zones of protected species from proposed infrastructure (including management felling areas); where no recognised disturbance zone exists a 30 m standoff has been used.

Table 8.12: Summary of Protected Species Survey Results and Importance

Species	Section A	Section B	Section C	Section D	Section E
Badger	Three badger tracks and one shelter were found within 30 m of infrastructure within Section A.	No field signs of badger were found within 30 m of infrastructure within Section B.	No field signs of badger were found within 30 m of infrastructure within Section C.	One record of badger foraging (snuffle holes) and one badger shelter was identified within 30 m of infrastructure within Section D.	Eight records of badger foraging, five tracks, three dung pits and 11 badger shelters were identified within 30 m of infrastructure within Section E.
	Importance: Badger are a common and widespread species in Scotland, protected through national legislation from persecution. Badgers are found to occur within a zone of potential disturbance (30 m) of the Proposed Development.				
Otter	Twenty-seven potential otter shelters, sixty-eight instances of otter faeces (spraint or anal gel) and three otter tracks were identified within 200 m of infrastructure within Section A.	Eighteen potential otter shelters, thirty-two instances of faeces and two track were identified within 200 m of infrastructure within Section B.	Eight potential otter shelters, seven instances of otter faeces and two tracks were identified within 200 m of infrastructure within Section C.	Thirty-seven potential otter shelters, thirty-four instances of otter faeces, three tracks and one instance of feeding remains were identified within 200 m of infrastructure within Section D.	Twenty-three potential otter shelters, thirty-six instances of otter faeces and two otter tracks were identified within 200 m of infrastructure within Section E.
	Importance: Otter are a European protected species found to occur within a zone of potential disturbance (200 m) of the Proposed Development. Otter are common and widespread throughout Scotland, a stronghold for the species.				
Pine marten	Two record of pine marten faeces (scat) was identified within 30 m of infrastructure within Section A.	Four records of pine marten faeces were identified within 30 m of infrastructure within Section B.	Fourteen records of pine marten faeces were identified within 30 m of infrastructure within Section C.	Eighteen records of pine marten faeces and one potential pine marten shelter (den) was recorded within 30 m of infrastructure within Section D.	Six records of pine marten faeces one track and one potential shelter were identified within 30 m of infrastructure within Section E.
	Importance: Pine marten are a nationally protected species found to occur within a zone of potential disturbance (30 m) of the Proposed Development. Pine marten is also listed as a priority species on the Highland LBAP. Pine marten are common and widespread within the highlands where suitable habitat exists.				
Red Squirrel	No field signs of red squirrel were found within 30 m of infrastructure within Section A.	No field signs of red squirrel were found within 30 m of infrastructure within Section B.	Two red squirrel shelters (dreys), nine signs of foraging (chewed cones) and a red squirrel sighting were found within 30 m of infrastructure within Section C.	One red squirrel shelter and fifteen signs of foraging were found within 30 m of infrastructure within Section D.	Three records of red squirrel foraging were found within 30 m of infrastructure within Section E.
	Importance: Red squirrels are a nationally protected species found to occur within a zone of potential disturbance (30 m) of the Proposed Development. Red squirrel is also listed as a priority species on the Highland LBAP. Red squirrels are common and widespread within the highlands where suitable habitat exists.				

Species	Section A	Section B	Section C	Section D	Section E
Scottish wildcat	No field signs of wildcat were found within 200 m of infrastructure within Section A.	No field signs of wildcat were found within 200 m of infrastructure within Section B.	No field signs of wildcat were found within 200 m of infrastructure within Section C.	No field signs of wildcat were found within 200 m of infrastructure within Section D.	One potential wildcat shelter (den) was recorded within 200 m of infrastructure within Section E.
	Importance: The Scottish wildcat is a European protected species found to occur within a zone of potential disturbance (200 m) of the Proposed Development. Wildcat is also listed as a priority species on the Highland LBAP. Scottish wildcat numbers have dropped since the 1960s due to persecution and hybridisation with feral cats, with the wild population estimated to be as low as 30 cats. A report released in 2019 concluded the wildcat population in Scotland is no longer viable[12].				
Water vole	Two burrows, two instances of foraging, two latrines and a single track were found within 30 m of infrastructure within Section A.	Nine burrows, three records of latrines and a single track were identified within 30 m of infrastructure within Section B.	No field signs of water vole were found within 30 m of infrastructure within Section C.	Two burrows and one latrine were found within 30 m of infrastructure within Section D.	No field signs of water vole were found within 30 m of infrastructure within Section E.
	Importance: Water vole are a nationally protected species found to occur within a zone of potential disturbance (30 m) of the Proposed Development. Water vole is also listed as a priority species on the Highland LBAP. Water vole populations have suffered significant declines since the 1980s due to the introduction of the invasive American mink, and loss of habitat.				
Reptiles	One common lizard was recorded within 30 m of infrastructure within Section A.	Four sightings of adder and five common lizard were recorded within 30 m of infrastructure within Section B.	One sighting of an adder and one common lizard was recorded within 30 m of infrastructure within Section C.	Three common lizards were recorded within 30 m of infrastructure within Section D.	Two common lizards were recorded within 30 m of infrastructure within Section E.
	Importance: All three species of reptile native to Scotland (common lizard, slowworm and adder) are protected from intentional or reckless killing or injury. These species are all found to occur within or adjacent to the Proposed Development across all Sections. Reptiles are generally widespread and found in low numbers within Scotland.				
Bats	No potential roost features (potential shelters) were recorded within 30 m of infrastructure within Section A.	Two potential roost features were recorded within 30 m of infrastructure within Section B.	Two potential roost features were recorded within 30 m of infrastructure within Section C.	One potential roost feature was recorded within 30 m of infrastructure within Section D.	Seven potential roost features were recorded within 30 m of infrastructure within Section E.
	Importance: Bats are a European protected species whose shelters are likely to occur within a zone of potential disturbance (30 m) of the Proposed Development. Brown long-eared bat, Daubenton's bat, Natterer's bat and pipistrelle bat are listed as priority species on the Highland LBAP.				

[12] IUCN (2019) Conservation of the wildcat (Felis silvestris) in Scotland: Review of the conservation status and assessment of conservation activities. https://www.nature.scot/sites/default/files/2019-02/Wildcat%20in%20Scotland%20-%20Review%20of%20conservation%20status%20and%20activities_1.pdf [Accessed January 2025].

Species	Section A	Section B	Section C	Section D	Section E
Great crested newts	No field signs or evidence of great crested newt were found within 1 km of infrastructure of Section A.	No field signs or evidence of great crested newt were found within 1 km of infrastructure of Section B.	No field signs or evidence of great crested newt were found within 1 km of infrastructure of Section C.	Sixty-nine male and 60 female great crested newts were found during torch, bottle trap, and net surveys at ponds throughout Section D. Eggs were also found on multiple visits to one pond.	No field signs or evidence of great crested newt were found within 1 km of infrastructure of Section E.
	Importance: GCN are a European protected species found to occur within a zone of potential mortality / disturbance (1 km) of the Proposed Development. GCN are locally rare and believed to be part of a unique and isolated population within the highlands.				
FWPM	There were eight watercourses which contained suitable habitat for freshwater pearl mussel and were subject to further survey, with one watercourse found to contain freshwater pearl mussel.	There were four watercourses which contained suitable habitat for freshwater pearl mussel and were subject to further survey, one watercourse was found to contain freshwater pearl mussel.	Three watercourses were considered to hold suitable habitat for freshwater pearl mussel and were subject to further survey, two watercourses were found to contain freshwater pearl mussel.	There were eight watercourses that contained suitable habitat for freshwater pearl mussel and were subject to further survey, one watercourse was found to contain freshwater pearl mussel.	Four watercourses were considered to hold suitable habitat for freshwater pearl mussel, and were subject to survey, three watercourses were found to contain freshwater pearl mussel.
	Importance: FWPM are a European protected species found to occur within a zone of potential mortality / disturbance (100 m upstream and 500 m downstream)[13] of any proposed watercourse crossing location of the Proposed Development. Freshwater pearl mussel is also listed as a priority species on the Highland LBAP. FWPMs are rare due to historic persecution and the effects of climate change.				

[13] Distance of effect based on type of works being undertaken as detailed within NatureScot (2018) *Freshwater pearl mussel for use in site specific projects* [Online] Available at: Freshwater pearl mussel survey protocol - for use in site-specific projects | NatureScot (Accessed May 2025)

Other Notable Species

8.4.17 Incidental records of other notable species recorded within 30 m of infrastructure during field surveys are presented by Section in **Table 8.13** with numbers of records of individuals per section presented. These species were recorded where seen but specific surveys for them were not undertaken.

Table 8.13: Other Species Identified Through Field Survey.

Species		Conservation Status (if any)	Section				
			A	B	C	D	E
Amphibians (not GCN)	Common toad	• Scottish Biodiversity List[14] • Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) section 9(5)[15] only.	1	0	2	0	0

INNS

8.4.18 Invasive non-native species recorded during field surveys are presented in **Table 8.14**. All field records of invasive mammal species, regardless of proximity to the Proposed Development, have been presented due to their ability to disperse and move within the landscape.

8.4.19 American mink were recorded from field survey in all sections except for Section C. However, due to the presence of desk study records for all sections (**Table 8.8**), and being a highly mobile and widespread species, American mink is likely to be present in all sections. Sika deer were recorded on Section B only, consistent with the desk study.

8.4.20 The non-native invasive plant species, rhododendron was observed on all sections except Section A. Japanese knotweed was only recorded in Section D.

Table 8.14: Records of INNS Identified During Field Surveys by Section.

Species		Section				
		A	**B**	**C**	**D**	**E**
Mammals	American mink[16]	3	1	0	1	1
	Sika deer	0	3	0	0	0
Plants	*Rhododendron ponticum* [8]	0	2	6	1	16
	Japanese knotweed	0	0	0	1	0

8.4.21 *Rhododendron ponticum*, Japanese knotweed and American mink are listed as some of the top INNS of concern in the Highlands as per the Highland LBAP.

[14] https://www.nature.scot/doc/scottish-biodiversity-list [Accessed December 2024]
[15] Section 9(5) of the Wildlife and Countryside Act 1981, in conjunction with Schedule 5, makes it illegal to publish or advertise any animal listed in Schedule 5 as being for sale. The protection afforded by section 9(5) aims to prevent the trade and exploitation of these protected species.
[16] LBAP priority for control (Action 4)

8.5 Future Baseline

8.5.1 Scotland's Environment[17] predicts that the changes in climate that Scotland is already experiencing are projected to continue and intensify, noting that:

- Average temperatures will increase across all seasons;
- Typical summers will be warmer and drier;
- Typical winters will be milder and wetter;
- Intense, heavy rainfall events will increase in both winter and summer;
- Sea levels will rise;
- Frost and snowfall will reduce; and,
- Weather will remain variable and may become more variable.

8.5.2 The wetter, warmer winters and extreme rainfall events in all seasons may lead to a reduced viability for some areas of forestry. Hotter drier summers may lead to exacerbated drying of wetland / peat forming habitats and other GWDTEs. Based on climate change predictions, actual climatic changes across the location of the Proposed Development cannot be accurately quantified, hence the future baseline is considered to remain approximately in line with the current baseline.

8.6 Determining Important Ecological Features

8.6.1 The assessment considers the potential impacts on designated sites, habitats and protected species (including freshwater), from the Proposed Development during construction and operation. For example:

- direct habitat loss due to permanent infrastructure, temporary facilities and habitat planting / restoration;
- effects on habitats in the surrounds (e.g., from incursion by workforce, lighting, pollution / spillages, dust, effects on surface / groundwater);
- direct effects on fauna, including their killing and injury and the destruction of their places of shelter or disturbance whilst using such places of shelter; and
- indirect effects on fauna species including disturbance, displacement and restriction of movement from construction related operations including management felling.

Embedded Mitigation

8.6.2 These measures include implementation of the Applicant's SPPs and GEMPs, the timing of installation and careful siting of temporary structure to avoid or minimise interaction with sensitive ecological receptors. Further detail on embedded mitigation is provided in **Volume 5, Appendix 8.2: Ecology Assessment Methodology**.

8.6.3 It is assumed that during operation and maintenance activities pertinent SPPs and GEMPs will be adhered to as best practice and hence the measures detailed within them will be implemented as necessary.

8.6.4 All permanent loss of woodland attributed to the Proposed Development operational corridor and access track locations, shall be replaced through compensatory planting, and as such, this is considered to form part of the embedded mitigation.

[17] Scotland's Environment https://www.environment.gov.scot/our-environment/climate/changing-climate/ [Accessed July 2024].

8.6.5 As the Applicant does not own the land on which management felling is identified and the implementation of recommendations to reduce adverse effects from felling are not within their control. However, statutory obligations that require the replanting of these areas by landowner, qualifies as embedded mitigation.

8.6.6 Further details of the forestry assessment and associated management felling areas can be found in **Chapter 13: Forestry**.

Mitigation by Design

8.6.7 The Proposed Development was selected and developed via an iterative design process, as described in **Chapter 4: The Routeing Process and Alternatives**. This applied the mitigation hierarchy[18]. Impacts to sensitive receptors were avoided, where feasible and in balance with other competing interests such as constructability, operational safety and sensitive features related to other environmental disciplines.

8.6.8 Design mitigation measures will be further implemented as both the detailed design continues and the construction phase commences.

Limitations and Assumptions

8.6.9 Any survey limitations encountered along the route are reported on in **Volume 5, Appendix 8.3, 8.4 and 8.9**.

8.6.10 Due to survey coverage and access being generally available across the Survey Area, successful characterisation of habitats and likely species present was possible. Any limitations, both individually and in combination, are therefore not considered to be significant and do not undermine the validity of the baseline survey.

8.6.11 The distribution of species varies naturally due to population fluctuations. Fluctuations may take place over short or long temporal phases. Surveys are a sample, and this chapter is based on species found or likely to be found, based on their known distribution and habitat availability present within the Survey Area.

8.6.12 Where third party data are referred to, this is referenced and taken at face value guided by professional judgement.

8.6.13 At the time of writing the proposals include no plans to demolish or alter buildings to enable construction of the Proposed Development; as such, potential roost features for bats identified within such structures are assumed only to be subject to disturbance, where found within 30 m of proposed infrastructure.

8.6.14 It is assumed that more disturbing construction operations such as blasting and piling will not be required, as such, standard disturbance distances for protected species have been used.

8.6.15 The Proposed Development has been designed to avoid waterbodies such as ponds. It is assumed that any standing water (e.g. oligotrophic and dystrophic lakes, eutrophic standing waters or mesotrophic lakes) would not be subject to habitat loss through micro-siting and the application of the Construction Environmental Management Plan (CEMP) to avoid impacts to the water environment. As such, they have been excluded from the BNG Toolkit as retained habitat.

[18] Scottish Government. Biodiversity: draft planning guidance. Section 3.3 https://www.gov.scot/publications/scottish-government-draft-planning-guidance-biodiversity/pages/3/ [Accessed February 2025].

8.6.16 Where field signs were considered inconclusive, for example, in relation to the presence of a protected species shelter, the assessment has taken a precautionary approach and assumed presence. Pre-construction surveys are a necessary step detailed within the Applicant's SPPs, the results of which will be used to inform protected species licencing, as necessary.

8.6.17 Otters in mainland Scotland are not considered to be seasonal breeders and as such may breed at any time of year, thus all shelters may be used for breeding at any time of year and have been assumed as such for the purposes of this assessment with a disturbance zone of 200 m applied. Pre-construction surveys are a necessary step detailed within the Applicant's SPPs, the results of which will be used to inform protected species licencing, as necessary.

8.6.18 It is assumed that all squirrel field signs found within the Survey Area are attributed to red squirrels, on account of no grey squirrels being recorded within the area in the last five years[19].

8.6.19 The inclusion of management felling areas came later in the design process, necessarily following completion of the forestry impact assessment. The inclusion of these areas came after the completion of the protected species surveys and so there is only partial coverage of these areas within the protected species survey. Due to the commercial nature of these felling areas, biodiversity value is likely to be low on account of low species diversity (monoculture) and a common age class, harvested before features of value to biodiversity develop (potential shelter features). As such limitations are considered only to apply to pine marten, red squirrel, badger and potentially Scottish wildcat. Impacts to bat foraging / commuting routes are not considered in respect to management felling due to the requirement of the necessary felling licence for such areas to be re-planted. Pre-construction surveys are a necessary step detailed within the Applicant's SPPs, the results of which will be used to inform protected species licencing, as necessary.

Important Ecological Features

8.6.20 Important ecological features, identified as being sensitive to the Proposed Development and taken forward for assessment are presented below;

- Statutory designated sites:
  - Berriedale and Langwell Waters Special Area of Conservation (SAC);
  - River Oykel SAC;
  - Caithness and Sutherland Peatlands SAC;
  - River Thurso SAC;
  - Mound Alderwoods SAC;
  - Caithness and Sutherland Peatlands Ramsar Site;
  - Dornoch Firth and Loch Fleet Ramsar Site;
  - World Heritage Site Scotland: The Flow Country;
  - Dunbeath Water SSSI;
  - Langwell Water SSSI;
  - Shielton Peatlands SSSI;
  - Berriedale Water SSSI;
  - Mound Alderwoods SSSI;

[19] Saving Scotland's Red Squirrels https://scottishsquirrels.org.uk/squirrel-sightings/ [Accessed January 2025]

  - Strathfleet SSSI;
  - Carrol Rock SSSI;
  - Kyle of Sutherland Marshes SSSI; and
  - Allt nan Caorach SSSI.
- Non-Statutory Designations: AWI
  - Class 1a and 2a (considered to be irreplaceable); and
  - Class 2b (considered to be irreplaceable).
- Terrestrial Habitats[20]:
  - w1d Wet woodland, including:
    - w1d5 Alder woodland on floodplains (H91E0)
  - w1e Upland birchwoods;
  - w1f Lowland mixed deciduous woodland;
  - w1g - Other broadleaved woodland;
  - w1h - Other woodland; mixed;
  - w1h5 - Other woodland; mixed; mainly broadleaved;
  - w1h6 - Other woodland; mixed; mainly conifer;
  - w2a5 Caledonian forest (H91C0);
  - w2b Other Scot's Pine woodland;
  - h1b Upland heathland;
  - h1b5 Dry heaths; upland (H4030);
  - h1b6 Wet heathland with cross-leaved heath; upland (H4010);
  - f1a Blanket bog, including:
    - f1a5 Blanket bog (H7130); and
    - f1a6 Degraded blanket bog
  - f1b5 Active raised bogs (H7110);
  - f2b Purple moor-grass and rush pastures;
  - f2c Upland flushes, fens and swamps;
  - c1a Arable field margins;
  - s1a Inland rock outcrop and scree habitats;
  - r - Rivers and lakes; including:
    - r1a Eutrophic standing waters;
    - r1b - Mesotrophic lakes;
    - r1c Oligotrophic and dystrophic lakes;
    - r1g - Other standing water;
    - r2 Rivers and streams; and
    - r2a Rivers (priority habitat).
- Protected Species:

[20] Presented using UKHab Classification V2.0, listed in order of the classification hierarchy, not in order of ecological importance. Habitats which are indented in the list comprise more detailed sub-classifications of the broader parent habitat classification.

- Badger;
- Bats;
- Great crested newt;
- Otter;
- Pine marten;
- Red squirrel;
- Reptiles;
- Water vole;
- Scottish wildcat;
- Freshwater pearl mussel;
- Atlantic salmon; and
- Common toad.

8.7 Assessment of Effects

8.7.1 This section assesses the predicted impacts of the Proposed Development taking into account the implementation of mitigation by design and embedded mitigation. The assessment recognises each IEF as listed in **Section 8.6**, assessing identified potential construction and operational impacts.

8.7.2 Impacts on habitat from the Proposed Development have been calculated based on the current design. Impacts to habitat relate to:

- Direct habitat loss from permanent tower bases;
- Direct habitat loss under temporary tower construction compounds;
- Direct habitat loss under temporary Equipotential Zones (EPZ) pulling positions;
- Direct habitat loss under temporary access tracks;
- Direct habitat loss under permanent access tracks; and
- Indirect habitat impacts relating to de-watering of peat along permanent access tracks and in respect to temporary infrastructure.

8.7.3 Direct habitat loss has been calculated under the footprint of proposed infrastructure.

8.7.4 Indirect habitat impacts have been calculated for wetland and peatland habitats, based on a 30 m buffer around access tracks, assuming that associated drainage may disrupt hydrological connectivity, resulting in a lowering of the water table within this ZoI. Indirect impacts to wetland and peatland habitat around other infrastructure, e.g. tower bases have been calculated based on a 10 m buffer. Indirect impacts to other habitat types are not predicted. For the purposes of assessing designated sites, on a precautionary basis, indirect impacts are assumed to result in habitat loss.

8.7.5 Following a description of the specific impacts on that IEF, a statement on the significance of the effect is made in the context of the value of the IEF and the impact magnitude.

Assessment – Construction Impacts

Statutory Designated Sites

8.7.6 Details of protected features and the characteristics of each designated site have been taken from their citation as found on the NatureScot Sitelink website[21]. Sites for which peatland is a cited feature are included within the **Volume 3, Figure 8.7: Peatland Condition Desk Study**.

Berriedale and Langwell Waters Special Area of Conservation (SAC)

8.7.7 The Proposed Development passes within Berriedale and Langwell Waters SAC (measuring 58.25 ha), a European protected site of international importance, located on the north east coast of Scotland. The site is designated for:

- Atlantic salmon.
  - The Berriedale and Langwell Waters on the north east coast of Scotland support small, but high-quality Atlantic salmon populations. The rivers have two separate catchments but share a short length of river just before they meet the sea. Both rivers are oligotrophic, draining the southern edge of the Caithness and Sutherland Peatlands, and show only limited ecological variation along their length. Whilst they are comparatively small rivers and support only a small proportion of the Scottish Atlantic salmon resource, their long history of low management intervention means that they score highly for naturalness. Recent records indicate that the full range of Atlantic salmon life-history types return to the river, with grilse, spring and summer salmon all being caught.

8.7.8 No temporary or permanent infrastructure is proposed within the Berriedale and Langwell Waters SAC, with the Proposed Alignment oversailing the site. Tree felling in order to clear an operational corridor for the Proposed Development is proposed adjacent to but not within the SAC, approximately 10 m from the boundary, these works will be undertaken in line with the embedded mitigation outlined in **Volume 5, Appendix 8.2** and are not anticipated to impact the SAC. The designated site is expected to remain in its current condition following construction of the Proposed Development.

8.7.9 This site (including its qualifying interest features) is assigned a **high** value due to its international status, with a **negligible** impact magnitude on account of no physical infrastructure being proposed within the designated site boundary. Impacts on this protected site when considering value of the site and magnitude of the impact are predicted to be **not significant**.

8.7.10 A Report to Inform HRA is presented in **Volume 5, Appendix 8.7** to provide the information required by the Competent Authority to inform their own assessment of LSEs on this protected site at the time of application. The report concludes no likely significant effects on the site from the Proposed Development.

Caithness and Sutherland Peatlands Ramsar Site

8.7.11 The Proposed Development passes within the Caithness and Sutherland Peatlands Ramsar site (measuring 145,960.53 ha), which is of international importance and is located in the north of mainland Scotland. The site comprises an extensive area of deep blanket bog and mire communities interspersed with wet heath, bog pools and lochs. Blanket bog is rare in world terms and Britain has a significant proportion of the total world resource. The Caithness and Sutherland Peatlands form the largest and most intact area of this habitat in Scotland and

[21] https://sitelink.nature.scot/home

represent the extreme northern Atlantic part of the range of variation. The site is designated for the following key features:

- Ramsar Criterion 1:
  - Blanket bog, encompassing an exceptionally wide range of vegetation and surface pattern types (pool systems), some of which are unknown elsewhere. The suite of bog types ranges from those of the Caithness plain in the east, with their continental affinities, through to those of the much more oceanic west and includes both upland and lowland areas. Extensive areas of ombrotrophic (rain-fed) bog are present, where *Sphagnum* and other bog species ensure active peat accumulation.
  - Mire communities, including very wet mires where the surface is unstable.
  - Oligotrophic lochs in addition to dystrophic lochs, lochans and pools, fen communities (surrounding the lochs, lochans and pools), as well as wet heath, grassland and rivers occur in a mosaic with the blanket bog and mire communities. These provide the diversity of habitats necessary to support a wide range of wetland species.
- Ramsar Criterion 2:
  - Two nationally scarce moss species, *Sphagnum lindbergii* (occurring only in Scotland in Great Britain) and *S. majus.* A nationally scarce higher plant the bog orchid *Hammarbya paludosa*. The invertebrate fauna includes the nationally rare water beetle *Oreodytes alpinus*, the entire British population of which is found in only a small number of lochs in the Caithness and Sutherland area. These lochs include Loch Gaineimh and Loch More both within the Ramsar site.
  - Mammals of importance include the otter *Lutra lutra*, which are wide ranging throughout the site. Freshwater pearl mussel *Margaritifera margaritifera* occur in the River Naver SAC and the River Borgie SAC, these rivers are an integral part of the Ramsar site's blanket bog, mire and moorland system.

8.7.12 Effects on *Oreodytes alpinus* and freshwater pearl mussel, listed under Criterion 2 of this designated site, have been scoped out as detailed in **Section 8.6**.

8.7.13 UKHab and NVC habitat surveys have been completed for the Proposed Development within the Ramsar site, covering an area of 250 m either side of the Proposed Development. Qualifying interest habitats of Caithness and Sutherland Ramsar recorded in this area predominantly comprised blanket bog, in addition to purple moor-grass and rush pastures, other acid grassland and *Holcus-Juncus* neutral grassland. No other qualifying interest habitats occur within the Survey Area and therefore will not be affected by the Proposed Development. Surveys recorded both active peat forming blanket bog, and degraded blanket bog: impacts are presented separately for these two habitat types. Degraded blanket bog included areas of felled coniferous plantation woodland on blanket bog. In areas of active blanket bog, potential pressures on habitat condition were recorded in some areas, including encroachment on bog habitats by self-set trees.

8.7.14 Additionally, no observations of any qualifying interest features plant species (including *Sphagnum lindbergii*, *S. majus* and bog orchid) were recorded during baseline surveys.

8.7.15 Construction of the Proposed Development will require installation of ten steel lattice towers within the boundary of the Caithness and Sutherland Peatlands Ramsar. Temporary construction compounds will be required at each tower location, and sections of permanent and temporary access track will be required to access tower locations. Temporary EPZ pulling positions will be required at angle towers to install the conductors, including two within the designated site. The duration of works in any one location within the designated site has been assumed as approximately 6 months. The location of the Proposed Development infrastructure in relation to habitats within the designated site is presented in **Volume 3, Figure 8.3: UK Habitat within Designated Sites**.

8.7.16 The Proposed Development will result in a permanent loss of 1.33 ha within the Ramsar site, of which designated habitats comprise:

- 1.13 ha of blanket bog (H7130);
- 0.09 ha of degraded blanket bog;
- 0.05 ha of purple moor-grass and rush pastures;
- 0.03 ha of upland acid grassland; and
- 0.03 ha of *Holcus-Juncus* neutral grassland.

8.7.17 The Proposed Development will result in a temporary loss of 25.11 ha within the Ramsar site, of which designated habitats comprise:

- 21.37 ha of blanket bog (H7130);
- 1.69 ha of degraded blanket bog;
- 0.17 ha of upland acid grassland; and
- 1.88 ha of *Holcus-Juncus* neutral grassland.

8.7.18 Relative to the total area of the Ramsar site, impacts to designated habitats comprise:

- 0.0009% Permanent loss;
- 0.0175% Temporary loss; and
- 0.0184% Total loss.

8.7.19 Signs of otter activity (spraints) were recorded on the Halsary Burn, which forms the boundary of the Ramsar in this location, and on the Burn of Tacher which passes through the designated site (**Volume 5, Appendix 8.4: Protected Species Technical Report**). No otter holts (underground shelters) or couches (temporary shelters) were recorded in this area.

8.7.20 As otter are active in the local area, there is the potential for adverse effects on this species where watercourses pass through or near to the Proposed Development.

8.7.21 Direct loss of supporting habitat within the designated site is not expected. The watercourses will not be directly affected by the Proposed Development as they are oversailed by the OHL. There is the potential for temporary construction related disturbance and displacement of otter from the surrounding habitat, and mortality risk during works, as the species is wide-ranging and highly mobile. A single permanent access track crossing of the Halsary Burn is proposed adjacent to Tower N25; this crossing will not be a public vehicle access.

8.7.22 The Applicant will utilise embedded mitigation measures, including their Otter SPP and GEMPs (e.g. Water Crossings) to reduce the impacts on any otters using the surrounding area to a not significant level.

8.7.23 The site is assigned a **high** value due to its international status, with a **negligible** impact magnitude on account of the very small / localised loss of qualifying habitat, amounting to a fraction of a percentage of the resource found within the site. Impacts on this protected site when considering value of the site and magnitude of the impact are predicted to be **not significant**.

8.7.24 A Report to Inform HRA is presented in **Volume 5, Appendix 8.7** in order to provide the Competent Authority with the information they require, to inform their own assessment of LSEs on this protected site at the time of application. The HRA screening report concluded likely significant effects from the Proposed Development, however, following Appropriate Assessment it has been concluded that the integrity of the Site would not be adversely affected.

Caithness and Sutherland Peatlands SAC

8.7.25 The Proposed Development passes within Caithness and Sutherland Peatlands SAC (measuring 145,960.53 ha), a European site of international importance, designated for:

- Oligotrophic to mesotrophic standing waters with vegetation of the *Littorelletea uniflorae* and / or of the *Isoëto-Nanojuncetea,* for which this area is considered one of the best in the UK.
- Natural dystrophic lakes and ponds, for which this area is considered one of the best in the UK.
- Northern Atlantic wet heaths with *Erica tetralix,* of which the area supports a significant presence.
- Transition mires and quaking bogs, for which the area is considered to support a significant presence. Depressions on peat substrates of the *Rhynchosporion* for which the area is considered to support a significant presence.
- Blanket bogs, for which this area is considered one of the best in the UK.
- *Saxifraga hirculus,* for which this area is considered one of the best in the UK, and which is known from 15 or fewer 10 km x 10 km squares in the UK.
- Otter, for which this area is considered one of the best in the UK.

8.7.26 The key features of this site are:

- Blanket bog (if active)
  - The scale and diversity of the Caithness and Sutherland Peatlands in northern Scotland make them unique in Europe. They form the largest peat mass in the UK and are three times larger than any other peatland area in either Britain or Ireland. The site is important because of the considerable abundance of large (several square kilometres) continuous areas of *Sphagnum* carpets and hummocks, including *Sphagnum fuscum*, *S. imbricatum* and *S. pulchrum*, and for its numerous intact pool systems. Not only are these features usually rare and localised on other bog systems in the UK, but a very high proportion of this ground remains undisturbed. The vegetation is mainly cross-leaved heath *Erica tetralix* with *Sphagnum papillosum* as well as deergrass *Trichophorum cespitosum* and hare's-tail cottongrass *Eriophorum vaginatum* blanket mire. Freshwater pools and lochans are an integral component of the mire expanse.
- Depressions on peat substrates of the *Rhynchosporion*
  - Depressions on peat substrates of the *Rhynchosporion* occur in complex mosaics with lowland wet heath and valley mire vegetation, in transition mires, and on the margins of bog pools and hollows in both raised and blanket bogs. The vegetation is typically very open, usually characterised by an abundance of white beak-sedge *Rhynchospora alba*, often with well-developed algal mats, the bog moss *Sphagnum denticulatum*, round-leaved sundew *Drosera rotundifolia* and, in relatively base-rich sites, brown mosses such as *Drepanocladus revolvens* and *Scorpidium scorpioides*. The Nationally scarce species brown beak-sedge *Rhynchospora fusca* and marsh clubmoss *Lycopodiella inundata* also occur in this habitat. This Annex I type appears to be widely distributed in the EU, especially in the Atlantic and Continental biogeographical regions. Depressions on peat substrates of the *Rhynchosporion* is a rare habitat type in the UK that exhibits a narrow range of ecological variation and has a restricted geographical distribution. This habitat type has a very discontinuous distribution, being found in largest quantity on heaths in southern England and on blanket and raised bogs in western Britain, with an outlying example in East Anglia.
- Otter
  - The otter is a semi-aquatic mammal, which occurs in a wide range of ecological conditions, including inland freshwater and coastal areas (particularly in Scotland). Populations in coastal areas utilise shallow, inshore marine areas for feeding but also require fresh water for bathing and terrestrial areas for resting and breeding holts. Coastal otter habitat ranges from sheltered wooded inlets to more open,

low-lying coasts. Inland populations utilise a range of running and standing freshwaters. These must have an abundant supply of food (normally associated with high water quality), together with suitable habitat, such as vegetated riverbanks, islands, reedbeds and woodland, which are used for foraging, breeding and resting. The otter was once widespread in Europe, but populations declined sharply during the 1960s and 1970s due to pollution, exacerbated by hunting and habitat loss. Currently it has a rather discontinuous distribution with strong populations in Greece, Spain, Portugal and much of eastern Europe. Over most of continental western Europe the species is scarce to extinct, but reintroduction or restocking projects are in progress in several countries. Historically, otters occurred over most of the UK. However, persecution, habitat loss and, more recently, the impact of toxic organochlorine insecticides caused a marked reduction in the range of the species. At present, the majority of the otter population in Great Britain occurs in Scotland, with a significant proportion of this number being found in the north and west of the country. Other strong populations survive in Wales and Ireland. The otter is still scarce over much of England, where the highest concentrations are in the south-west. However, recent surveys suggest that the otter population is recovering well and recolonising parts of its former range.

- Natural dystrophic lakes and ponds
  - This site represents natural dystrophic lakes and ponds on 7130 Blanket bogs in northern Scotland. The scale and diversity of the peatlands of Caithness and Sutherland make them unique in Europe. They are three times larger than any other peat mass in the UK. Dystrophic waters are especially common in the Peatlands. Compared to most other blanket bog systems, at this site waterbodies account for a high proportion of the bog surface. Dystrophic water bodies here range in size from pools to medium-sized lochans. Surface patterns and pool complexes occur in a variety of forms, reflecting different climatic and hydrological conditions within the site.
- Northern Atlantic wet heaths with *Erica tetralix*
  - Wet heath usually occurs on acidic, nutrient-poor substrates, such as shallow peats or sandy soils with impeded drainage. The vegetation is typically dominated by mixtures of cross-leaved heath *Erica tetralix*, heather *Calluna vulgaris*, grasses, sedges and *Sphagnum* bog-mosses. Wet heath is an important habitat for a range of vascular plant and bryophyte species of an oceanic or Atlantic distribution in Europe, several of which have an important part of their EU and world distribution in the UK. Northern Atlantic wet heaths with *Erica tetralix* are restricted to the Atlantic fringe of Europe between Norway and Normandy. A high proportion of the EU resource occurs in the UK. Northern Atlantic wet heaths with *Erica tetralix* occur throughout the UK but are highly localised in parts of southern and central England. Wet heaths become increasingly extensive in the cool and wet north and west, especially in the Scottish Highlands. However, the area covered by wet heath is significantly smaller than that covered by 7130 Blanket bogs or dry heath.
- Oligotrophic to mesotrophic standing waters with vegetation of the *Littorelletea uniflorae* and / or of the *Isoëto-Nanojuncetea*
  - Caithness and Sutherland Peatlands supports a range of high-quality freshwater loch habitats that include oligotrophic to mesotrophic standing waters. The lochs are part of large, generally nutrient-poor, drainage systems which characterise this part of the northern Highlands. The site covers an area greater than 140,000 ha and includes several hundred freshwater lochs of which the larger are oligotrophic. The lochs are generally located within 7130 blanket bog and peatlands that sit on nutrient-poor rocks. The aquatic vegetation is dominated by a very narrow range of species typical of northern, upland, lochs but there is much local variation in their abundance. The most characteristic species are shoreweed *Littorella uniflora*, water lobelia *Lobelia dortmanna*, bulbous rush *Juncus bulbosus*, bog pondweed *Potamogeton polygonifolius* and alternate water-milfoil *Myriophyllum alterniflorum*. More mesotrophic lochs support a wider range of pondweed *Potamogeton* species; other species present include stoneworts *Chara* spp. and *Nitella* spp. and least bur-reed *Sparganium*

natans. The margins of a few lochs support two nationally scarce plants; bog hair-grass *Deschampsia setacea* and marsh clubmoss *Lycopodiella inundata*. Other notable species include awlwort *Subularia aquatica* and water sedge *Carex aquatilis*. The range of aquatic invertebrates includes the nationally rare water beetle *Oreodytes alpinus*.

- Marsh saxifrage
  - Marsh saxifrage *Saxifraga hirculus* is a an attractive, yellow-flowered perennial that requires base-rich and wet conditions. It is now considered an upland species because its favoured habitats in the lowlands have been destroyed. It has suffered from overgrazing and drainage. Many of the sites for the species are heavily grazed, although moderate levels of grazing are probably beneficial to this plant. *Saxifraga hirculus* is widely distributed in Europe but it is declining or threatened in most countries. In the UK marsh saxifrage *Saxifraga hirculus* is found only at a very few sites in the uplands of Scotland and England, and at one site in Northern Ireland. Since the 19th century, it has become extinct in several areas, mostly in Scotland. The centre of distribution of marsh saxifrage in the UK is the North Pennines in England. In this area distributions are very patchy within flushes so that population estimates are hard to obtain, but there are several localities with thriving populations of many thousands of plants. In summer 1999 estimates made across the main English and Scottish localities suggested a population of well over 300,000 plants, with the largest single population surveyed estimated at 153,100 (Hallam & Kelly 2002). When considered together, the English localities hold over 90% of the UK population of the species. Sites in Scotland and Northern Ireland tend to have much smaller populations, although Craigengar in Scotland supported an estimated 9,666 plants in summer 1999.
- Transition mires and quaking bogs
  - The term ‘transition mire’ relates to vegetation that in floristic composition and general ecological characteristics is transitional between acid bog and 7230 Alkaline fens, in which the surface conditions range from markedly acidic to slightly base-rich. The vegetation normally has intimate mixtures of species considered to be acidophile and others thought of as calciphile or basophile. In some cases the mire occupies a physically transitional location between bog and fen vegetation, as for example on the marginal lagg of raised bog or associated with certain valley and basin mires. In other cases these intermediate properties may reflect the actual process of succession, as peat accumulates in groundwater-fed fen or open water to produce rainwater-fed bog isolated from groundwater influence. Many of these systems are very unstable underfoot and can therefore also be described as ‘quaking bogs’. Transition mires and quaking bogs have a wide European distribution but appear to be relatively scarce in the Mediterranean region. In a UK context transition mires and quaking bogs are a widespread but local habitat type in the UK that is ecologically variable and occurs in a wide range of geomorphological contexts.

8.7.27 The only qualifying interest habitat of Caithness and Sutherland SAC recorded in this area was blanket bog. Surveys recorded both active peat forming blanket bog, and degraded blanket bog: impacts are presented separately for these two habitat types. Degraded blanket bog included areas of felled coniferous plantation woodland on blanket bog. In areas of active blanket bog, potential pressures on habitat condition were recorded in some areas, including encroachment on bog habitats by self-set trees.

8.7.28 No other qualifying interest habitats occur in the Survey Area and as such will not be affected by the Proposed Development. Additionally, no observations of plant species that are qualifying interest features (including marsh saxifrage) were recorded during baseline surveys.

8.7.29 Construction of the Proposed Development will require installation of 10 steel lattice towers within the boundary of the Caithness and Sutherland Peatlands SAC. Temporary construction compounds will be required at each tower location, and sections of permanent and temporary access track will be required to access tower

locations. Temporary EPZ pulling positions will be required at angle towers to install the conductors, with two locations located within the SAC. The location of the Proposed Development infrastructure in relation to habitats within the SAC are presented in **Volume 3, Figures 8.3**.

8.7.30 The Proposed Development will result in a permanent loss of 1.27 ha within the SAC, comprising:

- 1.13 ha of blanket bog (H7130);
- 0.09 ha of degraded blanket bog; and
- 0.05 ha of purple moor-grass and rush pastures.

8.7.31 The Proposed Development will result in a temporary loss of 23.06 ha within the SAC, comprising:

- 21.37 ha of blanket bog (H7130);
- 1.69 ha of degraded blanket bog.

8.7.32 Relative to the total area of the SAC, impacts to designated habitats comprise:

- 0.009% Permanent loss
- Temporary loss – 0.0158%
- Total loss – 0.0166%

8.7.33 Signs of otter activity (spraints) were recorded on the Halsary Burn, which forms the boundary of the SAC in this location, and on the Burn of Tacher which passes through the SAC (**Volume 5, Appendix 8.4: Protected Species Technical Report**). No otter holts (underground shelters) or couches (temporary shelters) were recorded in this area.

8.7.34 As otter are active in the local area, there is the potential for adverse effects on otter where watercourses pass through or in close proximity to the Proposed Development.

8.7.35 Direct loss of habitat within the SAC is not expected. The watercourses will not be directly affected by the Proposed Development as they are oversailed by the OHL. There is the potential for temporary construction related disturbance and displacement of otter from the surrounding habitat, and mortality risk during works, as the species is wide-ranging and highly mobile. A single permanent access track crossing of the Halsary Burn is proposed adjacent to Tower N25; this crossing will be a private access.

8.7.36 The Applicant will utilise embedded mitigation measures, including their Otter SPP and GEMPs (e.g. Water Crossings) to reduce the impacts on any otters using the surrounding area to a not significant level.

8.7.37 The site is assigned a **high** value due to its international status, with a **negligible** impact magnitude on account of the very small / localised loss of qualifying habitat, amounting to a fraction of a percentage of the resource found within the site. Impacts on this protected site when considering value of the site and magnitude of the impact are predicted to be **not significant**.

8.7.38 A Report to Inform HRA is presented in **Volume 5, Appendix 8.7** in order to provide the Competent Authority with the information they require to inform their own assessment of LSEs on this protected site at the time of application. The HRA screening report concluded likely significant effects from the Proposed Development, however, following Appropriate Assessment it has been concluded that the integrity of the Site would not be adversely affected.

Dunbeath Water SSSI

8.7.39 The Proposed Development passes within Dunbeath Water SSSI (measuring 151.84 ha), a nationally protected site located 1 km west of Dunbeath, Caithness. The site is designated for biological features comprising:

- Upland birch woodland.
  - Native woodland has a very restricted distribution in Caithness, and Dunbeath Water is one of the larger areas of birch woodland in the county. The dominant tree species are downy birch *Betula pubescens* and hazel *Corylus avellana*, with smaller amounts of rowan *Sorbus aucuparia* and willow *Salix sp.* Aspen *Populus tremula* and bird cherry *Prunus padus* are frequent. Blackthorn *Prunus spinosa* and the nationally scarce downy currant *Ribes spicatum* are also found here. The rich and varied ground flora supports fine stands of tall herbs and ferns, including species such as bugle *Ajuga reptans*, male fern *Dryopteris filix-mas*, oak fern *Gymnocarpium dryopteris* and great wood-rush *Luzula sylvatica*. Other species include opposite-leaved golden saxifrage *Chrysosplenium oppositifolium*, burnet rose *Rosa pimpinellifolia*, wood millet *Milium effusum* and grass-of-parnassus *Parnassia palustris*.

8.7.40 No permanent infrastructure is required to be sited within this SSSI. An operational corridor free from trees at risk of falling on the conductors is required to be maintained for safety reasons.

8.7.41 The Proposed Development is predicted to result in the permanent loss of:

- 0.05 ha of Upland birchwoods

8.7.42 Relative to the total area of the SSSI, impacts to designated habitats comprise 0.0329% permanent loss. No temporary impacts to designated habitats are predicted.

8.7.43 Removal of trees associated with the operational corridor will provide a break in canopy of up to 90 m, with potential fragmentation effects on the remaining woodland crossed by the Proposed Development.

8.7.44 The site management statement identifies grazing by sheep and deer as a key pressure, preventing natural regeneration on account of seedings being grazed. The statement notes the site is still capable of regeneration with tree and shrub diversity maintained, however, due to the pressures the site was assessed as being in unfavourable condition. Exclosures were erected on site in the 1990s and where exclusion of grazing species has been successful these show tree seedling establishment has been successful.

8.7.45 The site is assigned a **medium** value due to its national status, with a **low** impact magnitude. Impacts are characterised by the designated sites inability to recover naturally from losses associated with the Proposed Development, due to the loss of mature trees within the operational corridor. Losses will further restrict the site's ability for future regeneration on account of a reduction in future additions to the seedbank, and potentially a loss of species diversity. Impacts on this protected site when considering value of the site and magnitude of the impact are considered **significant** at a regional level.

Langwell Water SSSI

8.7.46 The Proposed Development passes within Langwell Water SSSI (measuring 285.27 ha), a site of national importance, located 8 km south of Dunbeath on the east coast of Caithness. The site is designated for:

- Birch woodland
  - Langwell Water SSSI is one of the best examples of woodland habitat in Caithness. Woodland is a comparatively rare habitat in the county and, in combination with the adjacent Berriedale Water woodland, this site supports the largest area of native woodland in Caithness.

- The valley sides of Langwell Water have several large blocks of open woodland. Downy birch *Betula pubescens* and rowan *Sorbus aucuparia* are the commonest species of tree but alder *Alnus glutinosa*, hazel *Corylus avellana*, bird cherry *Prunus padus*, willow *Salix* spp. and aspen *Populus tremula* are also found here. Birch-rowan woodland occurs on the valley sides whilst alder woodland is found on the wetter slopes and on some of the river terraces. Birch-hazel woodland is found further downstream where there are rock outcrops and a short section of gorge.
- The ground flora is predominantly acid grassland with plants such as hard-fern *Blechnum spicant*, wood sage *Teucrium scorodonia* and chickweed-wintergreen *Lysimachiaeuropaea*. Blaeberry *Vaccinium myrtillus* grows extensively under the trees in some parts of the site. Wood sorrel *Oxalis acetosella* and opposite-leaved golden saxifrage *Chrysosplenium oppositifolium* are found in the alder woodland. Tall fern and herb species are found in the rocky area near the gorge, with typical species including great wood-rush *Luzula sylvatica*, foxglove *Digitalis purpurea*, polypody *Polypodium vulgare* and male-fern *Dryopteris filix-mas*.

8.7.47 A single tower compound and access tracks are proposed within this SSSI.

8.7.48 The Proposed Development will result in permanent loss of 0.11 ha within the SSSI, comprising:

- 0.11 ha of upland birchwoods.

8.7.49 The Proposed Development will result in no temporary loss of designated habitats within the SSSI.

8.7.50 Relative to the total area of the SSSI, impacts to designated habitats comprise:

- 0.0386% permanent loss.

8.7.51 The site is assigned a **medium** value due to its national status, with a **negligible** impact magnitude on account of the very small / localised loss of qualifying habitat, amounting to a fraction of a percentage of the resource found within the site. Impacts on this protected site when considering value of the site and magnitude of the impact are predicted to be **not significant**.

River Thurso SAC

8.7.52 The Proposed Development is located approximately 653 m from River Thurso SAC (measuring 348.25 ha) and has a direct hydrological connection to this European protected site of international importance, designated for:

- Atlantic salmon.
  - The River Thurso drains a moderately large peatland catchment in Caithness and flows north through a short section of agricultural land before entering the Pentland Firth at the town of Thurso. The river supports a higher proportion of multi sea-winter salmon than is found in many rivers further south in the species' range. This is aided by the northerly location of the river and the cooler ambient water temperature, resulting in slower-growing juveniles which smolt at an older age, and tend to return as older multi sea-winter salmon. In addition to these multi sea-winter fish, grilse also return to the River Thurso, meaning that the river supports the full range of salmon life-history types.
  - The site is considered to be one of the best areas in the UK for this species.

8.7.53 Tower N36 is located 40 m from the Burn of Tacher, a tributary of River Thurso SAC, and the temporary access track to Tower N35 is situated 35 m from the burn. Due to the distance between the Proposed Development and Burn of Tacher, the bankside vegetation can be maintained, and standard pollution prevention measures will be implemented. No in-stream works are proposed, with the conductors oversailing the watercourse. No barriers to fish passage, no direct mortality of salmon, or destruction of breeding habitat are predicted.

8.7.54 The Proposed Development crosses the Burn of Tacher (which is hydrologically connected to the River Thurso) approximately 1.1 km upstream of the SAC. There is the potential for indirect loss of supporting habitats for Atlantic salmon as a result of construction run off or pollution. However, no in-stream works are proposed at this location. All infrastructure will be situated outside of a riparian corridor buffer recommended by SEPA to protect watercourses: the nearest tower (Tower N36) is situated approximately 40 m from the Burn of Tacher and the nearest temporary access track is approximately 35 m from the burn. With this buffer in place to protect bankside vegetation and the distance between the burn and the SAC (which falls outside of the predicted ZoI for the Proposed Development), and with standard pollution prevention measures in place, no significant impacts are expected.

8.7.55 The site is assigned a **high** value due to its international status, with a **negligible** impact magnitude on account of watercourse standoffs and no in-stream works, paired with the embedded mitigation presented in **Volume 5, Appendix 8.2**. Impacts on this protected site are predicted to be **not significant**.

8.7.56 A Report to Inform HRA is presented in **Volume 5, Appendix 8.7** in order to provide the Competent Authority with the information they require, to inform their own assessment of LSEs on this protected site at the time of application. The report concludes no likely significant effect on the site from the Proposed Development.

Shielton Peatlands SSSI

8.7.57 The Proposed Development passes within Shielton Peatlands SSSI (measuring 5631.97 ha), a nationally protected site, located 6 km north of Lybster. The site forms the largest continuous area of peatland in the eastern part of Caithness, supporting nationally important blanket bog habitat and upland breeding birds. Parts of the site are being restored to blanket bog from conifer plantation. The key feature of this site is:

- Blanket bog.
  - Blanket bog has formed on a gently undulating landscape between 50 m and 150 m above sea level. The site contains two types of blanket bog: valley side mire which occurs on sloping ground, and watershed mire which is found on the flat ground above the slopes. The type of watershed mire found here has numerous, deep, widely spaced pools and is particularly noteworthy as it is found only in this part of Caithness. The blanket bog vegetation is dominated by deergrass *Trichophorum cespitosum*, cottongrass *Eriophorum* spp., heather *Calluna vulgaris* and species of *Sphagnum* bog moss. The relative abundance of these species varies locally. The highest cover of *Sphagnum* moss is found in the wetter parts of the site, whilst heather is more dominant in the drier areas. Parts of the site support a distinctive plant community which has extensive cover of hare's-tail cottongrass *Eriophorum vaginatum*, together with heather, bearberry *Arctostaphylos uva-ursi* and crowberry *Empetrum nigrum*. There are several areas of pools on this site. The pool systems display a wide range of patterns, from scattered seasonal pools filled with *Sphagnum* to permanent pools and lochans. Some parts of the site have a maze of dubh lochans in a variety of shapes whilst others have more regular, elongated pools. Some of the pool systems contain areas of quaking mire, a nationally rare type of bog that has a floating carpet of *Sphagnum* moss. Species of *Sphagnum* moss found on this site include the hummock forming species *S. fuscum* and the nationally scarce *S. austinii*. Other notable species which have a restricted distribution in Caithness include cranberry *Vaccinium oxycoccos* and the nationally scarce small cranberry *V. microcarpum*. The nationally rare marsh saxifrage *Saxifraga hirculus* is also found on this site. This is one of only two known populations within the Caithness and Sutherland Peatlands.

8.7.58 The management statement identifies the site to be in favourable condition, although it was noted that some conifer seedling had seeded into the site and signs of trampling and grazing were noted by both deer and livestock. The management statement further notes damage to blanket bog resulting from the installation of an

underground cable, which is revegetating and recovering, the long term effects of the damage are noted as unclear.

8.7.59 The Proposed Development crosses Shielton Peatlands SSSI at two locations, with infrastructure comprising:

- Ten tower bases;
- Temporary access tracks;
- Permanent access tracks; and
- Two temporary EPZ pulling positions at Tower N24, to facilitate stringing of the conductors.

8.7.60 The Proposed Development will result in a permanent loss of 1.22 ha, within the SSSI, comprising:

- 1.13 ha of blanket bog (H7130);
- 0.09 ha of degraded blanket bog.

8.7.61 The Proposed Development will result in a temporary loss of 23.06 ha within the SSSI, comprising:

- 21.37 ha of blanket bog (H7130);
- 1.69 ha of degraded blanket bog.

8.7.62 Relative to the total area of the SSSI, impacts to designated habitats comprise:

- 0.0217% permanent loss
- 0.4094% temporary loss; and
- 0.4311% combined permanent and temporary loss.

8.7.63 The site is assigned a **medium** value due to its national status, with a **low** impact magnitude on account of the small / localised loss of qualifying habitat, amounting to a fraction of a percentage of the resource found within the site. Impacts on this protected site when considering value of the site and magnitude of the impact are predicted to be **significant.**

Berriedale Water SSSI

8.7.64 The Proposed Development passes within Berriedale Water SSSI (measuring 215.54 ha), a nationally designated site located 7 km south west of Dunbeath in Caithness. The site is designated for:

- Birch woodland:
  - Native woodland is a rare habitat in Caithness and, along with Langwell Water SSSI just to the south, this is the largest native woodland in the county. The woodlands grow on the slopes surrounding the Berriedale Water. There are many large blocks of open, semi-natural broadleaf woodland dominated by downy birch *Betula pubescens* and rowan *Sorbus aucuparia*, together with aspen *Populus tremula* and willow *Salix* sp. Fragments of hazel *Corylus avellana* woodland can be found on dry sandstone outcrops whilst alder *Alnus glutinosa* grows in the wetter areas.
  - The ground flora is predominantly acid grassland with many woodland mosses and ferns, including hard fern *Blechnum spicant*, beech fern *Phegopteris connectilis* and oak fern *Gymnocarpium dryopteris*. The upper and drier slopes give rise to a more diverse woodland field layer including blaeberry *Vaccinium myrtillus*, chickweed wintergreen *Trientalis europaea*, wood sage *Teucrium scorodonia* and wood sorrel *Oxalis acetosella*.

8.7.65 The management statement for the site assesses the site as being in unfavourable condition due to the level of deer grazing. Red deer over winter within the woodlands and the grazing pressure has prevented tree regeneration. As a result, there is an unbalanced age structure with a predominance of over mature, even-aged trees, with a significant reduction in the amount of tall fern and herb species within the ground layer. Exclosures

within the site showed the ground flora and understory had flourished and natural tree regeneration was greatly improved, with large numbers of birch seedlings and saplings.

8.7.66 Within Berriedale Water SSSI, a single temporary tower construction site compound is proposed. Further to this an operational corridor free from trees at risk of falling on the conductors, is required to be maintained for safety reasons. No further temporary or permanent infrastructure is proposed within this designated site.

8.7.67 The Proposed Development will result in a permanent loss of 1.99 ha, within the SSSI, comprising:

- 1.99 ha of upland birchwoods.

8.7.68 The Proposed Development will result in a temporary loss of 0.03 ha within the SSSI, comprising:

- 0.03 ha of upland birchwoods.

8.7.69 Relative to the total area of the SSSI, predicted impacts to designated habitats comprise:

- 0.9233% permanent loss
- 0.0139% temporary loss; and
- 0.9372% combined permanent and temporary loss.

8.7.70 The site is assigned a **medium** value due to its national status, with a **low** impact magnitude. Impacts on this protected site are based on the fact that the site in its current condition is unable to naturally recover from the stated losses without intervention, and the loss of mature trees will likely further reduce any future ability to recover. Impacts on this protected site, when considering value of the site and magnitude of the impact are considered to be **significant** at a regional level.

World Heritage Site Scotland: The Flow Country

8.7.71 The Flow Country WHS (measuring 187,026 ha) represents an outstanding example of an actively accumulating blanket bog landscape, whose integrity is tied to those elements of OUV needed to demonstrate the ecological and biological processes and biodiversity of this globally significant ecosystem.

8.7.72 The offsetting of impacts is deemed by UNESCO to be inappropriate in a World Heritage context. The Applicant has employed the mitigation hierarchy to avoid, minimise and restore, through first avoiding impacts (mitigation by design), and secondly establishing embedded mitigation. With the application of these measures, and given the extent of The Flow Country WHS, the Proposed Development is not predicted to disrupt the primary ecological processes that sustain the OUV, with impacts reduced such that no adverse effect on the OUV of The Flow Country WHS is anticipated.

8.7.73 As a result, there will be no significant adverse effects as a result of the Proposed Development on the OUV attributes or integrity of the WHS, either alone or in combination with other projects. The full assessment of impact to the WHS can be found in **Volume 5, Appendix 8.10: The Flow Country World Heritage Site (WHS) Impact Assessment Report**.

Dornoch Firth and Loch Fleet Ramsar Site

8.7.74 Dornoch Firth and Loch Fleet Ramsar site is a large area covering the two northernmost estuaries in the Moray Basin ecosystem. Dornoch Firth extends eastwards for 25 km from Newton Point to the point of Tarbat Ness and supports large areas of sandflats and mudflats, dune heath and sand dunes, saltmarsh and a stretch of rocky shore. Loch Fleet is a narrow-mouthed estuary containing extensive sandflats which are bordered by sand dunes, pine wood and estuarine alder woodland. The sand dunes at Dornoch Links and Morrich More are of international importance for their flora and geomorphology.

8.7.75 This wetland of international importance falls within approximately 4 m of the Proposed Development and has a direct hydrological connection to it. The key features of this site under Criterion 1 are:

- Mound Alderwoods at the head of Loch Fleet, is the largest estuarine alder woodland in Britain (established when the inner part of Loch Fleet was enclosed from the sea by the building of the Mound embankment in 1816).
- The estuaries of Dornoch Firth and Loch Fleet are unlike other nearby estuaries and are both relatively unaffected by industrial development. Dornoch Firth is a particularly good example of an east coast estuary, large and complex, composed of extensive intertidal mudflats and sandflats with saltmarsh fringing the shores and sizable eelgrass beds. The saltmarsh and brackish pools at Morrich More form the best example of this habitat in the north of Scotland. Loch Fleet is an example of a shallow, bar-built estuary with extensive sandflats and additional areas of saltmarsh in sheltered areas.
- Morrich More is one of the most outstanding coastal sites in Britain. It is especially noteworthy for sand dunes, including the development of a large low-level sandy plain on which a set of parabolic dunes are superimposed. The sand dunes contain extensive examples of transitions from shifting dunes to dune grassland and dune heathland. At Coul Links there is a large sand dune system which contains a complete transition from foredune to sand dune slacks. The sand dune slacks or winter lochs / pools occur in wet areas created by variations in the water table and seasonal flooding. Sand dune slacks of exceptional quality and scale are widespread at Coul Links, displaying a rich diversity of vascular plants. There is also a very rare form of lichen heath on mixed sand and shingle at Cuthill Links with further areas of lichen-rich and moss-rich heath at Morrich More, Dornoch Links and Ferry Links.

8.7.76 Dornoch Firth and Loch Fleet Ramsar site further qualifies under Ramsar Criterion 2 by supporting:

- The nationally scarce Baltic rush *Juncus balticus* and seaside centaury *Centaurium littorale*, both associated with the sand dune and saltmarsh habitats, and
- The scarce dwarf eelgrass *Zostera noltei* and eelgrass *Z. marina* (the two species of eelgrass include plants recorded as *Z. angustifolia*), within the estuaries.
- Harbour seal *Phoca vitulina* and otter *Lutra lutra,* both range throughout the estuarine habitat.

8.7.77 The estuarine and sand dune habitats of the Ramsar site are situated near to the coast and do not occur close to the Proposed Development. The start of the estuarine habitat in Loch Fleet lies 3 km to the east of the Proposed Development, and the majority of sand dune habitats are over 6.6 km to the east. Due to the distance between the Proposed Development and the estuarine and sand dune habitats of the Ramsar, no significant indirect loss of habitat is predicted.

8.7.78 Baltic rush and seaside centaury are associated with sand dune and saltmarsh habitats. Dwarf eelgrass and eelgrass grow within estuarine habitats. Due to the distance between the Proposed Development and these habitats, and with standard pollution measures in place, no significant effects from pollution or sediment run off is predicted. No significant indirect loss of habitat or the associated plants is expected.

8.7.79 Harbour seal isa highly mobile species associated with estuarine / marine habitats. The start of the estuarine habitat in Loch Fleet lies 3 km to the east of the Proposed Development, on account of this distance no significant effects on seals are likely.

8.7.80 No temporary or permanent infrastructure associated with the Proposed Development is situated within the Ramsar site. The River Fleet is situated approximately 25 m from the Tower N266 and 16 m from Tower N265; all towers are situated outside the SEPA Recommended Riparian Corridor (15m) for the River Fleet to protect the riparian zone. As such, it will be possible to maintain bankside vegetation and implement all standard pollution prevention controls to prevent pollution of the river and associated downstream effects. The proposed

OHL crossing point at the River Fleet is over 1 km upstream of the Ramsar site, where the OHL oversails the River Fleet, so there are no predicted effects within the designated site. In addition, any potential effects will be managed through the embedded mitigation measures detailed above. With these measures in place, the risk of indirect habitat loss or degradation from run off / pollution during construction activity is reduced to negligible; therefore, no adverse effects on the alder woodland in relation to the conservation objectives for the Dornoch Firth and Loch Fleet Ramsar site are predicted.

8.7.81 No sign of otters or their holts (underground shelters) or couches (temporary shelters) were recorded within 200 m of the Proposed Development along the River Fleet. However, the species is active in the local area with one otter spraint recorded just inside the Ramsar site boundary on a small watercourse and 200 m from the proposed temporary access track (**Volume 5, Appendix 8.4: Protected Species Technical Report**).

8.7.82 As otter are active in the local area and are a mobile species, there is the potential for adverse effects on otter such as disturbance or mortality during works and indirect loss of habitat within the Ramsar site as a result of construction run-off or pollution. As detailed above, the risk of indirect habitat loss or degradation from run off / pollution within the Ramsar site during construction is negligible with embedded mitigation in place, therefore no effect on Ramsar habitats used by otter are predicted. The River Fleet (upstream of the Ramsar site) will not be directly affected as it is oversailed by the OHL and no in-river works are planned. There is the potential for temporary construction related disturbance and displacement of otter from the surrounding habitat, and mortality risk during works, as the species is wide-ranging and highly mobile. The Applicant will utilise mitigation measures, including their Otter SPP and GEMPs (e.g. Water Crossings) to minimise the impacts on any otters using the surrounding area outside the Ramsar boundary. As a result, effects on otter will be negligible and no adverse effects in relation to the conservation objectives for the species are predicted.

8.7.83 A temporary cut and fill track is proposed, to access Towers N267 to N269, and will join an existing track that follows the southern boundary of the northern most end of the Loch Fleet section of the Ramsar site. The temporary track starts at the end of the existing track, approximately 4 m south-west from the Ramsar site boundary.

8.7.84 Both the designated site and the Proposed Development are situated on a slope which falls to the north east. As such it is not anticipated that groundwater connectivity between Tower N266 and the Ramsar site is likely.

8.7.85 A single access road is identified as crossing the River Fleet approximately 4.5 km upstream of the OHL crossing point, however, this river crossing exists currently as part of a farm access road and will not be created as part of the Proposed Development. On account of no in river infrastructure, the River Fleet will remain passable to otter.

8.7.86 The site is assigned a **high** value due to its international status, with a **negligible** impact magnitude on account of no temporary or permanent infrastructure being located within the site and application of embedded mitigation measure (**Volume 5, Appendix 8.2: Ecology Assessment Methodology**) at works sites associated with local tower and track construction. Impacts on this protected site, when considering value of the site and magnitude of the impact are predicted to be **not significant**.

8.7.87 A Report to Inform HRA is presented in **Volume 5, Appendix 8.7** in order to provide the Competent Authority with the information they require, to inform their own assessment of LSEs on this protected site at the time of application. The HRA screening report concluded likely significant effects from the Proposed Development, however, following Appropriate Assessment it has been concluded that the integrity of the Site would not be adversely affected.

Mound Alderwoods SAC

8.7.88 The Mound Alderwoods SAC is designated for alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion, Alnion incanae, Salicion albae*) for which this is considered to be one of the best areas in the United Kingdom. This European site which falls within 250 m of the Proposed Development has potential groundwater connectivity to it. The key feature of this site is;

- Alder woodland on floodplains.
  - Mound Alderwoods in north east Scotland is the most northerly site selected and is the largest estuarine alder *Alnus glutinosa* wood in Britain. It provides examples of successional stages from estuarine mud to dense woodland and is representative of the more stable form of the habitat. A few dry ridges have an open growth of Scots pine *Pinus sylvestris* with a dry ground flora beneath. The alderwoods have both dry and waterlogged areas. In the former, characteristic plants include remote sedge *Carex remota*, Yorkshire fog *Holcus lanatus* and tufted hair-grass *Deschampsia cespitosa*. The swamp areas are generally richer and include species such as fen ragwort *Senecio paludosus*, marsh pennywort *Hydrocotyle vulgaris*, marsh bedstraw *Galium palustre* and meadowsweet *Filipendula ulmaria*.

8.7.89 The Proposed Development is located approximately 160 m north west of the SAC at its closest point, with both the site and the Proposed Development being situated on a slope which falls to the north east. As such, it is not anticipated that groundwater connectivity between the Towers N265 and N266 and the site is likely. Both tower locations are situated beyond the SEPA Recommended Corridor to the River Fleet; as such, it will be possible to maintain bankside vegetation and implement all standard pollution prevention controls to prevent pollution of the river and associated downstream effects. A single proposed temporary access track connects to an existing track, located 4 m from the boundary of the SAC, within a modified grassland field. Impacts on groundwater from the construction of this track are likely to be negligible given the presence of the existing track running adjacent to the designated site. Effects are anticipated to be temporary and are hence unlikely to affect the qualifying features of the SAC.

8.7.90 The site is assigned a **high** value due to its international status, with a **negligible** impact magnitude. Impacts on this protected site, when considering value of the site and magnitude of the impact are predicted to be **not significant**.

8.7.91 A Report to Inform HRA is presented in **Volume 5, Appendix 8.7** in order to provide the Competent Authority with the information they require to inform their own assessment of LSEs on this protected site at the time of application. The HRA screening report concluded likely significant effects from the Proposed Development, however, following Appropriate Assessment it has been concluded that the integrity of the Site would not be adversely affected.

Mound Alderwoods SSSI

8.7.92 Mound Alderwoods SSSI lies at the head of Loch Fleet in east Sutherland, 5 km south west of Golspie. The wet woodland, saline lagoon and the breeding birds that the wetland habitats support are of national importance. This Nationally protected site which falls within 4 m of the Proposed Development and has potential groundwater connectivity to it. The key ecological features of this site are:

- Wet woodland.
  - The alder woodland developed after the inner part of Loch Fleet was enclosed by the Mound embankment in 1816. It is one of the best examples of floodplain alderwood in Britain. There is an extensive alder swamp *Alnus glutinosa*, with areas of open fen. In addition to alder which is dominant, grey willow *Salix cinerea* and ash *Fraxinus excelsior* are frequent throughout. In the slightly drier parts

of the alderwood, shrubs such as hawthorn *Crataegus monogyna* and juniper *Juniperus communis* add to the shrub layer.

  - The alder woodland ground flora includes; remote sedge *Carex remota*, marsh ragwort *Senecio palustris*, meadow-sweet *Filipendula ulmaria* and occasional stands of yellow iris *Iris pseudacorus*. In drier areas of the woodland, the field layer is dominated by tufted hair-grass *Deschampsia cespitosa*. Fen habitats are a feature of this woodland site, including a range of sedge species, soft rush *Juncus effusus*, and purple-moor grass *Molinia caerulea* tussocks intermixed with bog-myrtle *Myrica gale*.

- Saline lagoon.
  - This lagoon has formed behind the Mound causeway covering approximately 24 ha. It is a 'sluiced saline lagoon' with an open connection to the sea (Loch Fleet). The lagoon retains a proportion of water at all times and has a maximum depth of only about 0.5 m. There is minimal influence from wave action and tidal currents.
  - The Mound Lagoon accumulates fine sediments from the River Fleet, adding to the muddy bed and mud / sand margins of the lagoon. Characteristic aquatic mud-dwelling animals are present, such as the ragworm *Hediste diversicolor*, mud-shrimp *Corophium volutator*, lugworm *Arenicola marina*, lagoon cockle *Cerastoderma glaucum* and shrimps *Crangon sp.* Green algae *Enteromorpha sp.*, sea-weed wrack *Fucus ceranoides* and eel-grass *Zostera sp.* are some of the plants which grow in the Mound Lagoon.

8.7.93 The Proposed Development is located approximately 160 m north west of the SSSI at the closest point, with both the designated site and the Proposed Development being situated on a slope which falls to the north east. As such, it is not anticipated that groundwater connectivity between Towers N265 and N266 and the site is likely. Both tower locations are situated beyond the SEPA Recommended Corridor to the River Fleet; as such, it will be possible to maintain bankside vegetation and implement all standard pollution prevention controls to prevent pollution of the river and associated downstream effects. Further hydrological assessment can be found in **Chapter 10: Water Environment, Section 10.5**. A proposed temporary access track connects to an existing track, located 4 m from the boundary of the SSSI, within a modified grassland field. Impacts on groundwater from the construction of this track are likely to be negligible given the presence of the existing track running adjacent to the designated site. Effects are anticipated to be temporary and are hence unlikely to affect the cited features of the SSSI.

8.7.94 The site is assigned a **medium** value due to its national status, with a **negligible** impact magnitude. Impacts on this protected site, when considering value of the site and magnitude of the impact are predicted to be **not significant**.

Strathfleet SSSI

8.7.95 Strathfleet SSSI (133.87 ha) is located on steep slopes between the Mound causeway and Rogart in east Sutherland. The site has been designated for its nationally important rock outcrops, oak woodland and range of rare plant species. This is a Nationally protected site which is crossed by the Proposed Development. The key features of the designated site are:

- Upland oak woodland.
  - The semi-natural upland oak woodland at Morvich is the most northerly oak wood of significance in eastern Scotland. Although this oak wood is relatively small, compared to other southern oak woodlands, it supports some impressive veteran oaks and a good range of typical woodland species for this habitat type. In addition to oak *Quercus petraea* / *robur*, commonly occurring tree species are birch *Betula pubescens*, hazel *Corylus avellana*, rowan *Sorbus aucuparia* and alder *Alnus glutinosa*. The understorey is open with woody shrubs being uncommon, although gorse (whin) *Ulex europaeus* is locally common. The ground flora is largely dominated by grasses; wavy-hair grass *Deschampsia*

cespitosa and sweet-vernal grass *Anthoxanthum odoratum*, and woodland herbs, such as; common cow-wheat *Melampyrum pratense*, wood sorrel *Oxalis acetosella* and wood sage *Teucrium scorodonia*. The oak woodland also supports a good range of lichens growing on tree branches and high stems.

- Vascular plant assemblage.
  - Due to the varied underlying rock types and associated soils, the site supports a nationally important assemblage of plant species. Of particular note is a population of the nationally rare rock cinquefoil *Potentilla rupestris*, known to exist at only two sites in Scotland. Other scarce plant species that also contribute to this assemblage include rock whitebeam *Sorbus rupicola* and pyramidal bugle *Ajuga pyramidalis*.

8.7.96 The management statement identifies the upland oak woodland as favourable with condition maintained, with the vascular plant assemblage in unfavourable condition but recovering. Pressures on the woodland are mainly associated with grazing / browsing pressure from deer and livestock and land management for pheasants. Areas where grazing has been excluded, ground flora recovers, and tree regeneration can be achieved. It is also noted within the management statement that non-native species including pines, rhododendron and laurel are present on site.

8.7.97 The following infrastructure is proposed within Strathfleet SSSI:

- Two temporary tower compounds;
- Two permanent towers; and
- Temporary access tracks.

8.7.98 No permanent or temporary losses are predicted to habitats for which the SSSI is designated.

8.7.99 The site is assigned a **medium** value due to its national status, with a **negligible** impact magnitude on account of no loss of habitat for which the site is designated. Impacts on this protected site, when considering value of the site and magnitude of the impact are predicted to be **not significant**.

Carrol Rock SSSI

8.7.100 Carrol Rock SSSI is in east Sutherland, 6 km inland of Brora. This site has been notified for the birch wood that extends for about 2.5 km along the south shore of Loch Brora. This Nationally protected site which falls within 250 m of the Proposed Development and has potential groundwater connectivity to it. The key feature of this site is:

- Upland birch woodland.
  - The birch wood has established on block scree beneath Carrol Rock. Most of the woodland area has an open canopy dominated by birch *Betula pubescens* with a ground flora of grasses and dwarf shrubs. The moss-covered boulder ground beneath the main cliff has a dense tree canopy and includes rowan *Sorbus aucuparia*, hazel *Corylus avellana*, bird cherry *Prunus padus* and willow *Salix cinerea*. Oak *Quercus petraea* and alder *Alnus glutinosa* are also found here and the ground layer is herb-rich, including wood sorrel *Oxalis acetosella*, chickweed wintergreen *Trientalis europaea* and bluebell *Hyacinthoides non-scripta*. The block scree birch woodland habitat is considered to be of national importance.

8.7.101 No temporary or permanent infrastructure is to be sited within this SSSI and no felling associated with the OC is proposed within it. The SSSI is situated uphill of the Proposed Development, with contours closely aligned to the north of the Proposed Development illustrating a steep slope, as such, no groundwater impacts on the Carrol Rock SSSI are anticipated. As no works are to be undertaken within the SSSI and no indirect effects

have been identified, the site is expected to remain in its current condition following construction of the Proposed Development.

8.7.102 The site is assigned a **medium** value due to its national status, with a **negligible** impact magnitude. Impacts on this protected site when considering value of the site and magnitude of the impact are predicted to be **not significant**.

Kyle of Sutherland Marshes SSSI

8.7.103 The Kyle of Sutherland Marshes SSSI is located between Rosehall and Bonar Bridge in east Sutherland. This is a two-part site. The site has been notified for the nationally important floodplain plant communities, woodland and the rare plants that occur on the broad, flat floodplain terraces of the River Oykel. The Proposed Development passes through this Nationally protected site, the key features of which are:

- Flood-plain fen.
  - The floodplain terraces are regularly flooded in winter and support the best examples of floodplain fen habitat in Sutherland. There are extensive areas of wet marshy grassland with some drier areas on the river banks, old embankments and other better drained ground. The main species include bottle sedge *Carex rostrata*, common sedge *C. nigra*, marsh cinquefoil *Potentilla palustris*, water horsetail *Equisetum fluviatile* and marsh pennywort *Hydrocotyle vulgaris*. Some of the areas of fen form quaking mires with transitions to open water. The wettest areas grade into stands of water sedge *Carex aquatilis* and estuarine sedge *Carex recta*. Extensive areas of wet grassland support tufted hair-grass *Deschampsia cespitosa* and soft-rush *Juncus effusus*, with variable amounts of tall herbs including meadowsweet *Filipendula ulmaria*, sneezewort *Achillea ptarmica*, angelica *Angelica sylvestris* and skull-cap *Scutellaria galericulata*. There are isolated stands of bladder sedge *Carex vesicaria*, yellow iris *Iris pseudacorus* and melancholy thistle *Cirsium heterophyllum* within the marshy grassland. Drier areas have a typical grazed acid grassland flora, with red fescue *Festuca rubra* and mat grass *Nardus stricta*.
- Wet woodland.
  - The site includes blocks of wet woodland dominated by a canopy of alder *Alnus glutinosa* on the floodplains, grading into birch woodland on neighbouring drier slopes. The alder woodland has an understory with scattered hawthorn *Crataegus monogyna*, hazel *Corylus avellana* and guelder-rose *Viburnum opulus*. The field layer typically consists of ferns, grasses, sedges and some flowering herbs, such as; lady fern *Athyrium filix-femina*, creeping soft-grass *Holcus mollis*, remote sedge *Carex remota* and opposite-leaved golden saxifrage *Chrysosplenium oppositifolium*. Fen vegetation can extend beneath the tree canopy and there is gradual transition from flood-plain fen (open fen and wet grassland) to wet woodland habitats throughout the site.
- Vascular plant assemblage.
  - The site supports a nationally important assemblage of plant species. Of particular interest is a large population of the nationally rare estuarine sedge *Carex recta*. Two scarce species, bog orchid *Hammarbya paludosa* and pillwort *Pilularia globulifera*, also grow on this site.

8.7.104 No temporary or permanent infrastructure associated with the Proposed Development is proposed within this SSSI and no felling associated with the operational corridor is proposed within it. The OHL oversails the SSSI with habitats not predicted to be affected by construction or operation. Indirect effects (such as changes to groundwater flow) associated with Towers S23 and S24 are not considered likely on account of the topography of the landscape and intervening features such as roads and drainage ditches. As no works are to be undertaken within the SSSI and no indirect effects have been identified. This designated site is expected to remain in its current condition should the Proposed Development be constructed as presented.

8.7.105 The site is assigned a **medium** value due to its national status, with a **negligible** impact magnitude. Impacts on this protected site, when considering value of the site and magnitude of the impact are predicted to be **not significant**.

River Oykel SAC

8.7.106 River Oykel's value stems from populations of Atlantic salmon *Salmo salar* for which the area is considered to support a significant presence, and freshwater pearl mussel *Margaritifera margaritifera* for which this is considered to be one of the best areas in the United Kingdom. The Proposed Development passes through this European protected site, the key features of which are:

- Freshwater pearl mussel.
  - The Oykel is a long, meandering river in the northern Highlands of Scotland that flows into the Kyle of Sutherland on the east coast. The river supports an excellent, high-quality freshwater pearl mussel *Margaritifera margaritifera* population with high densities recorded at some locations, including a bed numbering several thousand individuals. Surveys have also recorded high percentages of juveniles within the population, indicating that there has been recent successful recruitment. There is also evidence of unsurveyed pearl mussel populations in deep water that may increase the conservation importance of the river.
- Atlantic salmon.
  - Annex II species present as a qualifying feature, but not a primary reason for site selection.

8.7.107 No temporary or permanent infrastructure associated with the Proposed Development is situated within the SAC and no felling is proposed within the designated site. The nearest tower location is approximately 100 m from the SAC boundary, which is greater than SEPA's Recommended Riparian Corridor [11] maximum of 30 m, making potential effects upon aquatic habitats and species unlikely. In addition, any potential effects will be managed through the embedded mitigation measures set out in the GEMPs. With these measures in place, the risk of indirect habitat loss or degradation from run off / pollution during construction activity is reduced to negligible; therefore no adverse effects on Atlantic salmon and freshwater pearl mussel in relation to the conservation objectives for the site are predicted.

8.7.108 The OHL oversails the SAC with habitats unlikely to be affected by construction works. Indirect effects (such as changes to groundwater flow) associated with Towers S23 and S24 are not considered likely on account of the topography of the landscape and intervening features such as roads and drainage ditches. As no works are to be undertaken within the SAC and no indirect effects have been identified, the site is expected to remain in its current condition.

8.7.109 The site is assigned a **high** value due to its international status, with a **negligible** impact magnitude. Impacts on this protected site, when considering value of the site and magnitude of the impact are predicted to be **not significant**.

8.7.110 A Report to Inform HRA is presented in **Volume 5, Appendix 8.7** in order to provide the Competent Authority with the information they require, to inform their own assessment of LSEs on this protected site at the time of application. The report concludes no likely significant effect on the site from the Proposed Development.

Allt nan Caorach SSSI

8.7.111 The Allt nan Caorach SSSI (measuring 57.65 ha) is centred around the Allt nan Caorach burn, which originates on the eastern flank of the Ben Wyvis massif and flows eastwards to join the River Glass. The site is focussed on an incised gorge which has cut through different rock types and boulder clays resulting in a wide range of soil conditions. This is the only site in East Ross and Cromarty which shows the transition from valley

woodlands through upland birch woods to the upland vegetation of Ben Wyvis. The Proposed Development passes through this Nationally protected site, the key features of which are:

- Upland birch woodland.
- Subalpine dry heath.

8.7.112 The lowest section of the gorge, close to its confluence with the River Glass, is dominated by a range of deciduous trees including wych elm, oak and downy birch. At higher altitudes Scots pine becomes increasingly common although birch is still the dominant tree. On rocky bluffs above the river there are stands of aspen, juniper and on richer soils, hazel. Much of the site is steep sided and the ground flora is very diverse and reflects the range of soil conditions. Notable species include wood fescue *Festuca altissima*, wood vetch *Vicia sylvatica*, intermediate wintergreen *Pyrola media* and serrated wintergreen *Orthilia secunda*.

8.7.113 In the upper, more open parts of the gorge, particularly on the drier boulder clay banks, a range of sub alpine heath communities have developed. These are dominated by dwarf-shrubs including heather *Calluna vulgaris*, bearberry *Arctostaphylos uva-ursi* and cowberry *Vaccinium vitis-idaea* with less frequent cross leaved heath *Erica cinerea* and petty whin *Genista anglica*. Vascular plants such as common wintergreen *Pyrola minor*, slender St John's-wort *Hypericum pulchrum*, bitter vetch *Lathyrus linilolius* are present.

8.7.114 The management statement identifies the upland birch woodland as in unfavourable condition with no change and the sub-alpine heath as unfavourable and declining.

8.7.115 No temporary or permanent infrastructure associated with the Proposed Development is proposed to be situated within this SSSI. An operational corridor free from trees at risk of falling on the conductors is required for safety reasons.

8.7.116 As such, the Proposed Development will result in the permanent loss of 0.65 ha, comprising:

- 0.65 ha of Upland birchwoods.

8.7.117 The Proposed Development is not predicted to result in the temporary loss of habitats within the SSSI.

8.7.118 Relative to the total area of the SSSI, impacts to designated habitats comprise a permanent loss of 1.128%.

8.7.119 The woodland within the site is reported as being in unfavourable condition with browsing pressure from deer and sheep preventing tree regeneration from developing into saplings such that the structure of the woodland was considered poor. Further to this, in the heavily browsed areas the understorey component of the woodland is missing and there is considered to be insufficient canopy development. In addition, at least 60% of the regeneration showed evidence of browsing damage. Sub-alpine heath habitats within this SSSI will not likely be affected by the Proposed Development.

8.7.120 The site is assigned a **medium** value due to its national status, with a **medium** impact magnitude on account of the loss of tree cover by the Proposed Development, contributing the sites unfavourable status. The loss of tree canopy in the context of the existing grazing pressures will likely lead to an altered ground flora as a result of the changed climatic conditions and removal of tree species contributing to the seedbank. The loss of habitat is however, at the downstream end of the site and as such fragmentation effects within the site will not be incurred as a result of the Proposed Development. Impacts on this protected site, when considering value of the site and magnitude of the impact are predicted to be **significant**.

AWI

8.7.121 The impacts on AWI through construction of the Proposed Development are considered to include habitat fragmentation and severance e.g. through removal of woodland listed on the AWI, creating isolated and fragmented pockets of woodland. Effects may be temporary and permanent associated with temporary and permanent infrastructure.

8.7.122 The permanent and temporary impacts to AWI due to the construction of the Proposed Development are shown in **Table 8.15,** totalled by AWI category, per section. Impacts to AWI include all habitats within the site area and may not result in impacts to ancient woodland.

Table 8.15: Impacts to AWI Sites

AWI Category	Permanent Loss (ha)	Temporary Loss (ha)	Value of Receptor	Magnitude of Effect	Characterisation of Magnitude	Impact
Section A						
1a	3.08	0.37	High	Low	Low spatial and long-term / permanent temporal	Not significant
2a	0.25	0.00	High	Negligible	Low spatial and long-term / permanent temporal	Not significant
2b	0.39	2.02	Medium	Low	Low spatial and short-term temporal	Not significant
Section B						
1a	1.42	0.61	High	Negligible	Negligible spatial and long-term/permanent temporal	Not significant
Section C						
2b	19.33	14.54	Medium	Low	Low spatial and long-term/permanent temporal	Not significant
Section D						
2a	0.88	0.04	High	Low	Negligible spatial and long-term / permanent temporal	Not significant
2b	13.27	6.30	Medium	Low	Low spatial and long-term/permanent temporal	Not significant
Section E						
1a	2.35	0.39	High	Low	Negligible spatial and long-term/permanent temporal	Not significant
2a	4.31	0.26	High	Low	Low spatial and long-term/permanent temporal	Not significant
2b	36.52	18.28	Medium	Medium	Low spatial and long-term/permanent temporal	Significant

Terrestrial Habitats

8.7.123 This section presents the construction phase impacts on habitats from the Proposed Development. A summary of permanent and temporary habitat impacts is presented in **Table 8.16** to **Table 8.20**.

8.7.124 The temporary loss of habitats along the alignment of the Proposed Development will occur through the construction of temporary construction compounds around each tower location and temporary access tracks. Further to this the siting of EPZ pulling positions for conductor stringing are considered to lead to a temporary loss of habitat.

8.7.125 A permanent loss of habitats along the alignment of the Proposed Development will occur through the construction of tower locations and permanent access tracks.

8.7.126 An operational corridor will be required to be maintained free from trees along the entire alignment of the Proposed Development. The width of the corridor is dependent on the height and species of the adjacent trees with up to 45 m either side of the OHL (90 m width in total) remaining free from trees. Other habitats within the operational corridor will be retained or reinstated on completion of construction.

8.7.127 Habitat fragmentation and severance will occur through the habitat losses due to the permanent footprint of the Proposed Development, including each tower location, permanent access tracks, and the maintenance of an operational corridor within woodland.

8.7.128 The Principal Contractors will be responsible for reinstatement of habitat following completion of construction, including planting of any earthworks denuded of habitat during the construction phase.

8.7.129 In Section A, as presented in **Table 8.16,** significant impacts will likely occur to h1b5 Dry heaths; upland (H4030) with a **medium** spatial and long-term/permanent temporal magnitude, which is **significant** at an international level.

8.7.130 In Section B, as presented in **Table 8.17,** significant impacts will likely occur to h1b6 Wet heathland with cross-leaved heath; upland (H4010) with a **medium** spatial and long-term/permanent temporal magnitude, which is **significant** at an international level.

8.7.131 In Section C, as presented in **Table 8.18,** significant impacts will likely occur to w2a5 - Caledonian forest (H91C0) with a **medium** spatial and long-term/permanent temporal magnitude, which is **significant** at an international level.

8.7.132 In Section D, significant impacts will likely occur to the following habitats, as presented in **Table 8.19**:

- w2b - Other Scot's Pine woodland with a **medium** spatial and long-term/permanent temporal magnitude, which is **significant** at a **national** level;
- f1a - Blanket bog with a **medium** spatial and long term/permanent temporal magnitude, which is **significant** at a **national** level.

8.7.133 In Section E, significant impacts will likely occur to the following habitats, as presented in **Table 8.20**:

- w1e Upland birchwoods with a **medium** spatial and long-term/permanent temporal magnitude, which is **significant** at an international level;
- w1h Other woodland; mixed with a **medium** spatial and long-term/permanent temporal magnitude, which is **significant** at a local level; and
- w2b Other Scot's Pine woodland with a **medium** spatial and long-term/permanent temporal magnitude, which is **significant** at a national level.

8.7.134 Overall, considering impacts across all sections, the Proposed Development as a whole is predicted to have significant impacts on the following habitats:

- w1e Upland birchwoods with a **medium** spatial and long-term/permanent temporal magnitude, which is **significant** at an international level;
- w1h Other woodland; mixed with a **medium** spatial and long-term/permanent temporal magnitude, which is **significant** at a local level;
- w2b Other Scot's Pine woodland with a **medium** spatial and long-term/permanent temporal magnitude, which is **significant** at a national level; and

- h1b5 Dry heaths; upland (H4030) with a **medium** spatial and long-term/permanent temporal magnitude, which is **significant** at an international level;
- f1a Blanket bog with a **high** spatial and long-term/permanent temporal impact, which is **significant** at an international level; and
- f1a5 Blanket bog (H7130) with a **medium** spatial and long-term/permanent temporal impact, which is **significant** at an international level.

GWDTEs

8.7.135 A hydrological assessment of impacts to GWDTEs due to the construction of the Proposed Development is presented in **Chapter 10: Water Environment**. Impacts to GWDTEs are not considered further in this chapter. However, impacts to habitats are discussed in this chapter (**Chapter 8: Ecology and Nature Conservation**) and are presented in **Table 8.16** to **Table 8.20.**

Table 8.16: Assessment of Habitat Impacts: Section A

Note: * Conservation Status: (1) Annex I habitat, (2) SBL habitat, (3) HLBAP habitat

UKHab Classification	Conservation Status	Permanent Loss (ha)		Temporary Loss (ha)		Valuation of Receptor	Magnitude of Effect	Characterisation of Magnitude	Significant or Not significant	Impact Geography
		Direct	Indirect	Direct	Indirect					
g1a6 - Other lowland dry acid grassland	(2), (3)	0.00	0.00	0.00	0.42	Medium	Negligible	Negligible spatial and long-term/permanent temporal	Not significant	N/A
w1d5 - Alder woodland on floodplains (H91E0)	(1), (2), (3)	0.16	0.00	0.00	0.00	High	Negligible	Negligible spatial and long-term/permanent temporal	Not significant	N/A
w1e - Upland birchwoods	(1), (2), (3)	3.66	0.14	0.11	0.32	High	Low	Low spatial and long-term/permanent temporal	Not significant	N/A
w1f - Lowland mixed deciduous woodland	(2), (3)	0.00	0.09	0.00	0.00	Medium	Negligible	Negligible spatial and long-term/permanent temporal	Not signifcant	N/A
w1g - Other broadleaved woodland	(3)	1.33	0.00	0.00	0.00	Low	Negligible	Negligible spatial and long-term/permanent temporal	Not significant	N/A
w1h - Other woodland; mixed		3.59	0.18	0.67	0.91	Low	Negligible	Negligible spatial and long-term/permanent temporal	Not significant	N/A
w1h5 - Other woodland; mixed; mainly broadleaved	(2), (3)	2.55	2.83	0.00	0.00	Medium	Negligible	Negligible spatial and long-term/permanent temporal	Not significant	N/A
w1h6 - Other woodland; mixed; mainly conifer		2.32	0.39	0.58	1.50	Low	Negligible	Negligible spatial and long-term/permanent temporal	Not significant	N/A
w2b - Other Scot's Pine woodland	(2), (3)	0.28	0.00	0.00	0.00	Medium	Negligible	Negligible spatial and long-term/permanent temporal	Not significant	N/A
h1b - Upland heathland	(2), (3)	0.91	5.08	7.31	10.63	Medium	Low	Low spatial and long-term/permanent temporal	Not significant	N/A
h1b5 - Dry heaths; upland (H4030)	(1), (2), (3)	3.67	21.98	25.26	49.70	High	Medium	Medium spatial and long-term/permanent temporal	Significant	International
h1b6 - Wet heathland with cross-leaved heath; upland (H4010)	(1), (2), (3)	0.65	3.80	3.33	6.11	High	Low	Low spatial and long-term/permanent temporal	Not significant	International
h2a - Native hedgerow	(2)	0.00	0.01	0.00	0.00	Medium	Negligible	Negligible spatial and long-term/permanent temporal	Not significant	N/A
f1a - Blanket bog	(1), (2), (3)	11.54	66.15	54.99	118.69	High	Low	Low spatial and long-term/permanent temporal	Not significant	N/A
f1a5 - Blanket bog (H7130)	(1), (2), (3)	1.49	9.40	18.68	39.82	High	Low	Low spatial and long-term/permanent temporal	Not significant	N/A

UKHab Classification	Conservation Status	Permanent Loss (ha)		Temporary Loss (ha)		Valuation of Receptor	Magnitude of Effect	Characterisation of Magnitude	Significant or Not significant	Impact Geography
		Direct	Indirect	Direct	Indirect					
f1a6 - Degraded blanket bog	(1), (2), (3)	1.82	10.66	10.94	23.51	High	Low	Low spatial and long-term/permanent temporal	Not significant	N/A
f2b - Purple moor-grass and rush pastures	(1), (2)	0.12	2.25	1.46	3.26	High	Low	Low spatial and long-term/permanent temporal	Not significant	N/A
f2c - Upland flushes, fens and swamps	(1), (2), (3)	0.33	1.79	1.05	3.07	High	Negligible	Negligible spatial and long-term/permanent temporal	Not significant	N/A
c1a - Arable field margins	(2), (3)	0.05	0.41	0.00	0.00	Medium	Negligible	Negligible spatial and long-term/permanent temporal	Not significant	N/A
r - Rivers and lakes	(2), (3)	0.00	0.00	0.00	0.05	Medium	Negligible	Negligible spatial and long-term/permanent temporal	Not significant	N/A
r2 - Rivers and streams	(1), (2), (3)	0.03	0.18	0.01	0.04	High	Low	Low spatial and long-term/permanent temporal	Not significant	N/A
r2a - Rivers (priority habitat)	(1), (2), (3)	0.00	0.00	0.00	0.01	High	Negligible	Negligible spatial and long-term/permanent temporal	Not significant	N/A

Table 8.17: Assessment of Habitat Impacts: Section B

Note: * Conservation Status: (1) Annex I habitat, (2) SBL habitat, (3) HLBAP habitat

UKHab Classification	Conservation Status	Permanent Loss (ha)		Temporary Loss (ha)		Valuation of Receptor	Magnitude of Effect	Characterisation of Magnitude	Significant or Not significant	Impact Geography
		Direct	Indirect	Direct	Indirect					
w1d - Wet woodland	(1), (2), (3)	0.24	0.36	0.03	0.28	High	Negligible	Negligible spatial and long-term/permanent temporal	Not significant	N/A
w1e - Upland birchwoods	(1), (2), (3)	2.02	1.11	0.94	4.11	High	Low	Low spatial and long-term/permanent temporal	Not significant	N/A
w1f - Lowland mixed deciduous woodland	(2), (3)	0.00	0.00	0.00	0.12	Medium	Negligible	Negligible spatial and long-term/permanent temporal	Not significant	N/A
w1g - Other broadleaved woodland	(3)	2.00	1.45	0.59	0.18	Low	Low	Low spatial and long-term/permanent temporal	Not significant	N/A
w1h - Other woodland; mixed		0.00	0.11	0.00	0.01	Low	Negligible	Negligible spatial and long-term/permanent temporal	Not significant	N/A
w1h5 - Other woodland; mixed; mainly broadleaved	(2), (3)	0.18	0.00	0.00	0.51	Medium	Negligible	Negligible spatial and long-term/permanent temporal	Not significant	N/A
w1h6 - Other woodland; mixed; mainly conifer		0.00	0.10	0.00	0.28	Low	Negligible	Negligible spatial and long-term/permanent temporal	Not significant	N/A

UKHab Classification	Conservation Status	Permanent Loss (ha)		Temporary Loss (ha)		Valuation of Receptor	Magnitude of Effect	Characterisation of Magnitude	Significant or Not significant	Impact Geography
		Direct	Indirect	Direct	Indirect					
w2b - Other Scot's Pine woodland	(2), (3)	2.74	3.27	0.40	0.12	Medium	Low	Low spatial and long-term/permanent temporal	Not significant	N/A
h1b - Upland heathland	(2), (3)	1.69	9.87	12.03	26.34	Medium	Low	Low spatial and long-term/permanent temporal	Not significant	N/A
h1b5 - Dry heaths; upland (H4030)	(1), (2), (3)	2.11	12.33	7.13	8.92	High	Low	Low spatial and long-term/permanent temporal	Not significant	N/A
h1b6 - Wet heathland with cross-leaved heath; upland (H4010)	(1), (2), (3)	2.65	14.35	7.86	11.45	High	Medium	Medium spatial and long-term/permanent temporal	Significant	International
f1a - Blanket bog	(1), (2), (3)	2.02	12.35	20.89	47.32	High	Low	Low spatial and long-term/permanent temporal	Not significant	N/A
f1a5 - Blanket bog (H7130)	(1), (2), (3)	0.34	2.12	1.70	3.89	High	Low	Low spatial and long-term/permanent temporal	Not significant	N/A
f1a6 - Degraded blanket bog	(1), (2), (3)	1.24	3.94	8.93	19.37	High	Low	Low spatial and long-term/permanent temporal	Not significant	N/A
f2b - Purple moor-grass and rush pastures	(1), (2)	0.00	0.05	0.34	0.75	High	Negligible	Negligible spatial and long-term/permanent temporal	Not significant	N/A
f2c - Upland flushes, fens and swamps	(1), (2), (3)	0.08	0.30	0.13	0.36	High	Low	Low spatial and long-term/permanent temporal	Not significant	N/A
r1g - Other standing water	(2), (3)	0.00	0.11	0.00	0.00	Medium	Negligible	Negligible spatial and long-term/permanent temporal	Not significant	N/A
r2a - Rivers (priority habitat)	(1), (2), (3)	0.02	0.02	0.00	0.01	High	Low	Low spatial and long-term/permanent temporal	Not significant	N/A

Table 8.18: Assessment of Habitat Impacts: Section C

Note: * Conservation Status: (1) Annex I habitat, (2) SBL habitat, (3) HLBAP habitat

UKHab Classification	Conservation Status	Permanent Loss (ha)		Temporary Loss (ha)		Valuation of Receptor	Magnitude of Effect	Characterisation of Magnitude	Significant or Not significant	Impact Geography
		Direct	Indirect	Direct	Indirect					
w1e - Upland birchwoods	(1), (2), (3)	1.04	1.2	0.00	0.00	High	Low	Low spatial and long-term/permanent temporal	Not significant	N/A
w1g - Other broadleaved woodland	(3)	0.15	0.00	0.01	0.08	Low	Negligible	Negligible spatial and long-term/permanent temporal	Not significant	N/A
w1h - Other woodland; mixed		2.06	0.37	0.78	0.36	Low	Low	Low spatial and long-term/permanent temporal	Not significant	N/A

UKHab Classification	Conservation Status	Permanent Loss (ha)		Temporary Loss (ha)		Valuation of Receptor	Magnitude of Effect	Characterisation of Magnitude	Significant or Not significant	Impact Geography
		Direct	Indirect	Direct	Indirect					
w2a5 - Caledonian forest (H91C0)	(1), (2), (3)	4.23	2.94	0.73	0.35	High	Medium	Medium spatial and long-term/permanent temporal	Significant	International
w2b - Other Scot's Pine woodland	(2), (3)	7.60	2.89	2.28	3.91	Medium	Low	Low spatial and long-term/permanent temporal	Not significant	N/A
h1b5 - Dry heaths; upland (H4030)	(1), (2), (3)	0.47	2.98	2.33	3.67	High	Low	Low spatial and long-term/permanent temporal	Not significant	N/A
h1b6 - Wet heathland with cross-leaved heath; upland (H4010)	(1), (2), (3)	0.70	3.31	0.40	1.26	High	Negligible	Negligible spatial and long-term/permanent temporal	Not significant	N/A
f1a - Blanket bog	(1), (2), (3)	0.38	2.27	1.68	3.81	High	Low	Low spatial and long-term/permanent temporal	Not significant	N/A
f1a5 - Blanket bog (H7130)	(1), (2), (3)	0.09	0.26	0.59	1.31	High	Low	Low spatial and long-term/permanent temporal	Not significant	N/A
f1a6 - Degraded blanket bog	(1), (2), (3)	0.99	5.55	4.76	8.30	High	Low	Low spatial and long-term/permanent temporal	Not significant	N/A
f2b - Purple moor-grass and rush pastures	(1), (2)	0.00	0.00	0.12	0.76	High	Low	Negligible spatial and short-term temporal	Not significant	N/A
f2c - Upland flushes, fens and swamps	(1), (2), (3)	0.03	0.23	0.11	0.76	High	Low	Low spatial and long-term/permanent temporal	Not significant	N/A
r1a - Eutrophic standing waters	(1), (2), (3)	0.00	0.00	0.00	0.01	High	Negligible	Negligible spatial and short-term temporal	Not significant	N/A

Table 8.19: Assessment of Habitat Impacts: Section D

Note: * Conservation Status: (1) Annex I habitat, (2) SBL habitat, (3) HLBAP habitat

UKHab Classification	Conservation Status	Permanent Loss (ha)		Temporary Loss (ha)		Valuation of Receptor	Magnitude of Effect	Characterisation of Magnitude	Significant or Not significant	Impact Geography
		Direct	Indirect	Direct	Indirect					
w1d - Wet woodland	(1), (2), (3)	0.05	0.00	0.00	0.00	High	Negligible	Negligible spatial and long-term/permanent temporal	Not significant	N/A
w1e - Upland birchwoods	(1), (2), (3)	1.90	0.38	0.54	0.39	High	Low	Low spatial and long-term/permanent temporal	Not significant	N/A
w1f - Lowland mixed deciduous woodland	(2), (3)	0.53	0.00	0.00	0.00	Medium	Negligible	Negligible spatial and long-term/permanent temporal	Not significant	N/A

UKHab Classification	Conservation Status	Permanent Loss (ha)		Temporary Loss (ha)		Valuation of Receptor	Magnitude of Effect	Characterisation of Magnitude	Significant or Not significant	Impact Geography
		Direct	Indirect	Direct	Indirect					
w1g - Other broadleaved woodland	(3)	1.22	0.10	0.18	0.69	Low	Low	Low spatial and long-term/permanent temporal	Not significant	N/A
w1h - Other woodland; mixed		1.00	1.09	0.26	0.41	Low	Low	Low spatial and long-term/permanent temporal	Not significant	N/A
w1h5 - Other woodland; mixed; mainly broadleaved	(2), (3)	0.04	0.00	0.00	0.00	Medium	Negligible	Negligible spatial and long-term/permanent temporal	Not significant	N/A
w1h6 - Other woodland; mixed; mainly conifer		1.59	0.53	0.09	0.08	Low	Negligible	Negligible spatial and long-term/permanent temporal	Not significant	N/A
w2a5 - Caledonian forest (H91C0)	(1), (2), (3)	1.25	0.99	0.35	0.21	High	Low	Low spatial and long-term/permanent temporal	Not significant	N/A
w2b - Other Scot's Pine woodland	(2), (3)	12.52	4.74	2.98	5.02	Medium	Medium	Medium spatial and long-term/permanent temporal	Significant	National
h1b - Upland heathland	(2), (3)	0.24	1.25	0.65	0.59	Medium	Negligible	Negligible spatial and long-term/permanent temporal	Not significant	N/A
h1b5 - Dry heaths; upland (H4030)	(1), (2), (3)	1.45	9.37	3.43	3.83	High	Low	Low spatial and long-term/permanent temporal	Not significant	N/A
h1b6 - Wet heathland with cross-leaved heath; upland (H4010)	(1), (2), (3)	2.37	13.02	4.93	3.46	High	Low	Low spatial and long-term/permanent temporal	Not significant	N/A
f1a - Blanket bog	(1), (2), (3)	10.48	57.50	17.52	21.22	High	Medium	Medium spatial and long-term/permanent temporal	Significant	International
f1a5 - Blanket bog (H7130)	(1), (2), (3)	0.75	4.14	2.82	3.97	High	Low	Low spatial and long-term/permanent temporal	Not significant	N/A
f1a6 - Degraded blanket bog	(1), (2), (3)	2.26	12.39	1.37	0.89	High	Low	Low spatial and long-term/permanent temporal	Not significant	N/A
f2b - Purple moor-grass and rush pastures	(1), (2)	0.04	0.26	0.07	0.03	High	Negligible	Negligible spatial and long-term/permanent temporal	Not significant	N/A
f2c - Upland flushes, fens and swamps	(1), (2), (3)	0.35	2.24	0.48	0.71	High	Negligible	Negligible spatial and long-term/permanent temporal	Not significant	N/A
r1g - Other standing water	(2), (3)	0.01	0.08	0.02	0.10	Medium	Negligible	Negligible spatial and long-term/permanent temporal	Not significant	N/A
r2 - Rivers and streams	(1), (2), (3)	0.00	0.00	0.00	0.16	High	Negligible	Negligible spatial and short-term temporal	Not significant	N/A
r2a - Rivers (priority habitat)	(1), (2), (3)	0.00	0.06	0.00	0.00	High	Negligible	Negligible spatial and long-term/permanent temporal	Not significant	N/A

Table 8.20: Assessment of Impacts to Habitats: Section E

Note: * Conservation Status: (1) Annex I habitat, (2) SBL habitat, (3) HLBAP habitat

UKHab Classification	Conservation Status	Permanent Loss (ha)		Temporary Loss (ha)		Valuation of Receptor	Magnitude of Effect	Characterisation of Magnitude	Significant or Not significant	Impact Geography
		Direct	Indirect	Direct	Indirect					
w1e - Upland birchwoods	(1), (2), (3)	13.03	6.34	4.03	5.08	High	Medium	Medium spatial and long-term/permanent temporal	Significant	International
w1f - Lowland mixed deciduous woodland	(2), (3)	0.45	0.00	0.00	0.00	Medium	Negligible	Negligible spatial and long-term/permanent temporal	Not significant	N/A
w1g - Other broadleaved woodland	(3)	1.14	0.32	0.33	0.27	Low	Low	Low spatial and long-term/permanent temporal	Not significant	N/A
w1h - Other woodland; mixed		11.88	3.93	3.28	5.69	Low	Medium	Medium spatial and long-term/permanent temporal	Significant	Local
w1h5 - Other woodland; mixed; mainly broadleaved	(2), (3)	5.66	4.90	1.03	1.02	Medium	Low	Low spatial and long-term/permanent temporal	Not significant	N/A
w1h6 - Other woodland; mixed; mainly conifer		3.84	0.84	1.20	1.57	Low	Low	Low spatial and long-term/permanent temporal	Not significant	N/A
w2a5 - Caledonian forest (H91C0)	(1), (2), (3)	0.15	1.46	0.00	0.00	High	Low	Low spatial and long-term/permanent temporal	Not significant	N/A
w2b - Other Scot's Pine woodland	(2), (3)	17.38	10.84	4.18	2.41	Medium	Medium	Medium spatial and long-term/permanent temporal	Significant	National
h1b - Upland heathland	(2), (3)	0.39	2.55	1.63	0.70	Medium	Low	Low spatial and long-term/permanent temporal	Not significant	N/A
h1b5 - Dry heaths; upland (H4030)	(1), (2), (3)	4.46	23.47	4.54	2.46	High	Low	Low spatial and long-term/permanent temporal	Not significant	N/A
h1b6 - Wet heathland with cross-leaved heath; upland (H4010)	(1), (2), (3)	0.87	5.38	0.47	0.21	High	Low	Low spatial and long-term/permanent temporal	Not significant	N/A
f1a - Blanket bog	(1), (2), (3)	1.77	8.31	1.67	0.89	High	Low	Low spatial and long-term/permanent temporal	Not significant	N/A
f1a5 - Blanket bog (H7130)	(1), (2), (3)	2.75	16.22	2.75	0.97	High	Low	Low spatial and long-term/permanent temporal	Not significant	N/A
f1b5 - Active raised bogs (H7110)	(1), (2), (3)	0.00	0.09	0.29	0.20	High	Negligible	Negligible spatial and long-term/permanent temporal	Not significant	N/A
f2c - Upland flushes, fens and swamps	(1), (2), (3)	0.09	0.85	0.00	0.00	High	Negligible	Negligible spatial and long-term/permanent temporal	Not significant	N/A

Table 8.21: Assessment of Impacts to Habitats: Summary

Note: * Conservation Status: (1) Annex I habitat, (2) SBL habitat, (3) HLBAP habitat

UKHab Classification	Conservation Status	Permanent Loss (ha)		Temporary Loss (ha)		Valuation of Receptor	Magnitude of Effect	Characterisation of Magnitude	Significant or Not significant	Impact Geography
		Direct	Indirect	Direct	Indirect					
g1a6 - Other lowland dry acid grassland	(2), (3)	0.00	0.00	0.00	0.42	Medium	Negligible	Negligible spatial and long-term/permanent temporal	Not significant	N/A
w1d - Wet woodland	(1), (2), (3)	0.29	0.36	0.03	0.28	High	Negligible	Negligible spatial and long-term/permanent temporal	Not significant	N/A
w1d5 - Alder woodland on floodplains (H91E0)	(1), (2), (3)	0.16	0.00	0.00	0.00	High	Negligible	Negligible spatial and long-term/permanent temporal	Not significant	N/A
w1e - Upland birchwoods	(1), (2), (3)	21.65	9.17	5.62	9.90	High	Medium	Medium spatial and long-term/permanent temporal	Significant	International
w1f - Lowland mixed deciduous woodland	(2), (3)	0.98	0.09	0.00	0.13	Medium	Negligible	Negligible spatial and long-term/permanent temporal	Not significant	N/A
w1g - Other broadleaved woodland	(3)	5.85	1.86	1.11	1.23	Low	Low	Low spatial and long-term/permanent temporal	Not significant	N/A
w1h - Other woodland; mixed		18.53	5.67	4.98	7.39	Low	Medium	Medium spatial and long-term/permanent temporal	Significant	Local
w1h5 - Other woodland; mixed; mainly broadleaved	(2), (3)	8.42	7.73	1.03	1.52	Medium	Low	Low spatial and long-term/permanent temporal	Not significant	N/A
w1h6 - Other woodland; mixed; mainly conifer		7.76	1.85	1.88	3.42	Low	Low	Low spatial and long-term/permanent temporal	Not significant	N/A
w2a5 - Caledonian forest (H91C0)	(1), (2), (3)	5.64	5.39	1.08	0.56	High	Low	Low spatial and long-term/permanent temporal	Not significant	N/A
w2b - Other Scot's Pine woodland	(2), (3)	40.52	21.73	9.84	11.47	Medium	Medium	Medium spatial and long-term/permanent temporal	Significant	National
h1b - Upland heathland	(2), (3)	3.24	18.75	21.61	38.25	Medium	Low	Low spatial and long-term/permanent temporal	Not significant	N/A
h1b5 - Dry heaths; upland (H4030)	(1), (2), (3)	12.16	70.12	42.70	68.58	High	Medium	Medium spatial and long-term/permanent temporal	Significant	N/A
h1b6 - Wet heathland with cross-leaved heath; upland (H4010)	(1), (2), (3)	7.24	39.86	16.98	22.49	High	Medium	Medium spatial and long-term/permanent temporal	Not significant	N/A
h2a - Native hedgerow	(2)	0.00	0.01	0.00	0.00	Medium	Negligible	Negligible spatial and long-term/permanent temporal	Not significant	#N/A
f1a - Blanket bog	(1), (2), (3)	26.20	146.58	96.75	191.92	High	High	High spatial and long-term/permanent temporal	Significant	International

UKHab Classification	Conservation Status	Permanent Loss (ha)		Temporary Loss (ha)		Valuation of Receptor	Magnitude of Effect	Characterisation of Magnitude	Significant or Not significant	Impact Geography
		Direct	Indirect	Direct	Indirect					
f1a5 - Blanket bog (H7130)	(1), (2), (3)	5.42	32.15	26.54	49.95	High	Medium	Medium spatial and long-term/permanent temporal	Significant	International
f1a6 - Degraded blanket bog	(1), (2), (3)	6.32	32.54	26.01	52.07	High	Low	Low spatial and long-term/permanent temporal	Not significant	N/A
f1b5 - Active raised bogs (H7110)	(1), (2), (3)	0.00	0.09	0.29	0.20	High	Negligible	Negligible spatial and long-term/permanent temporal	Not significant	N/A
f2b - Purple moor-grass and rush pastures	(1), (2)	0.15	2.56	1.99	4.80	High	Negligible	Negligible spatial and short-term temporal	Not significant	N/A
f2c - Upland flushes, fens and swamps	(1), (2), (3)	0.87	5.41	1.77	4.90	High	Negligible	Negligible spatial and long-term/permanent temporal	Not significant	N/A
c1a - Arable field margins	(2), (3)	0.05	0.41	0.00	0.00	Medium	Negligible	Negligible spatial and long-term/permanent temporal	Not significant	N/A
r - Rivers and lakes	(2), (3)	0.00	0.00	0.00	0.05	Medium	Negligible	Negligible spatial and long-term/permanent temporal	Not significant	N/A
r1a - Eutrophic standing waters	(1), (2), (3)	0.00	0.00	0.00	0.01	High	Negligible	Negligible spatial and long-term/permanent temporal	Not significant	N/A
r1g - Other standing water	(2), (3)	0.01	0.20	0.02	0.10	Medium	Negligible	Negligible spatial and long-term/permanent temporal	Not significant	N/A
r2 - Rivers and streams	(1), (2), (3)	0.03	0.18	0.01	0.20	High	Negligible	Negligible spatial and short-term temporal	Not significant	N/A
r2a - Rivers (priority habitat)	(1), (2), (3)	0.02	0.08	0.00	0.01	High	Negligible	Negligible spatial and long-term/permanent temporal	Not significant	N/A

Protected Species

8.7.136 Species specific terminology has been standardised for consistency throughout the impact assessment, for example, the term shelter or temporary shelter has been used as opposed to badger sett, otter couch or squirrel drey, **Table 8.12** details the specific references used.

Badger

8.7.137 The significance of effects on badgers, a common and widespread protected species in Scotland (**medium** value), from the Proposed Development are limited to temporary construction related disturbance.

8.7.138 The badger population in Scotland is described as being a "healthy population size" with "widespread distribution across mainland Scotland"[22]. Numbers of badgers in Scotland are estimated to be approximately 10% of the UK population (350,000 individuals)[23]. A typical badger territory is 70 – 120 ha, varying dependent on resources available.

8.7.139 Results reported in **Table 8.12** show 13 badger shelters were found within 30 m of the Proposed Development. Nine records of badger foraging, eight tracks and three dung pits were found within 30 m of the Proposed Development.

8.7.140 Of the 13 badger shelters identified within 30 m of the Proposed Development or management felling areas seven are located within ten metres of works. The one shelter within Section A is a single hole located within 1 m of an access track. The only shelter in Section D (within 30 m) is an above ground shelter within the operational corridor. All setts in Section E are within the operational corridor.

8.7.141 Results from the protected species survey (**Volume 5, Appendix 8.4: Protected Species Technical Report**) do show badgers to be present along every section of the Proposed Development, although field signs were only found within 30 m (disturbance distance of setts) of the Proposed Development in Sections A, D and E. Setts identified in Sections A and D are low value setts not likely to be in regular use by badgers and readily replaceable. The congregation of setts near in Section E suggest a high level of use by a single social group with a ten hole sett (potential main sett) identified 23 m from proposed felling works.

8.7.142 Based on the current baseline data, there will be a potential need to exclude badgers from up to 13 setts. A staged programme of works will mean short term disturbance in localised parts of the Proposed Development at any one time, with badgers able to freely move beyond construction works to utilise other areas of their habitat for foraging and dispersal. Phasing of works will mean forestry works will necessarily take place in advance of construction works, giving badgers time to adjust to different period of disturbance. With a likely main sett, the hub of a social group and likely location of breeding (December – June inclusive), within 23 m of forestry clearance there is the potential for significant disturbance to this social group through construction works.

8.7.143 To avoid and reduce impacts on badgers using the environment local to construction works, these works will be carried out in line with embedded mitigation measures (**Section 8.6**) including a detailed Badger SPP and Forestry GEMP implemented in conjunction with the CEMP for the Proposed Development and the CTMP to manage site traffic movements. The Applicant's Badger SPP addresses the need for pre-construction surveys, 30 m protection zones to be implemented around all sett entrances, the preference to micro-site works away from sett entrances (where possible), the need and method for licencing, the requirement of an ECoW to

[22] https://www.nature.scot/plants-animals-and-fungi/mammals/land-mammals/badger [Accessed May 2025]
[23] https://scottishwildlifetrust.org.uk/2018/07/how-to-spot-badger-signs/ [Accessed May 2025]

oversee works within 30m of a sett entrance, scrub and forestry clearance works around setts and as a last resort the closure and destruction of setts (including breeding setts). The forestry GEMP covers the implementation of best practice working on all of the Applicant's sites where forestry works are required.

8.7.144 Accounting for embedded mitigation and mitigation by design, impacts on badgers are predicted to be of **negligible** impact magnitude on account of only one location where a main sett maybe disturbed, and the robust approach to working near badger setts detailed within the Applicant's Badger SPP. Impacts on Badgers from the Proposed Development, when considering value of the species and magnitude of the impact are predicted to be **not significant**.

Bats

8.7.145 The significance of effects on bats, an internationally protected species (**high** value), from the Proposed Development are limited to temporary construction related disturbance of bats at their place of shelter, permanent loss of bat places of shelter and severance of commuting / foraging habitat.

8.7.146 Impacts of management felling on bat commuting / foraging habitat is not considered here. These impacts are not considered on account of the rotational nature (felling / replanting) of commercial forestry i.e. the woodland would still be felled in the absence of the Proposed Development and the requirement of any felling licence being, that if felled, the forestry will be replanted.

8.7.147 Ten bat species occur in Scotland, five of which are considered to be common or widespread (common pipistrelle; soprano pipistrelle; Daubenton's bat; brown long-eared bat; and Natterer's bat). In Scotland, the number of bat species living in an area generally decreases the further north and west travelled. Populations of common pipistrelle, soprano pipistrelle and Daubenton's bat are all considered stable according to the National Bat Monitoring Programme[24]. Ongoing threats to Scottish bats include pressure from human disturbance to roosting sites and foraging grounds. For example, changes to agricultural and forestry practices which alter landscapes, or affect the availability of insect prey.

8.7.148 An appraisal of woodland loss to enable the Proposed Development identified 17 habitats with High potential suitability for bat foraging / commuting and 23 habitats with Moderate potential suitability for bat foraging / commuting (**Volume 5, Appendix 8.4: Protected Species Technical Report**). An additional two habitat areas were identified as borderline Moderate / High suitability. Of these 42 locations 23 were identified to be located adjacent to other linear landscape features such as watercourses, meaning habitat connectivity will likely be maintained despite woodland removal. The remaining 19 areas of woodland span Sections B, C, D and E over an area of approximately 100 km.

8.7.149 Structures (including trees, groups of trees or buildings) with bat Potential Roost Features (PRFs), located within the footprint of the Proposed Development (including the operational corridor) or a 30 m disturbance distance, have also been identified, with none in Section A, and 12 across Sections B-E. Of the potential roosts identified within 30 m of the Proposed Development and management felling areas, seven will likely need to be removed.

8.7.150 To avoid or reduce impacts on bats at their place of shelter (roost), works will be carried out in line with embedded mitigation measures (**Section 8.6**) including the Applicant's detailed Bat SPP and Forestry GEMP, implemented in conjunction with the CEMP for the Proposed Development. The Applicant's Bat SPP addresses

[24] https://web.archive.org/web/20220603150759/https://www.nature.scot/sites/default/files/A1759538%20-%20Trend%20Note%20024%20-%20Bats%20in%20Scotland%202015.pdf [Accessed May 2025]

the need for pre-construction surveys to identify roosts, 30 m protection zones to be implemented around all identified roosts, the preference to micro-site works away from roosts (where possible), the need and method for licencing, the requirement of an ECoW to oversee works within 30 m of a roost and as a last resort the approach and method for removal of a roost. The Forestry GEMP covers the implementation of best practice working on all of the Applicant's sites where forestry works are required.

8.7.151 Accounting for embedded mitigation and mitigation by design, effects on bats at their place of shelter are therefore predicted to be of **negligible** impact magnitude on account of only seven potential roost locations along the approximately 170 km route to be lost, with a further five subject to disturbance. The approach set out in the Applicant's Bat SPP accounts for both common and rarer species as well as the most sensitive periods for bats e.g. breeding and hibernating. Impacts on bats at their place of shelter, when considering value of the species and magnitude of the impact are predicted to be **not significant**.

8.7.152 On account of the potential effects of severance of commuting / foraging habitat through the introduction of an operational corridor, impacts on bat commuting / foraging are predicted to be of **low** impact magnitude. Applying professional judgement, considering the lower species diversity of bats in this part of the UK, together with the species present generally being those more common across the UK, impacts are unlikely to affect national populations. However, the predicted impacts cannot be mitigated due to the requirement to maintain operational safety of the Proposed Development, which requires to be kept clear of tree and shrub species, with offsite mitigation not an option due to the site-specific nature of the impact. As such, common and widespread UK bat species will potentially lose access to some of their foraging ground, through severance of commuting routes. It is, however, possible that the creation of new woodland edge habitat and associated areas cleared of trees will provide new commuting routes opening up new foraging resources. When considering the loss of access to parts of their foraging habitat, as well as the value of the species and magnitude of the impact , impacts on bats are predicted to be **significant** at a local level.

Great Crested Newt

8.7.153 The significance of impacts on GCN, a European protected species that is locally rare (**high** value), from the Proposed Development will likely include the direct mortality of newts within their terrestrial habitat during construction, and the temporary and permanent loss of non-breeding habitat.

8.7.154 Populations of great crested newt in the Scottish Highlands (Inverness area) are separated by over 80 km of unfavourable habitat from their main UK distribution. Research reported in 2013 suggest that the great crested newt is native to the Scottish Highlands[25]. The reported population extended to six groups of ponds around the Inverness area of which one is located within the Survey Area.

8.7.155 Five confirmed great crested newt ponds were found within a disturbance zone (1 km) of the Proposed Development **Table 8.22**, no GCN ponds will be lost to the Proposed Development. For further details on the GCN survey and associated results see **Volume 5, Appendix 8.4: Protected Species Technical Report**.

Table 8.22: Great Crested Newt Ponds Within a Disturbance Zone

Confirmed GCN Pond	Population Score	Approximate Closest Point to Works (including OC)
Pond 17	Low	20 m
Pond 20	Low	570 m

[25] Our findings suggest that the great crested newt is indeed a species native to the Scottish Highlands. [Accessed May 2025]

Confirmed GCN Pond	Population Score	Approximate Closest Point to Works (including OC)
Pond 24	Low	10 m
Pond 18	Medium	220 m
Pond19	Assumed Medium	220 m

8.7.156 Pond 19 has been assumed to be of "Medium" population score as eDNA assessment of the pond was undertaken and came back negative, however a subsequent check confirmed the presence of great crested newts. A complete population assessment was not possible within the survey window due to the finding of newts late in the survey season. A "Medium" population score is considered to be a likely realistic worst-case scenario.

8.7.157 Most great crested newts are considered to reside within 250 m of their breeding pond[26] (equating to an approximate area of 19.6 ha) but may disperse up to 1 km from it. Within this area GCN will undertake the terrestrial phase of their lifecycle, which includes foraging, sheltering and hibernating. GCN return to aquatic habitats to breed, although amphibians are also known to overwinter in ponds.

8.7.158 There will be approximately 5.1 ha of temporary loss of GCN habitat in close proximity to a known GCN pond (Pond 24), and an additional 4.4 ha of temporary habitat loss during construction due to barrier effects preventing movement of newts beyond the construction area (48.5% in total). Permanent loss of GCN habitat associated with the footprint of the Proposed Development is estimated to be approximately 1.6 ha (8.16%).

8.7.159 Further to the loss of habitat, it is likely that there will be direct mortality of GCN from construction related operations including forestry clearance, soil stripping, track laying and operation of vehicles within great crested newt habitat.

8.7.160 Pond 24 is considered to form part of a metapopulation (**Volume 5, Appendix 8.4: Protected Species Technical Report**). A metapopulation is a spatially structured population that persists over time as a set of local populations with limited dispersal between them.[27] Metapopulations can play a role in maintaining genetic diversity in a given species and provide resilience against stochastic events e.g. pond drying and disease outbreak. As a result, the loss of a great crested newt population at Pond 24 could have a wider knock-on effect on the local great crested newt population that form part of the metapopulation.

8.7.161 Pond 17 is located within 20 m of a temporary access track, currently proposed as a combination of trackway panel and floating road. The habitat through which this track is proposed is a heavily grazed sheep field of low value to GCN due to the likely short sward height. Between the field within which the track is proposed and Pond 17, is a strip of mixed woodland (approximately 15 m wide) and an existing farm access road. Habitat around Pond 17 has been classified as broadleaf woodland and looks to have been set aside from the wider field within which it sits, which is also used for sheep grazing. Pond 17 has little if any suitable habitat connectivity to the nearest other construction related activities, which all fall beyond 250 m of the pond.

8.7.162 Pond 18 and 19 are located within 250 m of the Proposed Development, however, habitat surrounding them is considered suitable for GCN (a mosaic of woodland, heath and bog habitats). Pond 12 which lies between the

[26] Langton, T.E.S., Beckett, C.L., and Foster, J.P.(2001), Great Crested Newt Conservation Handbook, Froglife, Halesworth.
[27] van Nouhuys, Saskya. (2016). Metapopulation Ecology. 10.1002/9780470015902.a0021905.pub2. https://www.researchgate.net/publication/310454905_Metapopulation_Ecology [Accessed February 2025]

Proposed Development and Pond 18 and 19, was ruled out of survey following a Habitat Suitability Index (HSI) assessment, suggesting limited risk of GCN being present around Tower S162 and associated works area.

8.7.163 Effects on GCN as a result of the Proposed Development are predicted to be of **medium** impact magnitude based on the volume of habitat loss and level of construction activity proposed within 10 m of a known great crested newt pond (Pond 24), which will inevitably lead to the direct mortality of great crested newts in the absence of additional mitigation measure. Impacts on great crested newts, when considering value of the species and magnitude of the impact are predicted to be **significant** at a local level.

Otter

8.7.164 The significance of impacts on otter, an internationally protected species that is common and widespread in Scotland (**medium** value), from the Proposed Development are limited to temporary construction related disturbance of otters at their place of shelter and restriction of their movements due to temporary and permanent infrastructure within watercourses.

8.7.165 The Scottish otter population is estimated at approximately 8,000 otters, approximately 50% of which are thought to be coastal. Otters have a home range of approximately 32 km for males and 20 km for females. The biggest threat to otters in Scotland is road traffic collisions[28]. The Scottish population is considered to be stable[29].

8.7.166 The Proposed Development is designed to maximise the setback of infrastructure from watercourses as far as possible, this includes tower locations and access tracks, with watercourse crossing being the only necessary exception to this. As such no potential otter shelters (or temporary shelters) are found within the permanent footprint of the Proposed Development and 39 are found within 30 m of the operational corridor or access tracks, meaning they will be subject to disturbance by felling or access track construction. A further seventy-four potential otter shelters (or temporary shelters) are found within a potential disturbance zone of breeding (200 m), of the Proposed Development (across all sections).

8.7.167 The Applicant will utilise embedded mitigation measures, including their Otter SPP and GEMPs (e.g. for watercourse crossings), to minimise the impacts on any otters using the surrounding area. As a result, effects on otter from the Proposed Development are predicted to be of **negligible** impact magnitude. The impact is assigned on the basis that to avoid or reduce impacts on otters at their place of shelter, works will be carried out in line with embedded mitigation measures (**Section 8.6**) including a detailed Otter SPP and Watercourse Crossings GEMP implemented in conjunction with the CEMP for the Proposed Development and the CTMP to manage site traffic movements.

8.7.168 The Applicant's Otter SPP addresses:

- the need for pre-construction surveys to identify shelters within 200 m, 30 m (non breeding) or 200 m (breeding) with protection zones to be implemented around otter shelters;
- the preference to micro-site works away from places of shelter (where possible);
- the need and method for licencing;
- the requirement of an ECoW to oversee works within protection zones of a shelter; and

[28] https://www.nature.scot/plants-animals-and-fungi/mammals/land-mammals/otter [Accessed May 2025]

[29] European Community Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora (92/43/EEC). Fourth Report by the United Kingdom under Article 17. Supporting documentation for the conservation status assessment for the species: S1355 - Otter (Lutra lutra). https://jncc.gov.uk/jncc-assets/Art17/S1355-SC-Habitats-Directive-Art17-2019.pdf [Accessed June 2025]

- (as a last resort) the approach and method for removal of a shelter.

8.7.169 In addition to these measures the Otter SPP states general best practice mitigation measures e.g. caping pipes and providing escape routes from excavations.

8.7.170 Further to measures set out in the Applicant's Otter SPP, adherence to 'WAT-SG-25 Engineering in the water environment: Good Practice Guide, River crossings', through implementation of the Watercourse Crossings GEMP will ensure watercourse crossing designs do not impede otter movements along riparian corridors. This will be achieved either through maintenance of the natural bank (bridging structures) or through use of culverts with incorporated mammal ledges, tied into the natural bank at both ends. Impacts on otters, when considering value of the species and magnitude of the impact are predicted to be **not significant**.

Pine Marten

8.7.171 The significance of impacts on pine marten, a nationally protected species that is common and widespread in the north of Scotland (**medium** value), from the Proposed Development are limited to temporary construction related disturbance at their place of shelter, associated with construction of the Proposed Development and associated management felling.

8.7.172 The Scottish pine marten population is estimated to be 3,700 animals and the species is listed as least concern on the IUCN red list[30]. A national pine marten survey undertaken in 2012 demonstrated that pine marten range expansion had continued into the 21st century and confirmed that the species had re-colonised parts of its former range, including vice counties Sutherland and Caithness, Moray, Banff, parts of Aberdeenshire and Kincardineshire, West Perth, Mid Perth, East Perth, a limited western area of Angus and Fife, Stirlingshire, parts of Dunbartonshire, Main Argyll and into Kintyre. The UK pine marten population is considered to be increasing in both population and range[31].

8.7.173 Pine marten will have somewhere in the region of 86 – 166 ha of woodland in their territory, which can vary from approximately 1 km^2 to 30 km^2 in size and they need large mixed woodlands with a rich diversity of plants and animals to thrive[32]. The main threats to pine martens include habitat loss and road traffic collisions.

8.7.174 No pine marten shelters (or temporary shelters) were found within the footprint of the Proposed Development (including management felling). Two potential pine marten shelters were found within a non-breeding disturbance zone (30 m) of the Proposed Development both associated with felling for the operational corridor and associated management felling areas. A further four potential pine marten shelters were found within a breeding (March-June inclusive) disturbance zone (100 m), all over 50 m from works associated with forestry management and access track construction.

8.7.175 The Applicant will utilise embedded mitigation measures, including their Pine Marten SPP and GEMPs (e.g. Forestry), to minimise the impacts on any pine marten using the surrounding area.

8.7.176 Considering embedded mitigation measures, effects on pine marten from the Proposed Development are predicted to be of **negligible** impact magnitude. The impact is assigned on the basis that to avoid or reduce impacts on pine marten at their place of shelter, works will be carried out in line with embedded mitigation

[30] https://mammal.org.uk/current-research/red-list-for-britains-mammals [Accessed May 25]

[31] European Community Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora (92/43/EEC) Fourth Report by the United Kingdom under Article 17. Conservation status assessment for the species: S1357 - Pine marten (Martes martes) UNITED KINGDOM. https://jncc.gov.uk/jncc-assets/Art17/S1357-UK-Habitats-Directive-Art17-2019.pdf [Accessed June 2025].

[32] https://www.vwt.org.uk/species/pine-marten-2 [Accessed June 2025]

measures (**Section 8.6**) including a detailed Pine Marten SPP and Forestry GEMP implemented in conjunction with the CEMP for the Proposed Development and the CTMP to manage site traffic movements.

8.7.177 The Applicant's Pine Marten SPP addresses:

- the need for pre-construction surveys to identify shelters within 100 m, 30 m (non breeding) or 100 m (breeding) and protection zones to be implemented around pine marten shelters;
- the preference to micro-site works away from places of shelter (where possible);
- the need and method for licencing;
- the requirement of an ECoW to oversee works within protection zones of a shelter; and
- (as a last resort) the approach and method for removal of a shelter.

8.7.178 In addition to these measures the Pine Marten SPP states general best practice mitigation measures e.g. caping pipes and providing escape routes from excavations.

8.7.179 The forestry GEMP covers the implementation of best practice working on all of the Applicant's sites where forestry works are required.

8.7.180 Impacts on pine marten, when considering value of the species and magnitude of the impact are predicted to be **not significant**.

Red Squirrel

8.7.181 The significance of impacts on red squirrel, a nationally protected species (**medium** value), from the Proposed Development are limited to temporary construction related disturbance at their place of shelter, and destruction of red squirrel shelters from construction of the Proposed Development (and management felling).

8.7.182 The red squirrel population in Scotland is estimated to be approximately 120,000 individuals, representing about 75% of the UK population. The IUCN list red squirrel as "least concern" globally but "near threatened" in Scotland due to population declines associated with disease outbreaks. In 2020 the Scottish red squirrel population was reported to be stable. North of Inverness where grey squirrels (main pressure on red squirrel populations) are considered absent, this is also considered to be the case.

8.7.183 Red squirrel densities generally vary from one squirrel per ha, to one squirrel per 10 ha of suitable habitat, they are generally solitary and not strictly territorial (Red Squirrel SPP). Red squirrels have home ranges typically between two and ten hectares, average of seven hectares, although about one hectare of this range is intensively used (referred to as a "core area") and does not overlap with those of other squirrels. In conifer plantations, where seed crops fluctuate, red squirrel ranges are much larger from 10 to 50 ha[33].

8.7.184 Three red squirrel shelters were found within the footprint of the Proposed Development (including proposed felling areas). No red squirrel shelters were found within a potential disturbance zone of works proposed as part of the Proposed Development.

8.7.185 The Applicant will utilise embedded mitigation measures, including their Red Squirrel SPP and Forestry GEMP, to avoid significant effects on any red squirrel using the surrounding area.

[33] https://www.wildlifeonline.me.uk/animals/article/squirrel-territory-home-range [Accessed February 2025]

8.7.186 The three dreys found within the footprint of the Proposed Development, two of which are within 500 m of each other (Section C) but in excess of 20 km from the third (Section D) and are therefore unlikely to be attributed to the same squirrel. Research on red squirrels has found they have between two and eight (average of four) different dreys, each situated in different locations throughout their home range, and females if disturbed during breeding may move their offspring between dreys[34]. This suggest that the value of a given drey is not critical to a squirrel's survival or even reproductive success.

8.7.187 Considering embedded mitigation measures, effects on red squirrel, a nationally protected species, from the Proposed Development are predicted to be of **negligible** impact magnitude. The impact magnitude is assigned on the basis that to avoid or reduce impacts on red squirrel at their place of shelter, works will be carried out in line with embedded mitigation measures (**Section 8.6**) including a detailed Red Squirrel SPP and Forestry GEMP implemented in conjunction with the CEMP for the Proposed Development and the CTMP to manage site traffic movements.

8.7.188 The Applicant's Red Squirrel SPP addresses:

- the need for pre-construction surveys to identify shelters within 50 m during breeding (February – August inclusive) or 5 m / one tree length (non breeding season);
- protection zones to be implemented around red squirrel shelters;
- the preference to micro-site works away from places of shelter (where possible);
- the need and method for licencing;
- the requirement of an ECoW to oversee works within protection zones of a shelter; and
- (as a last resort) the approach and method for removal of a shelter.

8.7.189 In addition, the forestry GEMP covers the implementation of best practice working on all of the Applicant's sites where forestry works are required. As a result of the measures detailed impacts on red squirrels, when considering value of the species and magnitude of the impact, are predicted to be **not significant**.

Reptiles

8.7.190 The significance of impacts on reptile species (adder, common lizard and slow worm), all nationally protected, and species found widespread and in low numbers in the north of Scotland (**medium** value). The adder, Scotland's only native snake, is reported to have suffered a 36% decrease in its distribution between 1994 and 2024, with the overall range remaining largely the same[35]. Slow worms and common lizard populations are anecdotally considered to be declining due to habitat loss and are included on the Scottish Biodiversity List due to their priority for biodiversity conservation. Significant effects from the Proposed Development are limited to direct mortality through construction related operations.

8.7.191 All reptiles native to Scotland are afforded protection from intentional or reckless killing under the Wildlife and Countryside Act (1981), as amended. Adders are most often found on heaths, moors and coastal areas. Common lizards are most frequently seen on commons, heaths, moorland, dry stone walls, embankments and sea cliffs. Slow worms are often found in gardens, allotments, rough grassland, woodland edges and heathland.

8.7.192 Seventeen reptiles were recorded within 30 m of the Proposed Development, across all sections. Suitable reptile habitat was also present throughout the Survey Area.

[34] https://www.wildlifeonline.me.uk/animals/article/squirrel-nests-refugia [accessed February 2025].

[35] Ward, R.J., Gray, F.G., Foster, J., Cooper-Bohannon, R., Julian, A.M., Whatley, C., Raynor, R., and McKinnell, J. 2025. Status of the adder in Scotland (2022-24) - re-survey and comparison with the 1994 study. NatureScot Research Report 1376.

8.7.193 ARG Advice note 10[36] states in peatland habitats, adders are found typically at densities of four per ha, common lizards average 40 per ha and slow worms average 30 per ha. The total footprint of the Proposed Development is 1,691 ha (excluding management felling areas), suggesting 6,764 adders, 67,640 common lizards and 50,730 slow worms could be at risk of direct mortality. This is likely to be a realistic worst-case scenario as not all habitats across the Proposed Development are peatland habitats, however, reptiles occupy other habitats in addition to peatlands for which densities are not currently available.

8.7.194 In the absence of a reptile SPP, reptiles will be at risk of direct mortality through construction related operations, as such these species are afforded only limited protection through embedded mitigation through the GEMPs.

8.7.195 Effects on reptiles from the Proposed Development are considered to be of **medium** impact magnitude due to the risk of direct mortality within a range of habitats across most of the Proposed Development. Potentially significant numbers of reptiles across all three species are likely to be killed through construction related activities, including (but not limited to) vegetation clearance, soil stripping, tower foundation construction and all access track construction. Impacts on reptiles when considering value of the species and magnitude of the impact are predicted to be **significant** at a local level.

Water Vole

8.7.196 Water voles are a nationally protected species whose population is declining in Scotland (**high** value) due to a number of factors including the release of American mink in the 1980s and 90s and loss of habitat. In 2005 approximately 40% of the UK population (58,341 – 186,142 individuals) was thought to occur on Mainland Scotland and many of those animals were living in upland habitats[37]. The water vole is considered to be one of Scotland's most threatened mammals and the Scottish population is considered to be distinct, stemming from a separate colonisation event from that in England. The IUCN list water vole as "near threatened" in Scotland on account of "very rapid declines over recent years".

8.7.197 The impacts on water voles from the Proposed Development include direct mortality through construction related operations, loss of habitat, disturbance whilst at their place of shelter and destruction of their places of shelter.

8.7.198 American mink has been identified throughout and adjacent to the land required for the Proposed Development (field and desk-based records) and are known to be a significant cause in the decline of water vole populations in the UK. The presence of mink within the area of the Proposed Development suggest water vole populations in the area are already under pressure, therefore likely to be sensitive to stochastic events such as temporary disturbance and loss of habitat associated with construction related activities.

8.7.199 Populations at low numbers are prone to random unpredictable (stochastic) events that they would otherwise be resilient to where populations are higher, in this case a construction event. Where you have a low population (as a result of mink predation in the area) there is the risk that effects of disturbance or habitat loss or pollution etc. could be exacerbated by the fact the population is already at low numbers and under predation pressure, like a magnifying glass effect.

8.7.200 Even in the absence of mink, water vole populations fluctuate with source and sink populations. A sink habitat is a habitat in which populations cannot survive when they are isolated from other populations but where

[36] https://www.arguk.org/info-advice/advice-notes/598-10-advice-note-10-reptile-survey-and-mitigation-guidance-for-peatland-habitats-1/file [Accessed February 2025].
[37] https://www.nature.scot/sites/default/files/2017-07/Publication%202005%20-%20SNH%20Commissioned%20Report%2099%20-%20The%20ecology%20and%20conservation%20of%20water%20voles%20in%20upland%20habitats.pdf [Accessed February 2025].

populations, during a period of expansion, will occupy. Therefore, whilst a local population may not occupy a given area of habitat at all times, the habitat may form part of the source sink dynamic for that population.

8.7.201 Fourteen locations with water vole evidence (including shelters) were found within 30 m of the footprint of the Proposed Development **(Table 8.23**), with twenty-three instances where construction related activities are proposed within 30 m of colonies, and thirteen instances of shelters within 30 m.

Table 8.23: Water vole population locations identified within 30 m of the Proposed Development

Watercourses where water vole populations identified within 30 m	Nearest Span	Closest Infrastructure	Required Crossing Point
Halsary Burn	N23 – N25	Track / Operational Corridor	No
Unnamed watercourse	N28 – N29	Operational Corridor	No
Unnamed watercourse	N156 - N157	Operational Corridor	No
Unnamed watercourse	N159 - N160	Track	No
Unnamed watercourse	N176 - N177	Track	No
Kintradwell Burn	N198 - N199	Track	No
Unnamed watercourse	N233 - N234	Track	No
Unnamed watercourse	N247 - N246	Track / Tower	Yes (temporary)
Farm pond and ditch	N264 - N265	Tower	No
Unnamed watercourse	N277 - N278	Operational Corridor	Yes (temporary)
Unnamed watercourse	N290 - N292	Tower	Yes (temporary)
Allt Srath nan Seasgach	S46 - S47	Track	Yes (permanent)
Unnamed watercourse	S69 - S70	Tower	No
Unnamed watercourse	S82 - S83	Operational Corridor	No

8.7.202 Watercourse crossings associated with the Proposed Development have the potential to reduce water vole habitat by approximately 10 m per crossing, assuming working areas will be reinstated to functional habitat. There are currently proposed to be four watercourse crossings in locations where water vole are present or likely to be present, amounting to approximately 40 m of water vole habitat, 10 m of which is due to be lost permanently.

8.7.203 Combined with the Applicant's embedded mitigation measures, including their Water Vole SPP and GEMPs (e.g. working in or near water), effects on water vole, from the Proposed Development are predicted to be of **negligible** impact magnitude. The impact magnitude is assigned on the basis that to avoid or reduce impacts on water vole at their place of shelter, works will be carried out in line with embedded mitigation measures (**Section 8.6**) including a detailed Water Vole SPP and Watercourse Crossings GEMP, implemented in conjunction with the CEMP for the Proposed Development.

8.7.204 The Applicant's Water Vole SPP addresses:

- the need for pre-construction surveys to identify shelters within 10 m of works;
- protection zones to be implemented around water vole shelters;
- the preference to micro-site works away from places of shelter (where possible);
- the need and method for licencing;
- the requirement of an ECoW to oversee works within protection zones of a shelter; and

- (as a last resort) the approach and method for removal of a shelter, including for habitat modification and trapping and translocation.

8.7.205 Further to measures set out in the Water Vole SPP, adherence to 'WAT-SG-25 Engineering in the water environment: Good Practice Guide, River crossings', through implementation of the Watercourse Crossings GEMP will ensure watercourse crossing designs do not impede water vole movements along riparian corridors. This will be achieved either through maintenance of the natural bank (bridging structures) or through use of culverts with incorporated mammal ledges, tied into the natural bank at both ends.

8.7.206 Impacts on water voles, when considering value of the species and magnitude of the impact are predicted to be **not significant**.

Wildcat

8.7.207 The significance of impacts on wildcat, an internationally protected species that is virtually extinct outside of reintroduction areas in Scotland (**high** value), from the Proposed Development are limited to temporary construction related disturbance at their place of shelter.

8.7.208 No wildcat shelters were found within the footprint of the Proposed Development. A single potential wildcat shelter was found within 30 m of a tower base location and is at risk of disturbance as a result of the Proposed Development. The potential shelter was identified within the Strathpeffer Wildcat Protection Area.

8.7.209 Wildcat numbers are critically low in Scotland with some reports that the population is no longer viable (outside of reintroduction areas). Historic persecution and the subsequent hybridisation with domestic / feral cats has led to very low numbers of true wildcats naturally occurring in the wild, with estimates as low as 30 individuals[38]. Research undertaken on wild living cats[39] identified no genetically pure wildcats, with all individuals found being hybrids or feral cats. Feral and hybrid cats are not afforded protection under legislation other than from acts of cruelty. The home range of wildcats can be 14 km^2 in females and 18 km^2 for males [40] with use of multiple den sites in a territory.

8.7.210 Impacts on wildcat from the Proposed Development are predicted to be of **negligible** impact magnitude as works will be carried out in line with embedded mitigation measures (**Section 8.6**), including a detailed Wildcat SPP and Forestry GEMP implemented in conjunction with the CEMP for the Proposed Development and the CTMP to manage site traffic movements.

8.7.211 The Applicant's Wildcat SPP addresses:

- the need for pre-construction surveys;
- 200 m protection zones to be implemented around all shelters;
- the preference to micro-site works away from shelters (where possible);
- the need and method for licencing; and
- the requirement of an ECoW to oversee works within 200 m of a shelter.

[38] https://www.nature.scot/sites/default/files/2019-02/Wildcat%20in%20Scotland%20-%20Review%20of%20conservation%20status%20and%20activities_1.pdf [Accessed February 2025]
[39] https://www.nature.scot/doc/scottish-wildcat-action-swa-final-summary-report-2023#3.+ECOLOGY [Accessed February 2025]
[40] https://www.nature.scot/doc/scottish-wildcat-action-swa-specialist-report-ecology [Accessed February 2025]

8.7.212 The Forestry GEMP covers the implementation of best practice working on all of the Applicant's sites where forestry works are required. Further to this, as the potential wildcat shelter is within a disturbance zone only, the physical structure will be maintained post construction for future use.

8.7.213 Impacts on wildcat when considering value of the species and magnitude of the impact are predicted to be **not significant**.

Atlantic Salmon

8.7.214 The significance of impacts on Atlantic salmon, an internationally protected species that is common and widespread in Scotland (**high** value), from the Proposed Development are limited to barriers to fish passage and destruction of breeding habitat from in-stream construction works; disturbance and mortality of spawning fish; and direct mortality of fish through pollution events and habitat loss.

8.7.215 As per **Appendix 8.5: Watercourse Crossing Ecological Appraisal,** Atlantic salmon are present and potentially breeding in the vicinity of proposed watercourse crossings in all sections. Though it is not known whether any salmonid spawning habitat or holding habitat exists in proximity to any of the proposed crossing points.

8.7.216 The Proposed Development, across its whole length, will feature a total of 175 watercourse crossings of which 84 are permanent access tracks and 91 are temporary access tracks. These watercourse crossings present a risk of direct mortality to fish through pollution events and habitat loss, as well as potential barriers to fish passage.

8.7.217 The Applicant does not currently have a SPP in place for Atlantic salmon, however, the Applicant will use embedded mitigation measures including their GEMPs (e.g., Working In or Near Water) to avoid effects upon the aquatic environment and Atlantic salmon.

8.7.218 All watercourse crossings will be designed in accordance with Engineering in the Water Environment: Good Practice Guide River Crossings (SEPA 2010[41] (as per watercourse crossings GEMP), which will ensure that fish passage is not impeded along any watercourse in which a crossing is required. This will be achieved be ensuring any culvert is passable to all fish species, and that the natural riverbed level and slope is maintained.

8.7.219 In addition to the above, no de-stumping will occur within 10 m of any watercourse to reduce the risk of pollution events, in line with GEMPs (e.g. Working in or Near Water). In-river working will not be undertaken between November and June on any river that contains salmonid fish, to avoid disturbance to spawning fish and their spawning sites.

8.7.220 As a result of the above measures impacts to the aquatic habitat are considered unlikely; therefore, effects on Atlantic salmon from the construction of the Proposed Development are predicted to be a negligible impact magnitude. Impacts on Atlantic salmon, when considering value of the species and magnitude of the impact are predicted to be **not significant**.

Freshwater Pearl Mussel

8.7.221 The significance of impacts on freshwater pearl mussel, an internationally protected species that is rare and declining in Scotland (**high** value), from the Proposed Development are limited to direct mortality of mussels

[41] SEPA (2010) Engineering in the water environment: good practice guide River crossings, second edition. [Online} River crossings - good practice guide (Accessed February 2025)

through pollution events, habitat loss and through in-river working and construction of watercourse crossing points.

8.7.222 In total eight watercourses were found to contain freshwater pearl mussel, one watercourse in each of Sections A, B and D, two watercourses within Section C and three watercourses in Section E. Therefore, there is a risk of direct harm and mortality to mussels.

8.7.223 Where watercourse crossings are proposed in a known freshwater pearl mussel river, crossings will be by way of a single span structure designed in accordance with SEPA guidance, with abutments set back from the riverbank.

8.7.224 The Applicant will use embedded mitigation measures including their FWPM SPP and GEMPs (e.g., Working in or Near Water) to avoid effects upon the aquatic environment and FWPM. This will include monitoring of water quality throughout the works.

8.7.225 In addition to the above no de-stumping will occur within 10 m of any watercourse to reduce the risk of pollution events, in line with GEMPs (e.g. Working in or Near Water).

8.7.226 As a result of the above measures, impacts upon the aquatic environment due to the Proposed Development are not anticipated; therefore, effects to FWPM, when considering value of the species and magnitude of the impact are predicted to be **not significant**.

Other Notable Species

8.7.227 The following species have been included within this impact assessment on account of their importance in a Scottish or Highland context.

Common Toad

8.7.228 Common toad is listed on the Scottish Biodiversity list affording it local significance (**low** value).

8.7.229 Common toads are seasonal breeders returning to their breeding ponds in spring to spawn. The remainder of a toads life cycle is spent in terrestrial habitats foraging. The Proposed Development has been designed to avoid waterbodies such as ponds, therefore avoiding impacts on toad breeding sites.

8.7.230 As a result of construction operations including traffic movements, there is potential for toads to be killed whilst utilising their terrestrial habitat.

8.7.231 When considering implementation of embedded mitigation (including the CEMP and CTMP) and measures outlined in **Section 8.8** to mitigate impacts on great crested newts and reptiles through a method statement, including e.g. sympathetic habitat management / removal measures (including staged strimming) and the avoidance of waterbodies, effects on common toads from the Proposed Development, when considering value of the species and magnitude of the impact are predicted to be **not significant**.

Assessment – Operational Effects

Statutory Designated Sites

8.7.232 The measures to mitigate impacts from in-stream barriers on the passage of fish, otter, water vole and freshwater pearl mussels identified as part of the construction assessment will also mitigate the operational impacts. These impacts are therefore not considered as part of the operational assessment.

8.7.233 During operation of the Proposed Development, predicted impacts are limited to the maintenance of the operational corridor to maintain safety clearances between woodland blocks and the OHL. Such maintenance may include removal of saplings growing, felling of trees that have reached a height to potentially interfere with the safe operation of the line or loping / de-limbing of trees as they encroach on the area.

8.7.234 As these maintenance activities (**negligible** magnitude) will maintain the operational corridor to that following the end of construction and works will be undertaken in line with the Applicant's SPPs and GEMPs, impacts on designated sites from operation when considering value of the site and magnitude of the impact are predicted to be **not significant**.

Habitats

8.7.235 Operational impacts on habitats present within the Proposed Development are predicted to be negligible as the habitat lost has been accounted for within the construction phase assessment. Monitoring and maintenance of the habitats planted / reinstated will be necessary so they meet their target condition and will be undertaken in line with the Proposed Development Habitat Management Plan (an Outline HMP has been included as annex to **Volume 5, Appendix 8.8: Biodiversity Net Gain (BNG) Report**. Habitat maintenance will be of **negligible** impact magnitude and impacts on habitats when considering value of the habitats and magnitude of the impact are predicted to be **not significant**.

Protected Species

8.7.236 It is assumed that all operational maintenance activities including vegetation management will be undertaken in line with the appropriate SPPs and GEMPs (embedded mitigation). Further to this, maintenance works are assumed to be sporadic (estimated at every 4 -5 years) and will not be undertaken along the whole route at once.

8.7.237 As a result of the above measures, effects on protected species (with SPPs) from the Proposed Development are predicted to be of **negligible** impact magnitude. Operational maintenance (habitat management) is therefore predicted to be **not significant**.

8.7.238 Species not covered by specific SPPs are specified below.

Reptiles

8.7.239 Operational activities associated with routine habitat maintenance for the Proposed Development will be undertaken in line with current best practice by the Applicant. These include:

- Operational habitat maintenance will be undertaken approximately every 4-5 years, when need arises, i.e. a safety concern has been identified in relation to vegetation growth.
- Works will be targeted to the winter months (where possible), when reptiles are not active, and works will be undertaken on foot, using hand tools to remove tree / shrub growth from within the operational corridor.
- Vegetation will be cut at or above ground level to avoid disturbance to the ground. Cut vegetation will be removed from site and disposed of in line with the Applicant's waste management procedures.
- Should a need to use forestry machinery on site arise during the operational phase, the Applicant will first consult NatureScot for appropriate guidance.

8.7.240 Effects on reptile species from the operation and maintenance (habitat management) of the Proposed Development, in light of the Applicant's standard approach, is assessed as a **negligible** impact magnitude. Impacts when considering value of the species and magnitude of the impact are predicted to be **not significant**.

Great Crested Newts

8.7.241 Operational activities associated with routine habitat maintenance for the Proposed Development will be undertaken in line with current best practice by the Applicant. These include:

- Operational habitat maintenance will be undertaken approximately every 4-5 years, when need arises, i.e. a safety concern has been identified in relation to vegetation growth.
- Works will be targeted to the winter months (where possible), when great crested newts are not active, and works will be undertaken on foot using hand tools to remove tree / shrub growth from within the operational corridor.
- Vegetation will be cut at or above ground level to avoid disturbance to the ground. Cut vegetation will be removed from site and disposed of in line with the Applicant's waste management procedures.

8.7.242 All operational habitat management within 250 m of a great crested newt pond, will be undertaken following consultation with NatureScot on the requirement for European Protected Species (EPS) licencing (in the context of the works required), and any necessary mitigation measures related to the specific activities required.

8.7.243 Effects on GCN from the operational habitat maintenance of the Proposed Development, in light of the Applicant's standard approach, are assessed as a **negligible** impact magnitude. Impacts when considering value of the species and magnitude of the impact are predicted to be **not significant.**

Atlantic Salmon

8.7.244 The impacts on Atlantic salmon through operation of the Proposed Development are considered to be limited to:

- Increased stress, and potential mortality to fish due to increases in water temperature due to removal of riparian vegetation.

8.7.245 A total of approximately 27.75 ha of riparian woodland will be removed to facilitate the Proposed Development. The loss of this habitat has potential to increase water temperatures within affected watercourses and may lead to stress and impact spawning success and potentially lead to direct mortality of Atlantic salmon.

8.7.246 The loss of riparian woodland, and the potential increases in water temperature and siltation, which could lead to increases in stress and a loss of spawning habitat, could reduce the number and distribution of Atlantic salmon within Sections A-E. Therefore, effects on Atlantic salmon from the operation and maintenance of the Proposed Development are predicted to be of **medium** impact magnitude. Operational impacts on Atlantic salmon, when considering value of the species and magnitude of the impact are predicted to be **significant** at a local level**.**

Freshwater Pearl Mussel

8.7.247 The impacts on FWPM through operation of the Proposed Development are considered to include:

- Direct mortality due to removal of bankside vegetation and potential increases in sediment regime and water temperature.
- Increased stress and potential mortality of mussels due to increases in water temperature and potential changes in river habitat due to removal of riparian vegetation

8.7.248 A total of approximately 3.40 in ha of riparian habitat (bog, grassland, woodland and scrub) is being removed along watercourses which are known to contain freshwater pearl mussel. The loss of this habitat has potential to increase water temperatures and siltation of watercourses during rainfall events within affected watercourses, which may lead to stress and direct mortality of freshwater pearl mussel.

8.7.249 The loss of riparian habitat and the potential increases in water temperature and siltation within watercourses that contain freshwater pearl mussel, have the potential to reduce the number and distribution of freshwater mussel in Sections A-E. Therefore, effects on freshwater pearl mussel from the operation and maintenance of the Proposed Development are predicted to be of **medium** impact magnitude. Operational impacts on FWPM, when considering value of the species and magnitude of the impact are predicted to be **significant** at a regional level.

8.8 Additional Mitigation

8.8.1 Where sensitive ecological receptors have been identified as likely to be subject to significant impacts, when considering mitigation by design and embedded mitigation measures, further additional mitigation measures have been proposed in order to ameliorate impacts. Where the same or similar measures are applicable to more than one sensitive ecological receptor, these have been grouped (where appropriate).

Construction Phase Mitigation

Dunbeath Water SSSI and Berriedale Water SSSI (**Chapter 19: Schedule of Mitigation Item E1**)

8.8.2 In order to mitigate the loss of woodland within these protected sites, natural regeneration is proposed in order to connect fragmented pockets of woodland or reinforce existing woodland blocks (as appropriate). Natural regeneration is the preferred method of mitigation (as opposed to planting) as it will enable the natural seed bank to grow, maintaining the characteristics of the woodland to be lost. The proposed regeneration area will be protected from deer grazing. Areas protected for natural regeneration will need to be managed to remove growth of unwanted species, such as non-native commercial conifer species and those which may hinder tree growth such as bracken (where required), which also may be present within the seed bank. Consideration should be given to enabling access to regeneration areas to other species through e.g. mammal gates (as appropriate). A sufficient area (not less than the area lost) of natural regeneration will be encouraged in order to provide functional and connected woodland habitat that promotes the features for which the sites are designated. Protection measures will be removed at a point at which the woodland is considered resilient to grazing by deer and sheep and in consultation with NatureScot. During establishment the site shall be monitored and managed to enable the target condition to be reached in line with the Proposed Development HMP (an Outline HMP has been included as an annex to **Volume 5, Appendix 8.8: Biodiversity Net Gain (BNG) Report)**.

Allt nan Caorach SSSI (**Chapter 19: Schedule of Mitigation Item E2**)

8.8.3 Woodland situated within the gorge and below the OHL will be managed to prevent trees impinging on the safe clearance zone of the conductors. This may involve reducing the height or pruning / lopping of trees, with the trees otherwise being preserved in situ, with associated habitats and species also being preserved.

Sheilton Peatlands SSSI (**Chapter 19: Schedule of Mitigation Item E3**)

8.8.4 Compensation for the loss of peatland habitat will be provided off-site in line with the mitigation strategy appended to **Volume 5, Appendix 8.8: Biodiversity Net Gain (BNG) Report**.

AWI (**Chapter 19: Schedule of Mitigation Item E3**)

8.8.5 Compensation for the loss of AWI will be provided off-site in line with the mitigation strategy appended to **Volume 5, Appendix 8.8: Biodiversity Net Gain (BNG) Report**.

Habitat (**Chapter 19: Schedule of Mitigation Item E3**)

8.8.6 The Applicant is committed to protecting and enhancing the environment by minimising the potential impacts from their construction and operational activities. As part of this approach, the Applicant has made

commitments within its Sustainability Strategy to deliver 10% biodiversity net gain (BNG) and leave a positive legacy for nature on all projects gaining consent. Where this cannot be delivered on-site, the Applicant must identify off-site opportunities for biodiversity enhancement. Details of the strategy behind delivering a net gain for the Proposed Development are appended to **Volume 5, Appendix 8.8: Biodiversity Net Gain (BNG) Report**.

Great Crested Newt (**Chapter 19: Schedule of Mitigation Item E4**)

8.8.7 In order to reduce mortality to GCN, exclusion zones will be set up around newt ponds up to 250 m. Works including felling, vegetation removal and construction activities that take place within 250 m of a confirmed newt pond will be undertaken under the guidance of a suitably qualified and experienced ECoW and under licence from NatureScot.

8.8.8 To minimise the risk of direct mortality to newts, works areas within 250 m of confirmed GCN ponds, will be fenced off using suitable newt proof fencing in line with guidance[42,43], to prevent movement of newts into the works area. Newts within the work area(s) will be trapped and translocated out with the fenced off area(s) in line with guidance. Once all newts are considered to have been removed from works areas (as per guidance), works including felling, vegetation removal and infrastructure construction may commence.

8.8.9 Following completion of construction activities, habitat within the newt fenced area will be enhanced, through the provision of, for example, artificial hibernaculum, new pond habitats and appropriate landscape planting to promote newt populations. All measures will be designed, sited and constructed in line with the stated guidance detailed within the HMP (an Outline HMP has been included as an annex to **Volume 5, Appendix 8.8: Biodiversity Net Gain (BNG) Report)**.

8.8.10 On completion of works (including reinstatement), all newt fencing will be removed and newts given access to their previous extents.

8.8.11 The above measures will be detailed within an application for a European Protected Species Disturbance Licence from NatureScot. The measures will also be detailed within a Great Crested Newt Management Plan developed by the Principal Contractors and implemented through the CEMP. Compliance with these documents will be monitored and audited by the site ECoW.

Reptiles (**Chapter 19: Schedule of Mitigation Item E5**)

8.8.12 Implementation of safeguarding measures in line with guidance[44], for example, staged strimming of areas earmarked for development / disturbance, will be undertaken to minimise the risk of killing reptiles, making existing habitat less favourable so they move out of that area. Stacking the arisings away from work areas may also be considered, to create refuges for reptiles to further draw them away from work areas. Use of reptile fencing, to prevent reptiles from moving into areas where they could be killed or injured, or in conjunction with capture and translocation to move animals to suitable habitat out with work areas may also be considered, in specific circumstances, where habitat management measures are deemed unsuitable or as advised by the ECoW.

[42] Langton, T.E.S., Beckett, C.L., and Foster, J.P. (2001), Great Crested Newt Conservation Handbook, Froglife, Halesworth. https://www.froglife.org/wp-content/uploads/2013/06/GCN-Conservation-Handbook_compressed.pdf [Accessed January 2025].
[43] English Nature (2001). Great Crested Newt Mitigation Guidelines. English Nature, Peterborough. https://mokrady.wbs.cz/literatura_ke_stazeni/great_crested_newt_mitigation_guidelines.pdf [Accessed January 2025].
[44] Edgar, P., Foster, J. and Baker, J. (2010). Reptile Habitat Management Handbook. Amphibian and Reptile Conservation, Bournemouth. https://www.arc-trust.org/habitat-management-handbooks. [Accessed January 2025].

8.8.13 During the reptile hibernating season (October – March inclusive) pre-clearance checks of areas of vegetation to be removed will be undertaken by an appropriately qualified and experienced ECoW to reduce the likelihood of direct mortality of reptiles.

8.8.14 All areas within the footprint of the Proposed Development will be surveyed for potential reptile hibernation sites (hibernacula). All hibernacula / potential hibernacula identified within work sites, will be removed through a destructive search undertaken / supervised by the ECoW, outside of the reptile hibernation season (October – March inclusive).

8.8.15 The measures stated above will be detailed within a Reptile Management Plan developed by the Principal Contractors and implemented through the CEMP. Compliance with these documents will be monitored and audited by the site ECoW.

Operational Phase Mitigation

Atlantic Salmon (**Chapter 19: Schedule of Mitigation Item E6**)

8.8.16 The removal of riparian woodland will be compensated through the planting and creation of riparian woodland in appropriate locations to improve riparian habitat for Atlantic salmon and increase resilience within populations of salmon to climate change. This habitat management will be captured within the HMP (an Outline HMP has been included as an annex to **Volume 5, Appendix 8.8: Biodiversity Net Gain (BNG) Report)**, and will be targeted to areas which will provide the greatest increase to salmon, for example in SACs designated for salmon such as the Berriedale and Langwell SAC. However, planting may occur throughout the wider catchment and if needed other areas within the Highlands. NatureScot will be consulted on habitat improvements and locations.

Freshwater Pearl Mussel (**Chapter 19: Schedule of Mitigation Item E7**)

8.8.17 The removal of riparian woodland in watercourses which contain freshwater pearl mussel, may leave populations more susceptible to effects of climate change, such as increased water temperature and siltation. To compensate for the loss of riparian woodland, riparian woodland will be created in appropriate locations for freshwater pearl mussel. This will be captured within the HMP (an Outline HMP has been included as an annex to **Volume 5, Appendix 8.8: Biodiversity Net Gain (BNG) Report)** and a species specific mitigation plan for freshwater pearl mussel. Planting locations will be agreed in consultation with NatureScot to provide benefit to freshwater pearl mussel populations local to the Proposed Development, locations in the wider catchment and if needed other areas in the Highlands.

8.9 Residual Effects

8.9.1 **Table 8.24** illustrates the sensitive ecological receptors, the predicted impacts upon them as a result of the Proposed Development and their predicted impacts following the application of additional mitigation measures. Sensitive ecological receptors where no significant impacts are predicted following application of mitigation by design and / or embedded mitigation measures have not been included in this table. **Table 8.24** demonstrates that with the application of the additional mitigation measures detailed, no significant adverse impacts are anticipated with the exception of impacts on bat foraging / commuting which cannot be mitigated.

Table 8.24: Impact Significance Following Application of Mitigation.

Sensitive Ecological Receptor	Pre-Additional Mitigation Significance (-) signifies predicted negative effect (+) signifies predicted positive effect.		Residual Significance (-) signifies predicted negative effect (+) signifies predicted positive effect.	
	Construction	Operation	Construction	Operation
Dunbeath Water SSSI	Significant (-)	Not significant	Not significant	Not significant
Berriedale Water SSSI	Significant (-)	Not significant	Not significant	Not significant
Allt nan Caorach SSSI	Significant (-)	Not significant	Not significant	Not significant
Sheilton Peatlands SSSI	Significant (-)	Not significant	Not significant	Not significant
AWI	Significant (-)	Not significant	Not significant	Not significant
Habitats	Significant (-)	Not significant	Not significant	Not significant
GCN	Significant (-)	Not significant	Not significant	Not significant
Reptiles	Significant (-)	Not significant	Not significant	Not significant
Bats	Significant (-)	Not significant	Significant (-)	Not significant
Atlantic salmon	Not significant	Significant (-)	Not significant	Not significant
Freshwater pearl mussel	Not significant	Significant (-)	Not significant	Not significant

8.10 Biodiversity Net Gain

8.10.1 The Applicant has a business commitment for all projects gaining consent to deliver a 10% Biodiversity Net Gain (BNG). This is aligned to the Highland Council's requirement for a minimum 10% biodiversity enhancement for Major, National and EIA-scale Development. In line with the requirements and guidance of Policy 3 of the Scottish Government's National Planning Framework 4 (2023) (NPF4), developers are obligated to ensure projects leave nature in a 'demonstrably better state than without intervention'.

8.10.2 The BNG report, found in **Volume 5, Appendix 8.8: Biodiversity Net Gain (BNG) Report**, details the BNG assessment undertaken for the Proposed Development.

8.10.3 The report sets out the results of the BNG calculations and the approach to delivering on the Applicant's BNG commitments for the Proposed Development. The SSEN Biodiversity Project Toolkit Excel Sheet was used to produce the BNG calculations for the Proposed Development.

8.10.4 The BNG report includes:

- A calculation of baseline Biodiversity Units (BU) for the Proposed Development following the guidance outlined within SSEN Transmission's BNG Toolkit User Guide;
- A prediction of the post development on-site BU;
- A qualitative assessment against the BNG Good Practice Principles; and
- Details of the required habitat creation or enhancements required to achieve biodiversity enhancements.

8.10.5 The non-irreplaceable baseline BU for habitat within the Proposed Development are 6,555 BU. The predicted post-development BU are 2998 BU, meaning that the Proposed Development is predicted to result in a 54% net loss.

8.10.6 The non-irreplaceable baseline Linear Watercourse Units (LU (W)) within the Proposed Development are 29 LU (W). The predicted post-development LU (W) are 6 LU (W), meaning that the Proposed Development is predicted to result in a 78% net loss.

8.10.7 Positive effects for biodiversity demonstrating compliance with NPF4 will be delivered through off-site BU as described within the report.

8.10.8 The Proposed Development will impact irreplaceable habitats, and the assessment for irreplaceable habitats is included within an Irreplaceable Habitat Supplement within the BNG Report.

8.11 Cumulative Effects

8.11.1 Further details on projects included within the cumulative assessment within this chapter can be found in **Chapter 5: EIA Process and Methodology** and **Volume 3, Figure 5.1: Cumulative Developments**. **Table 8.25** details the developments considered as potentially having cumulative effects on sensitive ecological receptors in combination with the Proposed Development. Those projects that were, at the time of writing at an early stage of development or at the screening stage, are identified in italicised text and are considered collectively within paragraph 8.11.102.

Table 8.25: SLBB Cumulative Developments Submitted or Approved for EIA

Application	Location	Proposal	Status	Distance from SLBB
Intra-project developments (SSEN ASTI Projects)				
Banniskirk 400 kV Substation and High Voltage Direct Current (HVDC) Converter Station 24/04898/FUL	Land 360 m north east of Achalone Cottage Achalone Halkirk	Erection and operation of an Air Insulated Switchgear 400 kV substation and HVDC converter station with associated buildings, installation of new platforms, drainage infrastructure, temporary construction compound, landscaping, mounding and other ancillary works.	Under Consideration	Adjacent
Carnaig 400 kV Substation 24/05062/FUL	Land 1800 m north east of Sleastray Bonar Bridge	Construction and operation of a 400 kV substation and associated infrastructure, site access, and landscaping.	Under Consideration	Adjacent
Fanellan 400 kV Substation and HVDC Converter Station 25/00826/FUL	Land 300 m north west of Fanellan Farmhouse Kiltarlity	Proposed new 400 kV substation and HVDC converter station comprising new buildings, platform, plant and machinery, access, laydown / work compound area(s), landscaping, site drainage, and other ancillary works (National Development).	Under Consideration	Adjacent
Inter-project developments (SSEN and Third Party Projects)				
Banniskirk – Sinclair's Bay HVDC UGC	*New underground cable between Spittal and Sinclair's Bay*	*Circa 30 km of onshore underground HVDC cable from Spittal travelling between Loch Scarmclate and Loch Watten, and through to landfall connections at Sinclair's Bay.*	*Early Development*	*Adjacent*
Banniskirk – Spittal 275 kV UGC Connection	*New underground cable adjacent to Spittal 275 kV Substation*	*Circa 1 km of underground cable from the Banniskirk 400 kV substation and HVDC converter station to the existing 275 kV substation at Spittal.*	*Early Development*	*Adjacent*
Carnaig – Loch Buidhe 275 kV UGC Connection	*New underground cable adjacent to Loch Buidhe 275 kV Substation*	*Circa 1 km of underground cable from the proposed Carnaig 400 kV Substation to the existing 275 kV substation at Loch Buidhe.*	*Early Development*	*Adjacent*
Western Isles HVDC UGC	*New underground cable between Dundonnell and Beauly*	*Circa 80 km of onshore underground HVDC cable from Dundonnell to a mainland HVDC Converter Station near Beauly.*	*Early Development*	*Adjacent*
Beauly to Blackhillock to New Deer to Peterhead 400 kV OHL	Land 1525 m south east of Finglack Culloden Moor Inverness	Section 37 application for the construction of a new double circuit steel structure 400 kV OHL between Beauly, Blackhillock, New Deer and Peterhead, approximately 194 km in length, including the diversion of an existing 400 kV OHL into a proposed	Scoping Application Decision Issued	Adjacent

Application	Location	Proposal	Status	Distance from SLBB
24/03064/SCOP		new Coachford 400 kV substation near Blackhillock, removal of the existing 132 kV OHL from Beauly to Knocknagael Substations, and rationalisation and crossings of the existing transmission network.		
West of Orkney Wind Farm 23/05353/PIP	AC Site Spittal Sub Station Halkirk KW12 6XA	Construction of onshore transmission infrastructure comprising up to two cable landfalls, an onshore substation and up to five associated export circuits.	Application Permitted	Adjacent
Ayre Offshore Wind Farm 24/00243/SCOP	Land 1500 m east of Old Free Church Manse Bower	Onshore infrastructure including substation, inter-array cables, export cables and associated infrastructure.	Scoping Application Decision Issued	Adjacent
Ouglassy Wind Farm 24/00902/SCOP	Ouglassy Wind Farm	The Proposed Development will comprise up to eight wind turbines, with a blade tip height of up to 180 m, Battery Energy Storage System (BESS) technology, associated infrastructure and ancillary development	Scoping Application Decision Issued	Adjacent
Watten Wind Farm 23/04113/S36	Land 3670 m south west of Watten Village Hall Watten	Erection and operation of a wind farm for a period of 35 years, comprising of seven wind turbines with a maximum blade tip height of 220 m, access tracks, borrow pits, substation, control building, battery storage and ancillary infrastructure.	Under Consideration	Adjacent
Garvary Wind Farm 21/01921/S36	Land 4600 m north east of Invershin Community Hall Invershin	Garvary Wind Farm - Erection and operation of wind farm for a period of 30 years, comprising of 25 (as amended) wind turbines with maximum blade tip height of up to 180 m, access tracks, up to 6 borrow pits, substation, battery storage compound, control building, 4 meteorological masts, and ancillary infrastructure	Under Consideration	Adjacent
Inveroykel Wind Farm 24/04326/SCOP	Land 1.5 km south of 2 Easter Kilmachalmack Strathkyle Ardgay	Scoping request for the erection and operation of a wind farm comprising 29 turbines with a maximum blade tip height of 230 m, battery energy storage system (BESS) facility and associated infrastructure.	Scoping Application Decision Issued	Adjacent
Braelangwell Wind Farm 24/04752/SCOP	Land 1400 m north of Ar Dachaigh Ardgay	Erection and operation of a wind farm comprising of up to 17 wind turbines with a maximum blade tip height of 220 m and associated infrastructure.	Scoping Application Decision Issued	Adjacent
Balblair Wind Farm 24/01500/SCOP	Land 695 m north west of Coirshellach Airdens Bonar Bridge	Erection and operation of a wind farm, comprising 9 wind turbines with a maximum blade tip height of 180 m, energy storage facility, access tracks, borrow pits, substation, control building, anemometer mast, LiDAR compound, and ancillary infrastructure.	Scoping Application Decision Issued	Adjacent

Application	Location	Proposal	Status	Distance from SLBB
Abhainn Dubh Wind Farm 23/02754/S36	Land 3450 m north of Kaytoo Heights of Dochcarty Dingwall	Erection and operation of a wind farm for a period of 30 years, comprising of 13 wind turbines with a maximum blade tip height of 149.9 m, energy storage facility, access tracks, borrow pits, substation, anemometer mast, control building, and ancillary infrastructure.	Under Consideration	Adjacent
Ceislein Wind Farm 24/03524/SCOP	Land 3 km south west Of Wester Lealty at Cnoc Ceislain Novar Evanton	Erection and operation of a wind farm comprising up to 20 turbines with a maximum blade tip height of 250 m, potential Battery Energy Storage System (BESS) and associated infrastructure, with a combined generating capacity exceeding 50 MW	Scoping Application Decision Issued	Adjacent
Creachan Wind Farm 24/03825/SCOP	Land 5.8 km north east of The Bothy Kildermorie Strathrusdale Alness	Erection and Operation of a Wind Farm, comprising up to 21 Turbines with a maximum blade tip height 220 m, battery energy storage system (BESS) facility, access tracks, borrow pits, substation, control building, and ancillary infrastructure.	Scoping Application Decision Issued	Adjacent
Abhainn Dubh 132 kV OHL Wind Farm Connection 25/00218/SCRE	*Land 140 m north west of 2 Clashnabuiac Alness*	*EIA Screening Opinion for construction and operation of a 132 kiloVolt (kV) single circuit overhead line (OHL) of approximately 8.4 km and approximately 1 km of underground cable (UGC) to connect the proposed Abhainn Dubh Wind Farm to the existing Fyrish Substation*	*Screening Application EIA Required*	*Adjacent*
Loch Toftingall BESS 23/04690/FUL	Land 725 m east of Mybster Sub Station Spittal	Erection and operation of a battery energy storage system with a maximum output of 49.9 MW including switchgear and control buildings, landscaping, fencing and ancillary infrastructure	Under Consideration	~1km west
Ballach Wind Farm 24/04177/SCOP	Land 6260 m north east of Erchless Forest Cottage Struy Beauly	Scoping request for Ballach Wind Farm - Erection and Operation of a Wind Farm for a period of 35 years, comprising 36 turbines with a maximum blade tip height of 200 m and 230 m, along with a battery energy storage system (BESS) and ancillary infrastructure	Scoping Application Decision Issued	~1 km west
Golticlay Wind Farm Redesign 23/05188/S36	Land 2040 m north east of Bulreanrob Lybster	Erection and operation of a wind farm for a period of 35 years, comprising up to 13 wind turbines, 11 with a maximum blade tip height of 200 m, two with a maximum blade tip height of 180 m, access tracks, borrow pits, substation, control building, metrological mast, and ancillary infrastructure.	Approved by Scottish Ministers	~2 km east
Hill of Lynchrobbie Wind Farm 23/03246/SCOP	Land at Hill of Lynchrobbie Dunbeath	Erection of two wind turbines with a tip height of up to 149.9 m, capacity of circa 4.5 MW each, and ancillary infrastructure; including battery storage facility of up to 5 MW	Scoping Application Decision Issued	~2km east

Application	Location	Proposal	Status	Distance from SLBB
Acheilidh Wind Farm (formerly known as Lairg III) 24/02094/S36	Land 1150 m south west of Tigh An Alt Acheilidh Rogart	Erection and operation of a wind farm for a period of 35 years, comprising of 12 wind turbines with a maximum blade tip height of between 200 m and 230 m, battery energy storage system (BESS), access tracks, borrow pits, substation, control building, and ancillary infrastructure.	S36 Raise Objection	~2 km north
Tormsdale Wind Farm 21/04984/S36 PLN/045/24	Land at Tormsdale 1500 m south of Bridge of Westerdale, Halkirk	Erection and operation of wind farm for period of 30 years, comprising of 10 wind turbines with maximum blade tip height of 149.9 m, access tracks, substation, control building, BESS, and ancillary infrastructure.	S36 Raise Objection	~2 km west

Intra – Projects

Banniskirk 400 kV Substation and HVDC Converter Station

8.11.2 Erection and operation of an air Insulated Switchgear 400 kV substation and HVDC converter station with associated buildings, installation of new platforms, drainage infrastructure, temporary construction compound, landscaping, mounding and other ancillary works are located adjacent to the Proposed Development. The EIA for Banniskirk reports that no impacts on qualifying features of the Caithness and Sutherlands Peatlands SPA / Ramsar site are predicted. Development, alone or in combination, is not predicted to have an adverse effect on the integrity on the designated features of the Caithness Lochs SPA and Ramsar site. Further to this no significant residual impacts on AWI, habitats or species are predicted. Foraging / commuting habitat was identified as being lost to the proposed substation, however, the effect was considered not significant based on the very small area of habitat concerned (1.4 ha).

8.11.3 Given that these two developments are being undertaken by the same developer, the same approach to mitigation by design and embedded mitigation will be followed as standard, and as such relevant SPPs and GEMPs will be applied. Further, design refinement will seek to maintain clearance from watercourses and to site towers in lower-value habitats. Together with the Applicant's commitment to providing a net gain on projects that it operates, planting will be designed to improve upon the biodiversity value of habitats lost to both projects either through on site or off site means. Woodland habitat lost to SSEN Transmission projects will be subject to compensatory planting.

8.11.4 It is therefore considered that the in combination cumulative effects of these two developments will be **not significant.**

Carnaig 400 kV Substation

8.11.5 The application seeks planning permission for the construction of a new 400 kV substation to interconnect with the Proposed Development. The ecology chapter of the EIA Report submitted indicates no significant residual impacts on sensitive receptors are predicted as a result of the Carnaig 400 kV Substation.

8.11.6 All protected sites in common with the Proposed Development are designated for ornithological interests and are discussed within **Chapter 9: Ornithology**. The proposed Carnaig Substation will require the loss of 178 ha of conifer plantation, most of which (156 ha) is proposed for forest to bog restoration, 1.8 ha of blanket bog will be lost to the substation development, with approximately 24 ha of degraded blanket bog subject to restoration. One potential squirrel drey and two potential pine marten shelters will be lost within the footprint of the proposed substation.

8.11.7 Permanent losses of forestry associated with both the Proposed Development and the proposed substation will require compensatory planting in line with the necessary felling licence for each development. The proposed substation has committed to restoring 191 ha of mosaic peatland habitats, including blanket bog, reporting a significant beneficial impact. The loss of a single squirrel drey and two pine marten shelters that are located close together, suggests a single animal of each species being impacted by the proposed substation.

8.11.8 Given these two developments are being undertaken by the same Applicant, the same approach to mitigation by design and embedded mitigation will be followed as standard. As such relevant SPPs and GEMPs will be applied through the CEMP and alongside the CTMP. Further to this, design refinement will look to minimise woodland loss, maintain clearance from watercourses and site ancillary infrastructure in lower value habitats. Together with SSEN Transmission's commitment to providing a net gain on projects that it operates, planting will be designed to improve upon the biodiversity value of habitats lost to both developments.

8.11.9 It is therefore considered that the in combination cumulative effects of these two developments will be **not significant**.

Fanellan 400 kV Substation and HVDC Converter Station

8.11.10 A proposed new 400 kV substation and HVDC converter station comprising new buildings, platform, plant and machinery, access, laydown / work compound area(s), landscaping, site drainage, and other ancillary works (National Development) are located adjacent to the Proposed Development. The Scoping Application Decision (published 14.06.2024) predicted potentially significant effects on badgers, bats and great crested newts. Habitats on site primarily comprise modified, agricultural grassland and woodland. The woodland areas were dominated by a mix of Scot's pine and other coniferous trees, with limited areas of mixed broadleaved trees, and birchwoods.

8.11.11 The EIA Report assessed impacts on bats and badgers, following the presence of GCN being ruled out. Impacts on bats as a result of the proposed Substation, following the application of mitigation / compensation were reported as not significant at the local level during construction and operation. Impacts on badgers as a result of the proposed substation, following mitigation / compensation were reported as not significant at the local level during construction and operation.

8.11.12 Badger setts identified through surveys for the Proposed Development are located in excess of 500 m from the proposed substation. It is therefore assumed that these setts were beyond the survey area (100 m) identified for that development. The cluster of setts identified as part of the Proposed Development, south of the River Beauly, are therefore considered to be a separate social group to the badgers found as part of the proposed substation, and as such, when considering the mitigation applied for both developments, the in combination cumulative effects of these two developments will be not significant for badgers, with the future persistence of both social groups unlikely to be affected by the two developments considered.

8.11.13 The Proposed Development identifies potential significant impacts resulting from the severance of foraging / commuting routes through the loss of connecting woodland features. The proposed substation does not consider impacts on foraging / commuting routes as a potential impact of that development, and as such cumulative impacts, in this respect, are unlikely. The Proposed Development identifies five potential bat roost structures within 3 km of the proposed substation, of these two are likely to have been identified within the assessment of proposed substation and three are located out with 30 m of the Proposed Development. When considering the mitigation / compensation applied for both developments, the in combination cumulative effects of these two developments will likely be **not significant** for bats.

Inter – Projects

Beauly to Blackhillock to New Deer to Peterhead 400 kV OHL

8.11.14 As stated in **Chapter 5: EIA Process and Methodology**, the final list of developments to be considered in the cumulative effects assessment was frozen at the end of March 2025, to allow sufficient time to compile this EIA Report. Therefore, the EIA Report for BBNP has not been submitted at time of writing. However, as it is an internal project, it has been possible to have sight of information available prior to finalising this EIA Report. This has therefore been used to undertake a cumulative assessment but will be subject to finalisation of the BBNP EIA Report.

8.11.15 A proposed new double-circuit steel 400 kV OHL between Beauly, Blackhillock, New Deer and Peterhead, measuring approximately 194 km in length. This project includes the diversion of an existing 400 kV OHL into a proposed new Coachford 400 kV substation near Blackhillock, removal of the existing 132 kV OHL from Beauly to Knocknagael Substations, and rationalisation and crossings of the existing transmission network located adjacent to the Proposed Development.

8.11.16 The draft EIA Report for the Beauly to Blackhillock to New Deer to Peterhead 400 kV OHL reported no designated sites in common with the Proposed Development and as such no cumulative effects are likely for any site reported within either EIA Report. Whilst some significant effects associated with the Beauly to Blackhillock to New Deer to Peterhead 400 kV OHL project are reported, following the application of mitigation residual effects remain only for bats (adverse) and blanket bog (positive).

8.11.17 The conclusion for bats states "*With the additional mitigation in place, and application of the 1994 Habitats Regulations Habitats Regulations for licensing works affecting bats, it is anticipated that the magnitude of impacts to bats which may be using the Proposed Development would be reduced but would remain significant. Any residual effects would be minor in all three LPAs, at a district scale suggesting a significant cumulative effect on bats is likely.*" The element of the Proposed Development assessed as leading to significant effect is the loss of foraging / commuting habitat associated with woodland removal to accommodate the operational corridor, not the impacts on potential bat places of shelter (PRFs). As the loss of commuting habitat cannot be avoided or mitigated due to the site-specific impact a **significant** cumulative effect is predicted.

8.11.18 Effects of the Beauly to Blackhillock to New Deer to Peterhead 400 kV OHL project on blanket bog are reported as impacting 12.3 ha, with peatland compensation exceeding this value, alluded to but not reported. The Proposed Development is estimating a loss of 377.45 ha with an aspirational net gain following compensation, suggesting that the in-combination effect of the two OHL developments will likely yield positive effects in the context of blanket bog.

8.11.19 Based on the draft Beauly to Blackhillock to New Deer to Peterhead 400 kV OHL EIA Report there is the potential for cumulative impacts on bats and blanket bog, with only effects on bats identified as potentially significant and adverse.

West of Orkney Wind Farm Grid Connection

8.11.20 A development adjacent to the Proposed Development comprising the construction of a substation and the undergrounding of up to five export cable circuits laid in separate trenches over approximately 35 km to tie-in with the National Grid at Spittal Substation. The EIA Report predicted no significant effects upon ecological features, and in consequence a cumulative impact assessment considered neither necessary nor possible to be undertaken. Consequently, the cumulative impacts on ecological features associated with the Proposed Development are assessed as **not significant**.

Ayre Offshore Wind Farm

8.11.21 An onshore grid connection for the proposed offshore Ayre Wind Farm including substation, inter-array cables, export cables and associated infrastructure which will be located adjacent to the Proposed Development. The Onshore Scoping Report (issued 22.04.2024) defined important ecological features in the vicinity including; GWDTEs and priority habitats, badger, otter, pine marten, red squirrel, reptiles and amphibians, bats, water vole, Scottish wildcat and fish. Caithness and Sutherland Peatlands Ramsar and SAC is the only designated site identified in common with the Proposed Development.

8.11.22 There is the potential for cumulative impacts on these receptors with the Proposed Development. However, there was insufficient information available at this time of drafting this report on the impacts of the Ayre Offshore Wind Farm Grid Connection to be able to undertake a cumulative assessment. It is assumed that when it is prepared, the EIA Report for Ayre Offshore Wind Farm Grid Connection will assess cumulative impacts with the Proposed Development.

Ouglassy Wind Farm

8.11.23 Ouglassy onshore wind farm comprises eight wind turbines located adjacent to the Proposed Development. The Scoping Report (issued 05.04.2024) identified important ecological features in the vicinity comprising; dry heathland (Annex 1), bog habitat (Annex 1), potential bat roosting habitat and limited foraging habitat, ponds with potential for amphibians, potential badger habitat, potential otter habitat, potential water vole habitat. Limited potential pine marten habitat.

8.11.24 Designated sites identified in common with the Proposed Development include Shielton Peatlands (SSSI), Caithness and Sutherland Peatlands (SAC), Caithness and Sutherland Peatlands (Ramsar), River Thurso (SAC), Blar nam Faoileag (SSSI), no non statutory designated site were identified. There is the potential for cumulative impacts on these receptors with the Proposed Development. However, there was insufficient information available at the time of drafting this report on the impacts of Ouglassy Wind Farm to be able to undertake a cumulative assessment. It is assumed that when it is prepared, the EIA Report for Ouglassy Wind Farm will assess cumulative impacts with the Proposed Development.

Watten Wind Farm

8.11.25 A proposed seven wind turbine wind farm adjacent to the Proposed Development. The ecology chapter of the proposed wind farm's EIA Report concludes no significant effects identified on any of the scoped-in important ecological features. The EcIA scopes out all protected species with the exception of bats in respect to operational impacts. All impacts on designated sites are scoped out based on a lack of connectivity with the proposed wind farm. Construction effects scoped in for habitats include the loss of 6.02 ha of blanket bog and 0.56 ha of wet modified bog for which the assessment concludes minor adverse but not significant impact. The assessment only looks at effects of direct mortality on pipistrelle sp. bats from barotrauma a condition specific to the operation of wind turbines.

8.11.26 The Proposed Development will result in the permanent loss of 249.23 ha of blanket bog habitat (comprising 172.78 ha of f1a blanket bog, 37.57 ha of f1a5 blanket bog (H7130) and 38.86 ha of f1a6 degraded bog). Effects on bats from the Proposed Development are limited to localised impacts on bat foraging / commuting routes, these impacts whilst assessed as significant at a local level are unlikely to affect populations at a national or even regional level and will not affect bats local to the proposed wind farm.

8.11.27 It is therefore considered that the in combination cumulative effects of these two developments will be **not significant**.

Garvary Wind Farm

8.11.28 A consented wind farm development comprised of 25 turbines, with associated battery energy storage system (BESS) facility and infrastructure, located adjacent to the Proposed Development.

8.11.29 The EIA Report scopes into assessment the River Oykel (SAC), River Evelix (SAC), otter, water vole, bats and blanket and wet modified bogs. No significant adverse residual effects were identified for the River Evelix or the River Oykel based on the deployment of standard pollution prevention measures. Effects on blanket bog and wet modified bogs are reported as not significant due to a low percentage of loss within the site and relative abundance in Caithness and Sutherland. Effects on otter from direct mortality and barrier effects preventing otter movements along watercourses were reported to be not significant with the only significant effects on otters coming from pollution events (e.g. fuel / chemical spills). All effects on water voles (disturbance and pollution events) are reported as not significant on account of micro siting of crossing point away from burrows. Operational effects of turbines on soprano and common pipistrelle bats are reported as not significant based on turbine locations being remote to identified areas of high bat activity.

8.11.30 The River Evelix is outwith the hydrological ZoI of the Proposed Development and the River Oykel is oversailed by the Proposed Development with no in-stream works and no works within the footprint of the SAC. The Proposed Development will result in the permanent loss of 249.23 ha of blanket bog habitat (comprising 172.78 ha of f1a blanket bog, 37.57 ha of f1a5 blanket bog (H7130) and 38.86 ha of f1a6 degraded bog). The Proposed Development will impact different water vole populations from those impacted by Garvary Wind Farm. Impacts from the Proposed Development predominantly comprise disturbance effects that are mitigated through the Applicant's Water Vole SPP. Operational impacts for the Proposed Development are considered to be significant at a local level.

8.11.31 Whilst both developments occur in approximately the same location and are likely to be used by the same bat populations, cumulative effects on bats are not considered likely, as the proposed wind farm reports no impacts on commuting / foraging routes and no likely direct mortality to bats on account of turbine location, contributing little if anything to the effects reported for the Proposed Development.

8.11.32 It is therefore considered that the in combination cumulative effects of these two developments will be **not significant**.

Inveroykel Wind Farm

8.11.33 A proposed 29 turbine wind farm, with associated battery energy storage system (BESS) facility and associated infrastructure adjacent to the Proposed Development. The Scoping Report (issued 25.09.2024) identified important ecological features in the vicinity comprising; Caithness and Sutherland Peatlands SAC / Ramsar (otter only); Dornoch Firth and Morrich More SAC (otter only), River Oykel SAC, Kyle of Sutherland Marshes SSSI, Atlantic salmon, freshwater pearl mussel, badger, bats, otter, pine marten, red squirrel, water vole, Scottish wildcat and brown hare.

8.11.34 There is the potential for cumulative impacts on these receptors with the Proposed Development. However, there was insufficient information available at the time of writing this report on the impacts of Inveryokel Wind Farm to undertake a cumulative assessment. It is assumed that when it is prepared, the EIA Report for Inveroykel Wind Farm will assess cumulative impacts with the Proposed Development.

Braelangwell Wind Farm

8.11.35 A proposed 17 wind turbine wind farm located adjacent to the Proposed Development. The Scoping Report (issued 12.11.2024) identified important ecological features in the vicinity comprising red squirrel, Daubenton's bat, common pipistrelle, common lizard, soprano pipistrelle, chiroptera (bats) and pine marten. Identified designated sites in common with the Proposed Development include the River Oykel (SAC), Caithness and Sutherland Peatlands (SAC), River Evelix (SAC), Caithness and Sutherland Peatlands (Ramsar) and Kyle of Sutherland Marshes (SSSI).

8.11.36 There is the potential for cumulative impacts on identified receptors with the Proposed Development. However, there was insufficient information available at time of writing to undertake a cumulative assessment. It is assumed that when it is prepared, the EIA Report for Braelangwell Wind Farm will assess cumulative impacts with the Proposed Development.

Balblair Wind Farm

8.11.37 A proposed nine turbine wind farm located adjacent to Proposed Development. The Scoping Report (issued 23.09.2024) defined important ecological features in the vicinity comprising badger, otter, red squirrel, water vole, pine marten, Daubenton's bat, common pipistrelle, soprano pipistrelle, and brown long-eared bat. Freshwater fish species have been scoped in including Atlantic salmon and European eel. Further to this the scoping report scoped out impacts on reptiles and amphibians. Designated site identified within 5 km and in

common with the Proposed Development include River Oykel (SAC), River Evelix (SAC) and Kyle of Sutherland Marshes (SSSI).

8.11.38 There is the potential for cumulative impacts on these receptors with the Proposed Development. However, there was insufficient information available at the time of writing this report to be able to conduct a cumulative assessment. It is assumed that when it is prepared, the EIA Report for Balblair Wind Farm will assess cumulative impacts with the Proposed Development.

Abhainn Dubh Wind Farm

8.11.39 A proposed 13 turbine wind farm located adjacent to the Proposed Development. Vol 1 Chapter 7 (Ecology) of the EIA Report concludes no significant adverse effects are predicted as a result of the proposed wind farm alone or in combination with other nearby developments. Blanket bog restoration has the potential to result in a significant (positive) effect during operation. **Volume 5, Appendix 8.7: Report to Inform Habitats Regulations Appraisal (HRA)** concludes there will be no adverse effect on the site integrity of any of the identified SPAs or SACs.

8.11.40 The only designated site reported in common between the Proposed Development and the proposed wind farm is the Allt nan Caorach SSSI and it is scoped out of the wind farm assessment on account of lack of connectivity. The only habitat subject to detailed assessment was blanket bog, and the only protected species were badger, pine marten and water vole. The proposed wind farm reports a loss of less than 1 ha of blanket bog resulting in a residual not significant impact. The EIA reports impact on badgers and pine marten as a result of disturbance will be mitigated through best practice and concludes a not significant residual impact for each species. Residual impacts on water vole are reported as not significant following implementation of mitigation to mitigate direct mortality of individuals, loss of burrows, disturbance and loss of habitat. Forestry loss associated with both developments will require to be replanted in line with the felling licence.

8.11.41 The Proposed Development will result in the permanent loss of 249.23 ha of blanket bog habitat (comprising 172.78 ha of f1a blanket bog, 37.57 ha of f1a5 blanket bog (H7130) and 38.86 ha of f1a6 degraded bog). The cumulative effect of a further 1 ha is unlikely to significantly affect the Scottish resource of 1.8 million ha. Effects of the Proposed Development on badgers and pine marten are assessed as not significant in the absence of additional mitigation, mainly on account of embedded mitigation developed by the Applicant, therefore a significant cumulative effect on these species is unlikely.

8.11.42 Impacts from the Proposed Development on water voles are not in proximity to the proposed wind farm therefore a cumulative effect on the local population is unlikely. Given the Proposed Development is likely only to lose 10 m of water vole habitat, which is likely to be microsited, wider cumulative effects on water vole are unlikely.

8.11.43 It is therefore considered that the in combination cumulative effects of these two developments will be **not significant**.

Ceislein Wind Farm

8.11.44 A proposed wind farm comprising up to 20 turbines located adjacent to the Proposed Development. The Scoping Report (issued 23.09.2024) identified important ecological features in the vicinity comprising the following in common with the Proposed Development, Allt nan Caorach SSSI, amphibians, badger, bats, otter, pine marten, red squirrel, reptiles, water vole, Scottish wildcat.

8.11.45 Habitats surveys undertaken to inform scoping found the proposed wind farm site is dominated by upland moorland habitat, bog, acid grassland and rush pasture with some areas of woodland. NVC survey identified

high quality blanket bog across much of the site. Areas of wet modified bog were recorded, but were smaller and dispersed across the Site, with acid dwarf shrub heath and wet dwarf shrub heath present. Wet dwarf shrub heath / blanket bog mosaic was recorded. Wet dwarf shrub heath was found across the site, acid dry shrub heath was distributed across the site. These habitats are potentially habitats listed on Annex I of the Habitats Directive, and as such could be of international importance. These habitats were interspersed with several other common habitat types, including wet flushes.

8.11.46 There is the potential for cumulative impacts on these receptors with the Proposed Development. However, there was insufficient information available the time of drafting this report to undertake a cumulative assessment. It is assumed that when it is prepared, the EIA Report for Ceislein Wind Farm will assess cumulative impacts with the Proposed Development.

Creachan Wind Farm

8.11.47 A proposed up to 21 turbines located adjacent to the Proposed Development. The Scoping Report (issued 04.09.2024) identified important ecological features in the vicinity comprising Amat Wood (SAC), Ben Wyvis (SAC), Alladale Pinewood (SSSI), Amat Wood (SSSI), Ben Wyvis (SSSI), and Ben Wyvis NNR. Habitats and species identified include priority peatland habitats and other Annex 1 Habitats (such as wet heath); badger, bats, otter, pine marten; red squirrel, ancient woodland and Scottish wildcat.

8.11.48 There is the potential for cumulative impacts on these receptors with the Proposed Development. However, there was insufficient information available at the time of drafting this report to be able to undertake a cumulative assessment. It is assumed that when it is prepared, the EIA Report for Creachan Wind Farm will assess cumulative impacts with the Proposed Development.

Loch Toftingall BESS

8.11.49 The proposed Loch Toftingall BESS is located 1 km west of the Proposed Development. The area affected by the BESS will affect an area of approximately 1.05 ha.

8.11.50 Caithness and Sutherland peatlands (SAC / Ramsar) and Sheilton peatlands (SSSI) fall just within the 2 km buffer of the proposed BESS. Given the location of the site, hydrological connectivity is likely to have a tendency towards the Loch of Toftingall, reducing the likelihood of pollution pathways to these designated sites even further. As such significant cumulative impacts in the context of the Proposed Development are considered unlikely.

8.11.51 The environmental report states that the site is currently of little value for fauna species. Bat surveys recorded three species of bat (Nathusius' pipistrelle, common pipistrelle and brown long-eared), with the vast majority of the records (approximately 98%) comprising common pipistrelle, a common and widespread bat species. The conifer plantations were not found to provide roosting opportunities for bats and the site is considered to be of low suitability for foraging and commuting bats. Bat activity was recorded only from the detector at the location outside the site boundary. On account of the Loch Toftingall BESS site's reported low value to protected species (including bats), significant cumulative impacts in the context of the Proposed Development are considered unlikely.

8.11.52 Of the habitats identified on site 23.4 ha (out of 23.4 ha on site) of conifer plantation are identified to be lost as well as 0.3 ha of wet modified bog (out of 14.40 ha on site). Following application of the habitat management plan there is anticipated to be a significant net increase in biodiversity value. The main losses will be of commercial conifer plantations, which provide low biodiversity value and the loss of a small area of wet modified bog for the access road.

8.11.53 The restoration of blanket bog (a priority habitat on the Scottish Biodiversity List), new native tree planting and habitat creation and enhancement of riparian habitats along the Allt Eireannaich watercourse and through features to be created as part of the drainage strategy, will result in a significant positive overall biodiversity gain for the site post construction. In particular, the area of blanket bog on the site will increase significantly with approximately 10 ha created in areas where conifers have been felled and improvement sought in areas of existing, but species poor, blanket bog along the forest rides.

8.11.54 Losses of commercial forestry will be undertaken under a felling licence, a requirement of which will be to replace forestry losses.

8.11.55 Given the loss of mainly low value habitats as a result of the Loch Toftingall BESS proposal and the reported net gain proposed as a result of implementation of the Outline HMP, cumulative impacts in the context of the Proposed Development are considered unlikely.

8.11.56 It is therefore considered that the in combination cumulative effects of these two developments will be **not significant**.

Golticlay Wind Farm Redesign

8.11.57 A proposed up to 13 wind turbines located 2 km east to the Proposed Development. Scottish Ministers approved the application to vary the Section 36 consent for this project on 04 Dec 2024.

8.11.58 Chapter 9 of the EIA Report (Ecology) reports '*Through the implementation of mitigation measures agreed for the Consented Development, and where necessary new measures, impacts to IEFs from the Proposed Varied Development are considered not significant*'. Also '*Significant beneficial effects are considered likely in respect of Caithness and Sutherland Peatlands Special Area of Conservation (SAC) / Ramsar Site, Shieltons Peatlands SSSI, blanket bog and water voles. This is because the Habitat Management Plan ("HMP") for the Consented Development has been amended to integrate the Proposed Varied Development and shows restoration of coniferous plantation woodland to blanket bog'*.

8.11.59 The proposed wind farm EIA reports the loss of 0.06 ha of blanket bog, compensated for through the provision of approximately 32.5 ha of forest to bog restoration.

8.11.60 Residual effects on bats are considered not significant in light of latest guidelines including for post consent monitoring for a minimum of 3 years.

8.11.61 Cumulative impacts have also been considered and the assessment has identified no significant adverse cumulative impacts between the Proposed Varied Development and other developments, which is the same conclusion as given in the 2016 EIA.

8.11.62 It is therefore considered that the in combination cumulative effects of these two developments will be **not significant**.

Hill of Lynchrobbie Wind Farm

8.11.63 A proposed wind farm comprised of two turbines located approximately 2 km east to the Proposed Development. The Scoping Report (issued 06.07.2023) identified important ecological features in the vicinity comprising, Knockinnon Heath (SSSI), wet dwarf shrub heath (D2); marshy grassland (B5); improved grassland (B4); blanket bog (E1.6.1); dry dwarf shrub heath (D2); scrub (A2); acid / neutral flush (E2.1); and conifer woodland (A1.2.2).

8.11.64 No field evidence of water vole, otter or any other protected mammal species was encountered.

8.11.65 Surveys for bats revealed only common pipistrelle species across the site with low activity levels noted across the site.

8.11.66 There is the potential for cumulative impacts on these receptors with the Proposed Development. However, there was insufficient information available at time of drafting this report to be able to undertake a cumulative assessment. It is assumed that when it is prepared, the EIA Report for Hill of Lynchrobbie Wind Farm will assess cumulative impacts with the Proposed Development.

Acheilidh Wind Farm (formerly known as Lairg III)

8.11.67 A proposed 12 turbine wind farm located approximately 2 km from the Proposed Development at its closest point.

8.11.68 Chapter 9 of the ES for Acheilidh Wind Farm reports no significant effects on the majority of receptors including a permanent loss of approximately 5.1 ha of blanket bog and approximately 6 ha of modified bog and. The only residual significant effect is a permanent, negative impact on bats during operation; this is reported as significant at a local (site) level and as a negligible effect on the regional species populations. Restoration of peatland associated with the Outline HMP will result in approximately 112 ha of blanket bog being restored. No significant cumulative impacts are reported.

8.11.69 The Proposed Development reports a significant impact on bat commuting / foraging, however, these effects are remote to the area common to both developments (likely different bat populations) and impacts from the proposed wind farm relate to an operational impact of direct mortality to bats, as such cumulative impacts on bats as a result of the Proposed Development and the proposed wind farm are unlikely.

8.11.70 It is therefore considered that the in combination cumulative effects of these two developments will be **not significant**.

Tormsdale Wind Farm

8.11.71 A proposed Erection 10 turbine wind farm located approximately 2 km from the Proposed Development at its closest point.

8.11.72 Key habitat losses reported within the update to the EcIA include 1.59 ha of wet modified bog, 2.41 ha of wet dwarf heath and 2.05 ha of marshy grassland. No habitat loss within the Caithness and Sutherland SAC, Blar nam Foileag SSSI and The Flow Country WHS are habitats for which the sites are designated, so impacts are reported as not significant. Impacts on the River Thurso SAC are assessed as not significant on the basis of sympathetic design to avoid in stream works and effects of shadow flicker on salmon being not significant. Effects on otter remain not significant in light of amendments to the design.

8.11.73 Following the implementation of enhancements, positive effects are predicted for a number of IEF, and for biodiversity as a whole. No adverse effects on site integrity are predicted for any European Site or Ramsar sites, and some positive effects are predicted as a result of riparian planting and enhanced peatland restoration proposals leading to restoration of approximately 35 ha.

8.11.74 The EIA reported that following implementation of the embedded and specific mitigation, the magnitude of effects of the Development on IEFs both alone and in combination with other schemes are assessed as being of low to negligible magnitude and not significant in the context of the EIA Regulations.

8.11.75 Cumulative impacts in respect to the Proposed Development only apply to habitat loss and impacts on designated sites. The proposed wind farm does not impact habitats for which the Caithness and Sutherland SAC, World Heritage Site or Blar nam Foileag SSSI are designated and as such cumulative impacts are

unlikely. Impacts of the River Thurso from the Proposed Development are limited to the OHL oversailing a connected watercourse with no significant impacts predicted. The proposed wind farm estimates restoration of 35 ha of peatland restoration, exceeding the 2.32 of modified bog being impacted.

8.11.76 It is therefore considered that the in combination cumulative effects of these two developments will be **not significant**.

Projects at Early- Stage Development

8.11.77 Projects within the cumulative developments area that are currently in early development or at the screening letter stage include:

- Banniskirk – Sinclair's Bay HVDC UGC;
- Banniskirk – Spittal 275 kV UGC Connection;
- Carnaig – Loch Buidhe 275 kV UGC Connection;
- Western Isles HVDC Link; and
- Abhainn Dubh 132 kV OHL Wind Farm Connection.

8.11.78 These projects have the potential to result in cumulative impacts with the Proposed Development. However, due to the current lack of sufficient information for each project, a cumulative assessment cannot be undertaken at this time. It is anticipated that the EIA Report for these developments will assess cumulative impacts with the Proposed Development.

Overall Cumulative Assessment

8.11.79 When considering all in combination effect presented above and for the projects where sufficient detail to undertake an assessment exists, the only consistent common feature is impacts on bog habitats. Impacts of the habitats are presented in **Table 8.26** where known.

Table 8.26: Cumulative Impact on Blanket Bog Across Projects

Project	Blanket Bog Impacted (ha)
The Proposed Development (total)	692.48
Carnaig 400 kV Substation	1.8
Beauly to Blackhillock to New Deer to Peterhead 400 kV OHL	12.3
Watten Wind Farm	6.5
Garvary Wind Farm	9
Abhainn Dhub Wind Farm	0.39
Loch Tofingall BESS	0.3
Golticlay Wind farm	0.06
Acheleilidh Wind Farm	11.1
Tormsdale Wind Farm	2.32
Total	**736.25**

8.11.80 The total impacted blanket bog across cumulative developments is approximately 736.25 ha, with the largest impacted area attributed to the Proposed Development. This equates to 0.04% of the Scottish blanket bog resource (1.8 million ha[45]).

8.11.81 The Applicant is committed to protecting and enhancing the environment by minimising the potential impacts from their construction and operational activities. As part of this approach, SSEN Transmission has made commitments within its Sustainability Strategy to deliver 10% biodiversity net gain (BNG) and leave a positive legacy for nature on all projects gaining consent. Where this cannot be delivered on-site, SSEN Transmission must identify off-site opportunities for biodiversity enhancement. It is therefore predicted that the in combination cumulative effects of these developments will result in a positive effect on blanket bog at a national level.

8.12 Summary and Conclusions

8.12.1 This chapter has described the assessment of the potential impacts of the Proposed Development on non-avian ecology and nature conservation. It has identified the potential impacts and significant effects of the Proposed Development on designated sites, terrestrial habitats and protected species in addition to some aquatic receptors. The assessment is based on best practice guidance including the Chartered Institute for Ecology and Environmental Management's (CIEEM) Guidelines for Ecological Impact Assessment (EcIA) in the UK and Ireland (2018) revised in 2024.

8.12.2 The scope of the ecological assessment and baseline conditions have been determined through a combination of desk-based study, field surveys, and consultation with relevant organisations. This process identified ecological features that could potentially be impacted by the Proposed Development.

8.12.3 The Proposed Development has been designed to minimise impacts on designated sites, important habitats, peatland and protected species as far as practicable. This has been achieved through embedded mitigation and an iterative design process as detailed in **Chapter 4: The Routeing Process & Alternatives**. Further commitments to specific mitigation measures pre-construction, during construction, and during operation, has enabled potential effects on habitats and species present, for the most part, to be assessed as not significant.

8.12.4 Seventeen sites designated for non-avian ecological features were identified as having potential to be impacted by the Proposed Development. All impacts on designated sites have been mitigated through mitigation by design, embedded mitigation and additional mitigation measures.

8.12.5 Eleven protected species were assessed as having potential to be impacted by the Proposed Development. Of those assessed, all impacts on protected species, except bats, have been fully mitigated through mitigation by design, embedded mitigation and additional mitigation measures. Effects on the commuting / foraging impacts on bats are predicted to be significant on account of severed potential commuting routes. It is not possible to mitigate loss of commuting / foraging routes within the operational corridor due to safety risks associate with the Proposed Development.

8.12.6 Twenty-eight terrestrial habitats were identified as important ecological features within the footprint of the Proposed Development. Of these, significant residual effects were predicted for the following eight habitats:

- w1e Upland birchwoods;
- w1h Other woodland; mixed;

[45] https://www.nature.scot/professional-advice/land-and-sea-management/carbon-management/restoring-scotlands-peatlands#:~:text=Blanket%20bog%20covers%20some%201.8,internationally%20important%20breeding%20bird%20populations.

- w2b Other Scot's Pine woodland;
- w2a5 Caledonian forest (H91C0);
- h1b5 Dry heaths; upland (H4030);
- h1b6 Wet heathland with cross-leaved heath; upland (H4010);
- f1a Blanket bog; and
- f1a5 Blanket bog (H7130).

8.12.7 AWI sites were predicted to be subject to significant effects as a result of the Proposed Development. Of these woodlands, significant residual effects are predicted to be limited to Category 2b woodland.

8.12.8 Cumulative effects were assessed for the developments presented within **Table 8.25**. Significant cumulative effects are only predicted between the Proposed Development and the Beauly to Blackhillock to New Deer to Peterhead 400 kV OHL (draft EIA Report), with significant adverse effects predicted on bats. When considering cumulative effects across all developments only those affecting blanket bog were considered relevant, with positive effects predicted resulting from habitat restoration proposals.