7 Ecology

7.1 Introduction

7.1.1 This chapter describes and evaluates the current nature conservation interest of the Site and study areas associated with the construction and operation of the Proposed Development. The chapter evaluates both habitats and non-avian animal species and assesses the potential impacts of the Proposed Development on habitats and species above a certain value. Potential impacts on birds are considered separately in **Chapter 8: Ornithology.**

7.1.2 The specific objectives of the chapter are to:

- describe the current baseline habitats;
- describe the assessment methodology and significance criteria used in completing the impact assessment;
- describe the potential effects, including direct, indirect and cumulative effects;
- describe the mitigation measures proposed to address the likely significant effects; and
- assess the residual effects remaining following the implementation of mitigation measures.

7.1.3 The assessment has been carried out by James Wilson and Emilie Michael, of Atmos Consulting Ltd. Both are ecologists with over two decades of experience. James is a full member of the Chartered Institute of Ecology and Environmental Management (CIEEM).

7.1.4 The chapter is supported by:

- **Technical Appendix 7.1: Habitats;**
- **Technical Appendix 7.2: Bat Surveys;**
- **Technical Appendix 7.3: Protected Species;**
- **Technical Appendix 7.4: Aquatic Habitat Surveys;**
- **Technical Appendix 7.5: Outline Habitat Management and Biodiversity Enhancement Plan (OHMBEP);**
- **Technical Appendix 7.6: Biodiversity Net Gain;**
- **Technical Appendix 7.7: MSS Checklist;**
- **Technical Appendix 7.8: Confidential Protected Species Survey Report; and**
- **Technical Appendix 8.3 Shadow Habitats Regulations Appraisal.**

7.1.5 The results of the baseline surveys were used to inform the turbine and associated wind farm infrastructure and design, and form the basis of the detailed assessment presented in this chapter. The results of the detailed ecological surveys undertaken are summarised in this chapter, with more details provided in the technical appendices.

7.2 Legislation, Policy and Guidance

7.2.1 The baseline surveys and ecological assessment have been carried out with reference to the legislation and guidance outlined below.

Legislation

7.2.2 The non-avian ecology assessment has been undertaken with reference to the following legislation:

- The EC Habitats Directive (Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora);
- The Wildlife and Countryside Act 1981 (as amended);
- Wildlife and Natural Environment (Scotland) Act 2011;
- The Nature Conservation (Scotland) Act 2004;
- The Conservation (Natural Habitats, &c.) Regulations 1994 (as amended); and
- The Protection of Badgers Act 1992 (as amended by the Nature Conservation (Scotland) Act 2004).

Planning Policy

7.2.3 Relevant planning policy is summarised in the **Planning Statement**.

7.2.4 The present chapter focuses solely on policy which is potentially relevant to ecology, with the exception of avian ecology which is addressed in **Chapter 8 (Ornithology)** of the EIA Report.

7.2.5 In February 2023 the Scottish Parliament approved National Planning Framework 4 (NPF4) which replaces Scottish Planning Policy (SPP). Policy 3 ‘Biodiversity’ and Policy 4 ‘Natural Places’ of NPF4 will be relevant to the EIA Report where it is noted:

"Development proposals for national or major development, or for development that requires an Environmental Impact Assessment will only be supported where it can be demonstrated that the proposal will conserve, restore, and enhance biodiversity, including nature networks so they are in a demonstrably better state than without intervention. This will include future management. To inform this, best practice assessment methods should be used." (Scottish Government, 2023).

7.2.6 The Scottish Government has published a number of Planning Advice Notes (Scottish Government, various dates) (PANs) providing advice on good practice on a variety of subjects. PAN 60: Natural Heritage (2000) (Updated 2008) is considered of relevance to this Chapter. The document gives basic advice in relation to development and natural heritage, and reiterates the Government's commitment to protection and enhancement of Scotland's natural heritage.

Local Development Plan

7.2.7 The Highland-wide Local development Plan (HwLDP) was adopted by The Highland Council (THC) in April 2012 and continues to be implemented. The following policies within the HwLDP are considered relevant to this chapter:

- Policy 57 – Natural, Built and Cultural Heritage;
- Policy 58 – Protected Species;
- Policy 59 – Other Important Species;
- Policy 60 – Other Important Habitats; and
- Policy 63 – Water Environment.

Other Guidance

7.2.8 Other documents and guidance reviewed and applied in this assessment are outlined below.

7.2.9 The Scottish Biodiversity List (SBL) is a list of animals, plants and habitats that the Scottish ministers consider to be of principal importance for biodiversity conservation in Scotland. Both scientific and social criteria have been used to define the SBL. Scientific criteria include all Priority Species and Priority Habitats included in the now superseded UK Biodiversity Action Plan (BAP), which occur in Scotland. Social criteria are based on the results of an omnibus survey of the Scottish public carried out in 2006, and includes some common species and habitats. This chapter only considers those listed using scientific criteria.

7.2.10 Highland Nature: The Biodiversity Action Plan (hereafter referred to as the Highland Local Biodiversity Action Plan (HLBAP)), sets out a number of objectives to help support the over-arching themes of the plan, including sustainable management of habitats, taking biodiversity into account in planning development and infrastructure, and identifying local opportunities to improve biodiversity. The plan identifies a wide range of local priority habitats and species.

7.2.11 Further key guidance documents relating to the assessment of effects of wind farms on non-avian ecological receptors that have been referenced in this assessment include the following:

- Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater and Coastal[1];
- Bats and onshore wind turbines: survey, assessment and mitigation (NatureScot (NS), Natural England, Natural Resources Wales, Renewable UK, Scottish Power Renewables, Ecotricity Ltd., the University of Exeter, and the Bat Conservation Trust (BCT),[2];
- Land Use Planning System Scottish Environment Protection Agency (SEPA) Guidance Note 31[3]; and
- Good Practice During Windfarm Construction (Scottish Renewables, NS, SEPA and Forestry Commission Scotland (FCS)[4]).
- Biodiversity: draft planning guidance[5].
- Planning and development: Enhancing Biodiversity[6].

7.2.12 Information about designated sites was obtained by accessing the following online resources:

- NatureScot SiteLink website[7];
- MAGIC online GIS tool[8]; and

[1] Chartered Institute of Ecology and Environmental Management (CIEEM). (2022). Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine. CIEEM, Winchester
[2] NatureScot, Natural England, Natural Resources Wales, RenewableUK, Scottish Power Renewables, Ecotricity Ltd., University of Exeter, Bat Conservation Trust (BCT) (2021). Bats and Onshore Wind Turbines: Survey, Assessment and Mitigation
[3] SEPA (2017). *Land Use Planning System SEPA Guidance Note 31: Version 3*
[4] SNH, FCS, Historic Scotland, SEPA, Scottish Renewables (2015). Good practice during wind farm construction. https://www.nature.scot/doc/good-practice-during-wind-farm-construction
[5] https://www.gov.scot/publications/scottish-government-draft-planning-guidance-biodiversity/
[6] NatureScot (2023). Advising on peatland, carbon-rich soils and priority peatland habitats in development management
[7] NatureScot. (2024). SiteLink: data and information on key protected areas across Scotland. Available at: https://sitelink.nature.scot/home
[8] Department for Environment, Food & Rural Affairs (DEFRA). (2024). Multi-Agency Geographic Information for the Countryside. Available at: https://magic.defra.gov.uk

- Joint Nature Conservation Committee (JNCC) website[9].

7.3 Consultation and Scope

7.3.1 A formal scoping exercise was undertaken in February 2024 as described in **Chapter 4: Approach to EIA**. In relation to non-avian ecology and nature conservation, scoping responses were sought from NatureScot and SEPA.

7.3.2 **Table 7.1** provides a summary of the key issues relating to non-avian ecology raised during the formal Scoping exercise undertaken in February 2024. Any additional communications with key stakeholders which took place outside of the formal Scoping process are also detailed.

Table 7.1: Consultee Responses Relating to Non-avian Ecology

Consultee	Responses Relevant to Non-avian Ecology	Comment
NatureScot - Scoping - 16/04/2024	"Based on the initial information provided in the Scoping Report we advise that the proposal raises the following key issues relevant to our interests: "… Potential impacts to protected areas including the River Spey Special Area of Conservation (SAC), and the Kinveachy Forest SAC, Special Protection Area (SPA) and Site of Special Scientific Interest (SSSI). Potential impacts to priority peatland habitats including blanket bog."	Detailed Phase 1, NVC and UKHab habitat surveys have been undertaken, please see Technical Appendix (TA) 7.1, the HMP at TA 7.5 as well as section 7.8 of this chapter for mitigation proposals to safeguard the habitats. A shadow Habitats Regulation Appraisal (sHRA) has been undertaken in TA 8.3
Findhorn Nairn and Lossie Rivers Trust - Scoping - 19/03/2024	"Access and egress of migratory fish is a key factor in maintaining healthy fish populations and the Board wish to see all river crossings ensure that this is facilitated. All bridges should be clear span to allow fish passage and substrate passage. The Board would also urge that the developers ensure all turbines and roads are a minimum of 50m from the nearest watercourse which should ensure any effect on riparian habitat will be minimal. Wind farm developments of this size may potentially affect runoff to the adjoining watercourses and the Board is encouraged to see this recognised within the report (page 35). It is of paramount importance that throughout construction high quality measures to control silt runoff and other potential pollutants are installed. The Board requires that a water quality and fisheries monitoring plan is developed to ensure that no detrimental effects are evident in the fish populations downstream of the development. This plan should include the following elements, water quality monitoring, invertebrate monitoring and fish monitoring, and it is essential that at least one year data is collected prior to the commencement of construction. The incorporation of a control stream for comparison is also recommended."	A CEMP will be produced pre-construction as outlined in this chapter. Please see section 7.8 of this chapter for mitigation pertaining to aquatic fauna (section 7.7.49).
Fisheries Management Scotland - Scoping - 08/03/2024	"The proposed development falls within the district of the Findhorn District Salmon Fishery Board, and the catchment relating to the Findhorn, Nairn and Lossie Rivers Trust. It is important that the proposals are conducted in full consultation with these organisations…"	A fish habitat survey has been conducted for the Proposed Development Site, please see TA 7.4. The Findhorn, Nairn and Lossie Rivers Trust will be consulted pre-construction in relation to further survey work for aquatic fauna, as detailed in this chapter in section 7.8.
SEPA - Scoping - 07/03/2024	"1.1 The layout should make use of the existing tracks on the site and be designed to minimise the extent of supporting infrastructure required to facilitate development. 1.2 The proposed location of the turbines avoids impacts on watercourses shown on the 1:50,000 OS map which is welcomed; the developer is reminded to also consider any smaller scale water features. …… ……. 1.5 The submission should include a draft Habitat Management Plan, or similarly named document, which should include specific proposals to offset/compensate for direct and indirect impacts on peatland, and to provide environmental enhancement. 1.6 As indicated above we would very much welcome further pre-application discussions with the developer once further peat probing and habitats NVC survey has been carried out and the layout has been updated as a result. The layout should clearly show how impacts on deeper peat and near natural peatland has been avoided."	The layout has made use of existing tracks on site to the greatest extent practical while also taking the sensitivity of surrounding habitat into account. The turbine locations have taken all watercourses into consideration and they have been kept as far from waterbodies as possible. The submission does include a HMP. Please see TA 7.1 with attendant figures for updated habitats as well as TA 9.2 for the PMP.
The Highland Council - Scoping - 01/05/2024	"The EIAR should provide a baseline survey of the bird and animals (mammals, reptiles, amphibians, etc.) interest on site. It needs to be categorically established what species are present on the site, and where, before a future application is submitted. Further the EIAR should provide an account of the habitats present on the proposed development site. It should identify 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, particularly in respect to blanket bog, in the contexts of both biodiversity conservation and the inherent risk of peat slide (see later). Details of any habitat enhancement programmes (such as native-tree planting, stock exclusion, etc.) 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. The developer should undertake a specific peat assessment to inform the siting, design, or other mitigation in order to overcome significant effects on peatland and Carbon Rich Soils, Deep Peat, and Priority Peatland Habitat (CPP). Attention is drawn to paragraph 4.34 on page 24 of the OWESG, which	A full suite of ecology surveys including habitats and protected species has been undertaken, please see TAs 7.1 - 7.8, which includes BNG and the HMP. An outline CEMP has been included as TA 3.1, and a full CEMP will be produced pre-construction.

[9] Joint Nature Conservation Committee (JNCC). (2024). Available at: https://jncc.gov.uk.

Consultee	Responses Relevant to Non-avian Ecology	Comment
	discusses peat and CPP. We also expect an up- to-date National vegetation Classification (NVC) survey and a commitment to undertake peatland restoration on an area of increased size to that of the application site. The Environmental Impact Assessment Report (EIAR) should provide details of all direct, indirect, permanent, and temporary impacts to any bog habitat present on the site. The EIAR should address the likely impacts on the nature conservation interests of all the designated 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. NatureScot provide advice on the impact on designated sites. If wild deer are present or will use the site an assessment of the potential impact on deer will be required. This should address deer welfare, habitats, and other interests. The EIAR needs to address the aquatic interests within local watercourses, including downstream interests that may be affected by the development, for example increases in silt and sediment loads resulting from construction works; pollution risk/incidents during construction; obstruction to upstream and downstream migration both during and after construction; disturbance of spawning beds / timing of works; and other drainage issues. The EIAR should evidence consultation input from the local fishery board(s) where relevant. Further advice can be found in NatureScot's consultation response on ecology in relation to the surveys required and the adequacy of the work already undertaken. 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's commitment to deliver positive effects for biodiversity through development. 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. The HMP should include a comprehensive monitoring programme for all habitat improvements, and breeding birds on the site. Remote sensing using radar or infra-red cameras should be considered, to help inform future development and decision making within the industry with regards to eagles. Lastly, the HMP (or other document) should also include a protocol for reporting collisions to NatureScot."	
ECU – Scoping – 14/05/2024	"…. 3.11 In addition to identifying the main watercourses and waterbodies within and downstream of the proposed development area, developers should identify and consider, at this early stage, any areas of Special Areas of Conservation where fish are a qualifying feature and proposed felling operations particularly in acid sensitive areas. 3.12 MD-SEDD also provide standing advice for onshore wind farm or overhead line development (which has been appended at Annex B) which outlines what information, relating to freshwater and diadromous fish and fisheries, is expected in the EIA report. Use of the checklist, provided in Annex 1 of the standing advice, should ensure that the EIA report contains the required information; the absence of such information may necessitate requesting additional information which may delay the process. Developers are required to submit the completed checklist in advance of their application submission. …."	A fish habitat survey has been undertaken on site, detailing all watercourses, please see TA 7.4. Further aquatic fauna surveys will be undertaken pre-construction as detailed in this chapter, section 7.7. The Marine Science Scotland (MSS) checklist has been populated and is included as Technical Appendix 7.7.

7.4 Assessment Methodology and Significance Criteria

7.4.1 The Chartered Institute of Ecology and Environmental Management (CIEEM) Guidelines for Ecological Impact Assessment in the UK and Ireland[10] (henceforth referred to as the CIEEM guidelines) form the basis of the impact assessment presented in this chapter. These guidelines set out a process of identifying the value of each ecological receptor and then characterising the impacts that are predicted, before discussing the effects on the integrity or conservation status of the receptor, proposed mitigation and significance of effects of any residual impacts predicted. The following definitions of the terms 'impact' and 'effect' are used in this chapter:

- impact – actions resulting in changes to an ecological feature. For example, the construction activities of a development removing a hedgerow.
- effect – outcome to an ecological feature from an impact. For example, the effects on a dormouse population from loss of a hedgerow.

7.4.2 The initial action for any Ecological Impact Assessment (EcIA) is to determine which features should be subject to detailed assessment. The ecological receptors to be the subject of more detailed assessment should be of sufficient value that impacts upon them may result in effects which are significant in terms of either legislation or policy. The receptors should also be vulnerable to significant impacts arising from the development.

[10] Chartered Institute of Ecology and Environmental Management (CIEEM). (2022). Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine. CIEEM, Winchester.

7.4.3 All designated nature conservation sites, plant and animal species, habitats and integrated plant and animal communities that occur within the 'zone of influence' of the Proposed Development are defined as potential ecological features (as described below). The zone of influence for a project is defined here as the area over which ecological features may be affected by biophysical changes as a result of the Proposed Development and associated activities. The zone of influence is likely to extend beyond the Proposed Development Site, for example where there are ecological or hydrological links beyond the Proposed Development Site boundary. The zone of influence will also vary for different ecological features, depending on their sensitivity to environmental change.

Determining Value

7.4.4 The CIEEM guidelines recommend that the value of ecological features is determined based on a geographic frame of reference. For this project the following geographic frame of reference is used:

- international (nature conservation designation, habitat or populations of species of international importance, e.g. a SAC or significant numbers of a designated population outside the designated site);
- national (nature conservation designation, habitat or populations of species of Scottish importance, e.g. a Site of Special Scientific Interest (SSSI) or a National Nature Reserve (NNR), a nationally important population / assemblage of a European Protected Species and / or a species listed on Schedule 5 of the Wildlife and Countryside Act 1981);
- regional (nature conservation designation, habitat or populations of species of The Highland Council Area importance, e.g. a site / population that meets SSSI designation criteria but has not been designated due to better examples being present in the regional area or a regionally important population / area of a Scottish Biodiversity List (SBL) priority species / habitat);
- local (i.e. within 5km) (a nature conservation site, habitat or species of importance in the local or district area, e.g. a breeding population / viable area of an SBL or local BAP species / habitat); and
- less than local (unremarkable habitat / common species of little or no intrinsic nature conservation value).

Valuing Habitats

The value of habitats, according to the CIEEM guidelines, is measured against published selection criteria where available. Reference may therefore be made to SBL and Habitat Action Plans (HAPs) contained within the HLBAP. As the guidelines note, the presence of a HAP reflects the fact that the habitat concerned is in a sub-optimal state and hence the action plan is required and a HAP does not, therefore, necessarily imply any specific level of importance for the habitat. It must be noted, in accordance with the guidance, that features may be assigned greater value if there is reasonable chance that they can be restored to a higher value in the future.

Valuing Species

7.4.5 In assigning a level of value to a species, it is necessary to consider its distribution and status, including a consideration of trends based on available historical records. Rarity is an important consideration because of its relationship with threat and vulnerability although, because some species are inherently rare, it is necessary to look at rarity in the context of status. A species that is rare and declining should be assigned a higher level of importance than one that is rare with a stable population. Reference may also be made to SBL and Species Action Plans (SAPs) contained within the HLBAP and other indicators of conservation status, as appropriate, although, as above with HAPs, the existence of a SAP does not necessarily imply any specific level of importance.

Predicting and Characterising Impacts and Effects

7.4.6 The CIEEM guidelines suggest that the process of predicting ecological impacts and effects should take account of relevant ecosystem structure and function such as:

- available resources – e.g. territory, food and water;
- environmental process – e.g. flooding, erosion, eutrophication, deposition and climate change;
- ecological processes and relationships – e.g. population dynamics, vegetation dynamics and predator / prey relationships;
- human influences – e.g. animal husbandry, burning, pollution, disturbance from public access; and
- historical context – e.g. natural range of variation, historical human influences and geomorphological evolution.

7.4.7 In accordance with the CIEEM guidelines, when describing impacts and effects, reference is made to the following, where appropriate:

- confidence in predictions – the level of certainty that an impact will occur as predicted, based on professional judgement and where possible evidence from other schemes – this is based on a four point scale: certain / near certain; probable; unlikely; and extremely unlikely;
- magnitude – the size of an impact in quantitative terms where possible;
- extent – the area over which an impact occurs;
- duration – the time for which an impact is expected to last;
- reversibility – a permanent impact is one that is irreversible within a reasonable timescale or for which there is no reasonable chance of action being taken to reverse it. A temporary impact is one from which a spontaneous recovery is possible; and
- timing and frequency – i.e. whether impacts occur during critical life stages or seasons.

7.4.8 Both direct and indirect impacts are considered: direct ecological impacts are changes that are directly attributable to a defined action, e.g. the physical loss of habitat occupied by a species during the construction process. Indirect ecological impacts are attributable to an action, but which affect ecological resources through effects on an intermediary ecosystem, process or receptor, e.g. external sourcing of stone for road surfaces may cause growth of plant species not generally found in that area of the Site.

7.4.9 The potential for cumulative effects was also considered. Cumulative effects can arise from individually insignificant but collectively significant actions taking place over a period of time or concentrated in a location. Ecological features may already be exposed to pressure and further impact could cause irreversible decline[11]. Developments within 10km of the Proposed Development were identified as this is considered to be the maximum zone of influence for ecological receptors. In line with CIEEM guidance, the following development types were included:

- proposals for which consent has been applied for which are awaiting determination in any regulatory process;
- projects which have been granted consent but which have not yet been started or which are under construction;
- proposals which have been refused permission but which are subject to appeal and the appeal is undetermined; and
- to the extent that their details are in the public domain, proposed projects that will be implemented by a public body but for which no consent is needed from a competent authority.

Significance of Effects

7.4.10 For the purposes of EcIA, the CIEEM guidelines define a significant effect as "an effect that either supports or undermines biodiversity conservation objectives for important ecological features or for biodiversity in general". Significant effects can be either positive or negative and are qualified with reference to an appropriate geographic scale, from international to local, however, it should be noted that the scale of significance of an effect may not be the same as the geographic context in which the feature is considered important. For example, an effect on a species which appears on a national list of species of principal importance for biodiversity may not have an effect on its national population.

7.4.11 Significance relates to the weight which should be attached to effects when decisions are made. Any significant effects remaining after mitigation (residual effects), together with an assessment of the likelihood of success of the mitigation, are the factors to be considered against legislation, policy and development control in determining the application.

Avoidance, Mitigation, Compensation and Enhancement

7.4.12 It is important as part of any Environmental Impact Assessment to clearly differentiate between mitigation, compensation and enhancement and these terms are defined here as follows:

- avoidance is used where an impact has been avoided, e.g., through changes in scheme design;
- mitigation is used to refer to measures to avoid, reduce or remedy a specific negative impact *in situ*. Mitigation is only required for negative impacts assessed as being significant or where required to ensure compliance with legislation;
- compensation is used to refer to measures proposed in relation to specific negative impacts but where it is not possible to fully mitigate for negative impacts *in situ*. Compensation is only required for negative impacts assessed as being significant or where required to ensure compliance with legislation; and

[11] Chartered Institute of Ecology and Environmental Management (CIEEM). (2022). Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine. CIEEM, Winchester

- enhancement is used to refer to measures that will result in positive ecological impacts but which do not relate to either specific significant negative impacts or where measures are required to ensure legal compliance.

Vegetation Assessment Area (VAA)

7.4.13 The assessment area for vegetation has been defined here as an area which extends 250m from borrow pits or structures requiring foundations and 100m out from all infrastructure, i.e. areas which are considered to be potentially impacted upon by the development footprint. These distances are based on guidance by SEPA[12], with respect to the suggested buffers in which GWDTE should be identified. The vegetation assessment area will hereafter be referred to as the Vegetation Assessment Area and is shown on **Figure 7.2** and **Figure 7.3**.

7.4.14 The faunal surveys cover a wider are, so impacts have been assessed within the zone of impact appropriate for each receptor.

7.4.15 Subsequently, in late 2022, the survey area was extended to the south of the original area, encompassing land of similar terrain and stretching towards the River Dulnain. These will be referred to hereafter as the 'Original Site' and 'Additional Area' within this document as necessary, with the 'Site' being used to refer to the survey area as a whole.

7.5 Approach and Methodology

Desk Study

7.5.1 An ecological desk study was undertaken to identify nature conservation designations and records of protected or otherwise notable species in the local area. Only those features that relate to non-avian ecology are considered in this chapter, with bird data being presented in **Chapter 8: Ornithology**.

7.5.2 The desk study identified designated nature conservation sites such as SACs, SSSIs and NNRs within 5km of the Site, extending to 10km for nature conservation sites that are designated (in whole or in part) for aquatic migratory species and which are hydrologically connected with the Proposed Development site. The desk study also collated records of protected or otherwise notable species from within the last 15 years and within 5km of the Site, although, in the case of bats, this was extended to 10km.

Phase 1, NVC and UKHab Habitats Surveys

7.5.3 As detailed in **Technical Appendix 7.1**, in September 2022 an extended Phase 1 habitat survey was undertaken that covered the site plus a 250m buffer, although it should be noted that the subsequent impact assessment considered only the Vegetation Assessment Area (VAA) (see Section 7.4.13). The survey was carried out in accordance with standard Joint Nature Conservation Committee (JNCC) methodology[13] and involved mapping all habitats, describing plant communities and notable features and assessing the potential for the application site to support protected or otherwise notable species.

7.5.4 The survey was undertaken at what is considered to be the optimal time of year. Vegetation boundaries were clearly and readily identifiable, together with the dominating floral species of each habitat type. No significant survey limitations were identified.

7.5.5 As detailed in **Technical Appendix 7.1**, the NVC survey was carried out during August, September and October 2023 and covered the same survey area as the extended Phase 1 habitat survey. The work was carried out in accordance with the standard classification of UK vegetation[14]. UKHAB surveys were undertaken in accordance with the latest guidance[15], in August 2024, with the condition of the habitats being assessed and incorporated into the BNG assessment (TA 7.6 refers).

[12] SEPA (2017). *Land Use Planning System SEPA Guidance Note 31: Version 3*

[13] JNCC (2010). *Handbook for Phase 1 habitat survey – a technique for environmental audit*, revised reprint. Joint Nature Conservation Committee, Peterborough

[14] Rodwell JS (Ed.) (1991 *et seq*.). *British Plant Communities*. 5 volumes: Vol. 1 (1991) - *Woodlands and Scrub*; Vol. 2 (1991) - *Mires and Heaths*; Vol. 3 (1992) - *Grasslands and Montane Communities*; Vol. 4 (1995) - *Aquatic Communities, Swamps and Tall-herb Fens*; Vol. 5 (2000) – *Maritime Communities and Vegetation of Open Habitats*. Cambridge University Press, Cambridge

[15] UKHab Ltd (2023). *UK Habitat Classification Version 2.0.* www.ukhab.org

7.5.6 Following the NVC survey, potential GWDTE among the recorded NVC communities were classified in terms of their likely high, moderate or low groundwater dependence, based on SEPA guidance[16].

7.5.7 While surveys were undertaken towards the end of the season, boundaries between vegetation community types were clearly identifiable and no significant limitations in terms of survey timing or weather conditions were identified.

Bat Surveys

7.5.8 As detailed in **Technical Appendix 7.2**, bat surveys were carried out between April - May and October 2021 in accordance with current survey guidelines[17]. Survey effort commensurate with a low risk site was considered to be appropriate based on a review of habitat features present.

7.5.9 Habitat Suitability Assessment Surveys of the Original Site and the immediate surrounding area were undertaken in April and August/September 2022.

7.5.10 The surveys comprised the following (see **Technical Appendix 7.2** for further details):

- On each survey occasion, detectors were deployed for a minimum of 10 days, recording in full spectrum. All detectors were set to commence recording a minimum of 30 minutes before sunset and continue until a minimum of 30 minutes after sunrise.
- Static detectors were located approximately at the location of the proposed turbines, although turbine locations were not fixed during the period of survey and as such detector locations altered to some degree. The locations did however provide a good representation of turbine locations.

7.5.11 The Additional Area of the site was surveyed for bats between April and September 2023 (see **Technical Appendix 7.2** for further details).

7.5.12 Three main survey periods were undertaken during spring summer and autumn 2023. However, partly due to the size of the site and other logistical reasons, both the summer and autumn deployments were split into two. Not all locations were (or were required to be) monitored for all the resulting 5 periods. On each survey occasion, detectors were deployed for a minimum of 10 days, recording in full spectrum. All detectors were set to commence recording a minimum of 30 minutes before sunset and continue until a minimum of 30 minutes after sunrise.

Protected Species Surveys

7.5.13 As detailed in **Technical Appendix 7.3**, surveys for protected species were undertaken during February 2023. Target species were considered to be otter *Lutra lutra*, water vole *Arvicola amphibius*, badger *Meles meles*, wild cat *Felis silvestris*, red squirrel *Sciurus vulgaris* and pine marten *Martes martes*, and the study area was defined as the site plus a 250m buffer.

7.5.14 The otter survey followed standard methodologies[18][19][20][21]. The water vole survey was conducted with reference to Strachan and Moorhouse[22]. The badger survey was carried out in accordance with the methodology described by NS[23]. The pine marten and red squirrel Sciurus vulgaris surveys followed the methods described in Cresswell et al,[24]. However, any evidence of other species of conservation interest was also noted.

7.5.15 Surveys were undertaken at an appropriate time of year and under suitable weather conditions. No significant limitations were identified.

[16] SEPA (2017). *Land Use Planning System SEPA Guidance Note 31: Version 3*.
[17] Collins, J. (Ed). (2023). Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edition).

[18] Purseglove, J. (1995). *The new rivers and wildlife handbook*. RSPB, NRA and RSNC, the Royal Society for the Protection Of Birds, Sandy, 1994.
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[20] Bang, P. & Dahlstrøm, P. (2006). Animal Tracks and Signs. Oxford University Press, Abingdon
[21] Muir, G. and Morris, P. (2013). *How to find and identify mammals* (2nd edition). The Mammal Society, Southampton
[22] Strachan, R., Moorhouse, T., and Gelling, M. (2011). *Water Vole Conservation Handbook (3rd edition)*. Wildlife Conservation Unit, University of Oxford, Abingdon
[23] Scottish Natural Heritage (2003). Best Practice Guidance - Badger Surveys. Inverness Badger Survey. Commissioned Report No. 096
[24] Cresswell, W. J., Birks, J. D. S., Dean, M., Pacheco, M., Trewhella, W. J., Wells, D. and Wray, S. (eds) (2012). *UK BAP Mammals: Interim Guidance for Survey Methodologies, Impact Assessment and Mitigation.* The Mammal Society, Southampton

Aquatic Habitat Surveys

7.5.16 As detailed in **Technical Appendix 7.4**, a walkover survey was undertaken in order to assess the importance of watercourses on site for fish. All watercourses draining the site were visited and photographed and their suitability for migratory fish assessed along with their connectivity to significant watercourses in the wider environs such as the Halladale River.

7.5.17 The walkover survey was undertaken following a period of heavy rainfall and flows were considered to be elevated however, this was not considered to be a significant limitation in terms of the aim of assessing the suitability of watercourses for fish.

7.6 Baseline Conditions

Nature Conservation Sites

7.6.1 There are nine sites designated for non-avian nature conservation interests within 10km of the Site (**Figure 7.1**).

Table 7.2: Designated Sites within 10km of Site

Site Name	Designation	Distance from Site	Qualifying feature (latest assessed condition)
Kinveachy Forest	SAC	c. 0.65km to the south-east	Bog woodland[25] Caledonian forest
Carn nan Tri-tighearnan	SAC	c. 7.15km to the north east of the Site	Blanket bog[26]
Slochd	SAC	c. 0.17km to the north east of the Site	European dry heaths[27]
River Spey	SAC	c. 1.66km	Otter *Lutra lutra*[28] Freshwater pearl mussel *Margaritifera margaritifera* Sea lamprey *Petromyzon marinus* Atlantic salmon *Salmo salar*
Loch Vaa	SSSI	c. 8.9km to the south-east of the Site	Aquatic beetles including nationally scarce and[29] notable species such as *Berosus luridus*, *Hydrochus brevis*, *Cyphon punctipennis* and *Agabus labiatus* Goldeneye *Bucephala clangula* Slavonian grebe *Podiceps auritus*
Kinveachy Forest	SSSI	Partial overlap with the south-eastern edge of the Site	Native pinewood assemblage[30] including: Scots pine *Pinus sylvestris* Birch *Betula* sp. Alder *Alnus glutinosa* Breeding bird assemblage including: Capercaillie *Tetrao urogallus* Scottish crossbill *Loxia scotica* Crested tit *Lophophanes cristatus*
Craigellachie	SSSI	c. 8.93km south east of the Site	Upland birch woodland including: Silver birch *Betula pendula* Aspen *Populus tremula* Hazel *Corylus avellana* Sessile oak *Quercus petraea* Wych elm *Ulmus glabra* Bird cherry *Prunus padus* Juniper *Juniperus communis* Moth assemblage including: Kentish glory *Endromis versicolora* Rannoch sprawler *Brachionycha (Asteroscopus) nubeculosa* Angle-striped sallow *Enargia paleacea*[31]
Carn nan Tri-tighearnan	SSSI	c. 7.15km to the north east of the Site	Blanket bog and subalpine dry heath[32]
Craigellachie	NNR	c. 8.93km south east of the Site	Upland birch woodland[33] Open glades

7.6.2 The boundary of the Site does slightly overlap the Kinveachy Forest SSSI site in the south-east. No turbines will be located in this area and there will be no over sail of any habitats within the designated site.

7.6.3 There are no non-statutory designated sites of conservation interest within the Site or within 10km of the Site.

Evaluation of Designated Sites

7.6.4 Designated sites considered relevant to non-avian ecology are evaluated in **Table 7.3**.

[25] NatureScot SiteLink. (2024). https://sitelink.nature.scot/site/8283
[26] NatureScot SiteLink. (2024). https://sitelink.nature.scot/site/8220
[27] NatureScot SiteLink. (2024). https://sitelink.nature.scot/site/8639
[28] NatureScot SiteLink. (2024). https://sitelink.nature.scot/site/8365
[29] NatureScot SiteLink. (2024). https://sitelink.nature.scot/site/1065
[30] NatureScot SiteLink. (2024). https://sitelink.nature.scot/site/864
[31] NatureScot SiteLink. (2024). https://sitelink.nature.scot/site/428
[32] NatureScot SiteLink. (2024). https://sitelink.nature.scot/site/323
[33] NatureScot SiteLink. (2024). https://sitelink.nature.scot/site/5020

Table 7.3: Evaluation of Designated Sites

Designated Site	Reason for Evaluation	Evaluation
Kinveachy Forest SAC	The designation of this site as a SAC recognises it is of international value.	International
Carn nan Tri-tighearnan SAC	The designation of this site as a SAC recognises it is of international value.	International
Slochd SAC	The designation of this site as a SAC recognises it is of international value.	International
River Spey SAC	The designation of this site as a SAC recognises it is of international value.	International
Loch Vaa SSSI	The designation of this site as a SSSI recognises it is of national value.	National
Kinveachy Forest SSSI	The designation of this site as a SSSI recognises it is of national value.	National
Craigellachie SSSI	The designation of this site as a SSSI recognises it is of national value.	National
Carn nan Tri-tighearnan SSSI	The designation of this site as a SSSI recognises it is of national value.	National
Craigellachie NNR	The designation of this site as a NNR recognises it is of national value.	National

Habitats

7.6.5 Phase 1 habitats are presented on **Figure 7.2**, UKHab habitats are presented on **Figure 7.3** and NVC communities are presented on **Figure 7.4**. The Site boundary, proposed infrastructure layout, and associated VAA have been superimposed onto all Figures. Phase 1 and NVC communities recorded as present within the VAA are listed, together with their extent, in **Table 7.4** and **Table 7.5** respectively.

Table 7.4: Phase 1 Habitats Recorded Within VAA (ha)

Phase 1 Habitat	Extent (ha) within VAA (ha)
Acid grassland - unimproved	0.04
Broadleaved woodland - plantation	1.74
Broadleaved woodland - semi-natural	0.45
Cultivated/disturbed land - ephemeral/short perennial	0.54
Dry dwarf shrub heath	259.32
Dry dwarf shrub heath - acid	170.93
Dry heath/acid grassland	234.56
Dry modified bog	389.86
Fen	1.8
Marsh/marshy grassland	9.16
Other habitat	9.09
Scrub - dense/continuous	9.83
Scrub - scattered	3.1
Standing water	0.17
Wet modified bog	1.11
Total	1091.8

Table 7.5: NVC Communities Recorded Within VAA (ha)

NVC Community	Extent (ha) within VAA (ha)
H10 Calluna vulgaris -Erica cinerea heath	402.57
H10/U5 Mosaic	59.59
M19 Calluna vulgaris - Eriophorum vaginatum blanket mire	519.55
M6 Carex echinata - Sphagnum fallax / denticulatum mire	3.28
Non-NVC	4.66
U5 Nardus stricta-Galium saxatile grassland	92.66
W19 Juniperus communis ssp. communis-Oxalis acetosella woodland	8.71
W4 Betula pubescens-Molinia caerulea woodland	0.79
Total	1091.8

7.6.6 The habitats and NVC communities are briefly described below, with full details provided in **Technical Appendix 7.1**. For ease of reading, habitats and NVC communities are described below under Phase 1 habitat headings.

7.6.7 It should be noted that there is not always a direct correspondence between the two types of classification because individual Phase 1 habitat types can include a number of different NVC community types, and some NVC communities can occur in different Phase 1 habitat types. Scientific names for plant species are provided in **Technical Appendix 7.1** and only used below where a species has no commonly accepted English name (this notably applies to some lower plants). Habitats present at very low abundance (< 0.1ha) are not described below.

Blanket Bog

7.6.8 This habitat occupies the largest area of the Site (some in its degraded form), with wide expanses made up of deergrass *Trichophorum germanicum* to the south-west. The bogs centre around the upper reaches of the Wester Strathnoon Burn and Allt Lathach, and are dominated by heather *Calluna vulgaris*, cross-leaved heath *Erica tetralix* and hare's-tail cotton-grass *Eriophorum vaginatum*, on peat usually deeper than 0.5m.

7.6.9 A small variety of *Sphagnum* species were found, typical of modified bogs, including red bog-moss *S. capillifolium*, flat-topped bog-moss *S. fallax* and blunt-leaved bog-moss *S. palustre* in characteristic green and red hummocks. *Sphagnum* was not abundant throughout the blanket bog on Site. There were localised patches of the aforementioned species recorded however no species, such as *S. fuscum* or *S. austinii* were observed during the survey. These species indicate good quality bog habitat or blanket bog of national interest. There were also relatively few bog pools recorded on site, with only two recorded within the Vegetation Assessment Area. Those observed were generally species poor, dominated by *S. cuspidatum*.

7.6.10 Apart from heather, the most common dwarf shrub was cross-leaved heath as well as bog-myrtle *Myrica gale*. There was very little crowberry *Empetrum nigrum* and even less bilberry *Vaccinium myrtillus*. The bogs regularly recorded species such as common cotton-grass *Eriophorum angustifolium* and woolly fringe-moss *Racomitrium lanuginosum*, as well as various lichen species in the genus *Cladonia*. The abundance of these species suggests bogs that are slightly drier than those with more Sphagnum, hence the dry modified bog classification (JNCC, 2016).

7.6.11 The modified bogs were all examples of the NVC community M19, floristically grading into M20 in localised areas.

Dry Heath

7.6.12 This habitat occupies large swathes of the Site, with wide expanses made up of more than 25% ericoids or small gorse species in relatively dry conditions, usually constrained to the steeper slopes and higher areas of the Site, for example on the hillsides toward the north-west. This habitat is dominated by heather, bell heather *Erica cinerea*, bilberry and gorse *Ulex europaeus*, with patches of common juniper *Juniperus communis* scrub along the hillsides.

7.6.13 The dwarf shrub heath is an example of NVC community H10.

Wet Heath

7.6.14 There are comparatively small amounts of wet heath to be found within the Vegetation Assessment Area and as a consequence do not appear on **Figures 7.2** and **7.3** due to the scale of mapping. The habitat was recorded in the south-east and north of the Site, providing a transition between dry heath and blanket bog.

7.6.15 The habitat is dominated by heather and cross leaved heath *Erica tetralix* with small localised patches of grasses such as mat-grass *Nardus stricta* and wavy hair-grass *Avenella flexuosa* and sedges such as green-ribbed sedge *Carex binervis*, carnation sedge *Carex panicea* with occasional purple moor-grass *Molinia caerulea* and deergrass.

7.6.16 The areas of wet heath most closely align with M15 NVC community. However, it should be noted that this habitat was only identified during the UKHab survey, not the original NVC survey work, where M15 was not floristically identified. It is considered that the areas identified as wet heath in the UKHab survey are gradations of H10 on more waterlogged substrate as a result of local topography, hence the greater percentage cover of *Erica tetralix*.

Upland Acid Grassland

7.6.17 This habitat resides in the north-west of the Site, on the southern banks of the River Findhorn. They are relatively species rich areas found on acidic soils that grade into dry dwarf shrub heath. Dominant species include wavy hair-grass and heath bedstraw *Galium saxatile*.

7.6.18 These are largely areas dominated by wavy hair-grass with frequent heath bedstraw. Small patches can be found along the lower reaches of the Clune Burn, Western Strathnoon Burn and Caochan Seachdag, where cattle and sheep roam freely.

7.6.19 The upland acid grassland is an example of NVC community U5.

Mesotrophic Grassland

7.6.20 These areas of the Site are in the north-west toward the River Findhorn which are heavily grazed by sheep and cattle. The species richness is generally poor, and pastures have been heavily affected by drainage and/or the application of herbicides and/or slurry. Species found here were typical of this habitat and include perennial rye grass *Lolium perenne*, Yorkshire Fog *Holcus lanatus*, sweet vernal grass *Anthoxanthum odoratum*, common bent *Agrostis capillaris*, rough meadow-grass *Poa trivialis*, false fox sedge *Carex otrubae*, *Rhytidiadelphus squarrousus*, soft rush *Juncus effusus*, white clover *Trifolium repens*, common sorrel *Rumex acetosa* and common dandelion *Taraxacum officinale*.

7.6.21 This habitat most closely aligns with NVC community MG10.

Woodland

7.6.22 There are two patches in the north-west corner and another on the lower reaches of the Allt Phris of ancient birch woodland, with both silver birch *Betula pendula* and downy birch *Betula pubescens* protected from grazing by fencing. These areas of woodland are considered ancient/climax series as they contain mature trees which host endemic species such as *chaga Inonotus obliquu*s. Other tree and shrub species recorded include aspen *Populus tremula*, grey willow *Salix cinerea*, eared willow *Salix aurita*, and gorse *Ulex europaeus*.

7.6.23 Within the survey area there is a small patch of broad-leaved plantation woodland on the northern boundary which contains both silver and downy birch, and Scots pine Pinus sylvestris.

7.6.24 There is a handful of areas of juniper *Juniperus communis* dominated scrub, scattered throughout the site particularly along water courses such as Wester Strathnoon Burn and the Allt Lathach. These areas are dominated by juniper with no other species recorded within the canopy, apart from individual rowan *Sorbus acuparia*, rarely.

7.6.25 The woodland areas are an example of NVC communities W4 and W19, respectively.

Waterbodies and Watercourses

7.6.26 There are several watercourses within and adjacent to the Site with one loch present in the north-east of the Site.

7.6.27 There are four main watercourses on Site; Allt Phris, Clune Burn, Wester Strathnoon Burn, and Allt Lathach.

7.6.28 The Allt Phris drains into the River Findhorn from the eastern side of the Site along a relatively shallow gradient from 520m to 310m AOD, a gradient similarly followed by the Clune Burn slightly further to the west. The Allt Lathach flows through the centre of the Site, draining the hills of Carn Ruighe Shamraich, Carn Phris Mhor and Carn Coire na Cluanaich which have relatively steep banks covered by scattered scrub in the middle and lower reaches. The Wester Strathnoon Burn drains the higher regions of the Site in the West, including Carn Dubh'Ic an Deoir and Carn Leachter Beag from a height of 750m to 330m AOD.

Evaluation of Habitats and Plant Communities

7.6.29 **Table 7.6** shows the potential groundwater dependence (from SEPA, 2017) and nature conservation status for NVC categories identified (or Phase 1 habitats where NVC categorisation is absent) within the VAA.

Table 7.6: Evaluation of Recorded NVC Communities within the VAA

NVC Community	Potential Groundwater Dependence	Nature Conservation Status
H10 Calluna vulgaris -Erica cinerea heath	None	Alpine and Boreal heaths (Annex 1) European dry heaths (Annex 1) Upland heathland (SBL)
H10/U5 Mosaic	None	Alpine and Boreal heaths (Annex 1) European dry heaths (Annex 1) Upland heathland (SBL) Species-rich *Nardus* grassland, on siliceous substrates in mountain areas (and submountain areas in continental Europe) (Annex 1) Nardus stricta-Galium saxatile grassland (SBL)
M19 Calluna vulgaris - Eriophorum vaginatum blanket mire	None	Active raised bogs (Annex 1) Blanket bogs (Annex 1) Depressions on peat substrates of the *Rhynchosporion* (Annex 1) Blanket bog (SBL) Upland heathland (SBL)
M6 Carex echinata - Sphagnum fallax / denticulatum mire	High	Upland flushes, fens and swamps (SBL)
Non-NVC	None	None
U5 Nardus stricta-Galium saxatile grassland	None	Species-rich *Nardus* grassland, on siliceous substrates in mountain areas (and submountain areas in continental Europe) (Annex 1) Nardus stricta-Galium saxatile grassland (SBL)
W19 Juniperus communis ssp. communis-Oxalis acetosella woodland	None	*Juniperus communis* formations on heaths or calcareous grasslands (Annex 1)
W4 Betula pubescens-Molinia caerulea woodland	High	Bog woodland (Annex 1) Upland birchwoods (SBL)

Definitions:
Annex 1 - Annex 1 of the European Union Habitats Directive (92/43/EEC)
SBL - Scottish Biodiversity List

7.6.30 **Table 7.7** shows the value given for each habitat identified within the VAA. Wherever possible, the NVC categories have been used as the basis of the evaluation because they more directly relate to the SEPA GWDTE classification as well as Annex 1 and SBL habitat categories.

Table 7.7: Evaluation of Habitats / NVC Communities within the VAA

NVC Community	Reason for Evaluation: Potential Groundwater Dependence	Evaluation of Nature Conservation Status
H10 Calluna vulgaris -Erica cinerea heath	Listed on the SBL, with floristic variations listed on Annex 1. High level of cover within the vegetation assessment area at 402.5 ha.	Local
H10/U5 Mosaic	Listed on the SBL, with floristic variations listed on Annex 1. Moderate level of cover of the Site at 59.59 ha.	Local
M19 Calluna vulgaris - Eriophorum vaginatum	Listed on the SBL, with floristic variations listed on Annex 1. The largest extent of habitat type recorded	Regional

NVC Community	Reason for Evaluation: Potential Groundwater Dependence	Evaluation of Nature Conservation Status
blanket mire	on Site at 519.5 ha.	
M6 Carex echinata - Sphagnum fallax / denticulatum mire	Listed on the SBL. High potential for groundwater dependence. Low level of coverage within vegetation assessment area at 3.28 ha.	Local
U5 Nardus stricta-Galium saxatile grassland	Listed on the SBL, with floristic variations listed on Annex 1. Moderate level of cover of the Site at 92.6 ha.	Local
W19 Juniperus communis ssp. communis-Oxalis acetosella woodland	Listed on the SBL, with floristic variations listed on Annex 1. Low level of cover within the vegetation assessment area at 8.71 ha.	Less than local
W4 Betula pubescens-Molinia caerulea woodland	Listed on the SBL, with floristic variations listed on Annex 1. High potential for groundwater dependence. Low level of cover within the vegetation assessment area at 0.79 ha.	Local

Fauna

Existing Species Records

7.6.31 **Table 7.8** shows a summary of records for legally protected or otherwise notable species within 5km (or 10km for bats) of the Site from the last 15 years.

Table 7.8: Summary of Desk Study Species Records up to 5km from the Site (10km for Bats)

Species	Data Source	Summary of Records
Mountain Hare *Lepus timidus*	Highland Biological Records Group (HBRG) Vertebrates (not Badger) Dataset, available on NBN Atlas Scotland (CC-BY, OGL, CC0 licences)	3 records from 2013 - 2018, adjacent to the Site boundary to west and east.
Eurasian Red Squirrel *Sciurus vulgaris*	The Scottish Squirrel Database and Highland Biological Records Group (HBRG) Vertebrates (not Badger) Dataset, available on NBN Atlas Scotland (CC-BY, OGL, CC0 licences)	24 records from 2012 to 2021, none located within the Site, records located along forest blocks adjacent River Findhorn.
Eurasian Otter *Lutra lutra*	Highland Biological Records Group (HBRG) Vertebrates (not Badger) Dataset, available on NBN Atlas Scotland (CC-BY, OGL, CC0 licences)	2 records outwith the Site boundary to the east in 2014 and to the west in 2017.
Common Lizard *Zootoca vivipara*	Highland Biological Records Group (HBRG) Vertebrates (not Badger) Dataset, available on NBN Atlas Scotland (CC-BY, OGL, CC0 licences)	1 record outwith the Site boundary to the east in 2020.
Daubenton's Bat *Myotis daubentonii*	Highland Biological Records Group (HBRG) Vertebrates (not Badger) Dataset, available on NBN Atlas Scotland (CC-BY, OGL, CC0 licences)	1 record from 2017 outwith the Site boundary to the west.
Natterer's Bat *Myotis nattereri*	Roost Count, available on NBN Atlas Scotland (CC-BY, OGL, CC0 licences)	1 record form 2014 outwith the Site boundary to west.

7.6.32 A summary of the protected or otherwise notable fauna recorded within the study area during the various ecological surveys and / or the potential for protected / notable faunal species to be present is provided below.

Otter

7.6.33 Otters are largely solitary, semi-aquatic mammals which feed mainly on fish but also on amphibians (especially in winter and spring), small mammals or birds. Otters are listed as a priority species in the UK Biodiversity Action Plan (BAP) and are also listed on the Scottish Biodiversity List as a species of importance for the purpose of conservation of biodiversity in Scotland. As a European Protected Species (EPS) under the Habitats Directive, otters and their resting places are afforded a high level of legal protection.

7.6.34 As detailed in **Technical Appendix 7.3**, the field survey resulted in no evidence of otter. The main watercourses within the survey area and the banks of the River Findhorn were surveyed and no evidence recorded.

7.6.35 Results from the Fish Habitat Survey identified old otter spraint at three locations on the Allt Lathach.

Wildcat

7.6.36 No evidence of this species was found during the field survey. The species is in significant decline, and this is not recognised as a priority area for wildcat.

Bats

7.6.37 As detailed in **Technical Appendix 7.2**, bat surveys were undertaken in line with current guidance[34] during the bat activity season of 2021 across the Proposed Development and adjacent habitats.

7.6.38 The habitats in the field study area are considered to be of low potential for the support of bats as the open moorland habitat is considered to be low quality foraging habitat and is not connected to the wider landscape by prominent linear features such as woodland or hedgerows. Most watercourses are small burns flowing in a north-westerly direction into the River Findhorn.

[34] NatureScot, Natural England, Natural Resources Wales, RenewableUK, Scottish Power Renewables, Ecotricity Ltd., University of Exeter, Bat Conservation Trust (BCT) (2021). Bats and Onshore Wind Turbines: Survey, Assessment and Mitigation

7.6.39 The wider environs support moorland at higher altitude with woodland and grazing land at lower levels (i.e. along the River Findhorn to the north of the Site). The relatively high altitude and exposed nature of the generally open habitats of low suitability result in local bat populations generally being at low density with low species diversity.

7.6.40 Activity levels across the Proposed Development (within the original survey area) were low with a high of 28 passes recorded (sonogram analysis identified these as common pipistrelle) at the location of Turbine 30 during the autumn deployment phase. When converted to bat passes per hour, it is clear that activity across the Site is low, reflecting its exposed, upland geographical location with little to no roosting and / or foraging habitat.

7.6.41 Activity levels across the Proposed Development (within the additional survey area) were also low with a high of 41 common pipistrelle passes recorded at the location of Turbine 3 during the early autumn deployment phase. When converted to bat passes per hour, it is clear that activity across the Site is low, generally speaking. This reflects its exposed, upland geographical location with little to no roosting and / or foraging habitat.

Pine Marten

7.6.42 No signs of pine marten were recorded during the survey. Woodland along the northern edge of the Site along the River Findhorn is considered to be suitable habitat but no evidence was recorded in the survey area, including a 250m buffer.

Water Vole

7.6.43 Evidence of water vole was recorded along the middle to upper reaches of the Allt Lathach and Clune Burn. A burrow entrance with fresh faeces were recorded on the Clune Burn. Further upstream, a burrow was found with mud piles breaking through the surface. Along the Allt Lathach, burrows were recorded close to the track. More burrows were observed along the Caochan Leiteir (tributary of the Allt Lathach).

Badger

7.6.44 Evidence of badger was found within the survey area at two locations.

7.6.45 The first sett was recorded in the spruce plantation within the buffer zone, just south of Clune Farm. This sett consisted of multiple entrances (c. 21), and a selection of fresh spoil heaps.

7.6.46 The second sett was found within the Site, in the birch *Betula sp*. woodland on the west bank of the Allt Phris. One entrance was recorded, and the spoil in front showed signs of plant growth, suggestive of an outlier sett that has not been used recently.

Red Squirrel

7.6.47 A desktop study and field survey resulted in no evidence of red squirrel. The woodland along the northern Site boundary is suitable habitat for red squirrels, as was the neighbouring plantation until it was recently felled. However, no evidence of red squirrel was recorded within the Site or the 250m buffer.

Herptiles

7.6.48 The Site contains dry and wet habitats, varied vegetation structure, open areas and ecotones, and is considered generally suitable for a variety of reptile and amphibian species. Adder Vipera berus, slow worm *Anguis fragilis*, common lizard *Lacerta vivipara*, common frog *Rana temporia*, common toad *Bufo bufo*, smooth newt *Triturus vulgaris* and palmate newt *T. helveticus* have the potential to be present.

Aquatic Fauna

7.6.49 The watercourses within the Original Site area were all tributaries of the River Findhorn.

7.6.50 It is clear from the fisheries survey that the majority of the watercourses within the Original Site offer low-good quality fish habitat, and the watercourses within the Additional Area contain good and high-quality fish habitat. High quality habitat was recorded along some stretches of the watercourses, however impassable obstacles likely prevent migration to most of the upper reaches of these burns. The Allt Lathach was found to be consistently of high-quality habitat with confirmed fish and otter signs. The Allt An T-Sionnaich, Allt Coire Challich and An Leth-Allt were found to be consistently of good and high quality habitat with confirmed fish.

7.6.51 As requested in the scoping response by Findhorn Nairn and Lossie Rivers Trust (dated 19/03/2024), a full programme of further surveys post-consent and pre-construction are proposed, and will include water chemistry (12 months sampling at 3 sites), fully quantitative electrofishing surveys (at 3 sites plus a control site) and macroinvertebrate sampling.

Evaluation of Faunal Receptors

7.6.52 An evaluation of non-avian faunal receptors which are subject to legal protection or which are otherwise notable (priority species on the SBL and/or LBAP) and which are present within the study area is provided in **Table 7.9**.

Table 7.9: Evaluation of Faunal Receptors

Species	Status	Reason for Evaluation	Evaluation
Bat species	Fully protected as a European Protected Species under The Conservation (Natural Habitats, &c.) Regulations 1994 (as amended). SBL priority species	Static detector surveys highlighted low / medium activity across the Proposed Development. Common and soprano pipistrelle are considered to be common species (Wray et al., 2010).	Local (common and soprano pipistrelle, *Myotis* sp.)
Water Vole	Fully protected under the Wildlife & Countryside Act 1981 (as amended) SBL priority species	Several burrows were noted, along with latrines, along the Allt Lathach and Clune Burn, as well as the Caochan Leiteir (tributary of the Allt Lathach).	Local
Badger	Fully protected under the Protection of Badgers Act 1992 (as amended by the Wildlife and Natural Environment (Scotland) Act 2011	One sett was recorded in spruce plantation within the buffer zone and a second was recorded within birch woodland.	Local
Otter	Fully protected as a European Protected Species under The Conservation (Natural Habitats, &c.) Regulations 1994 (as amended) SBL priority species	No signs of otter and/or resting places were discovered within the study area. Results from the Fish Habitat Survey identified old otter spraint at three locations on the Allt Lathach.	Local
Reptiles (potentially adder, slow worm, common lizard)	Protected under the Wildlife & Countryside Act 1981 (as amended) SBL species	Habitat suitability.	Less than local
Amphibians (potentially common frog, common toad, smooth newt, palmate newt)	Protected under the Wildlife & Countryside Act 1981 (as amended) SBL species (common toad only)	Habitat suitability.	Less than local
Aquatic Fauna	Fully protected as a European Protected Species under The Conservation (Natural Habitats, &c.) Regulations 1994 (as amended) SBL Priority Species	Habitat suitability.	Local

Future Baseline

7.6.53 If the current land management practices were to continue, the range and condition of habitats currently present is likely to be maintained.

Ecological Features Brought Forward for Assessment

7.6.54 The following applies to all non-avian ecological receptors brought forward to the detailed ecological impact assessment stage:

- their value is assessed as being important at a local or higher level (and / or they are subject to some form of legal protection); or
- they are habitats classified as highly or moderately dependent GWDTEs; or
- they are potentially vulnerable to significant effects from the Proposed Development.

7.6.55 Ecological features meeting those criteria are considered Important Ecological Features (IEFs) and the EIA concerns such features only. IEFs include the following:

Habitats:

- M6 Carex echinata – Sphagnum fallax / denticulatum mire;
- M19 Calluna vulgaris – Eriophorum vaginatum blanket mire;
- H10 Calluna vulgaris –Erica cinerea heath;
- U5 Nardus stricta-Galium saxatile grassland; and
- W4 Betula pubescens-Molinia caerulea woodland.

Species:

- Otter;
- Water vole;
- Common pipistrelle;
- Soprano pipistrelle;
- *Myotis* sp.;
- Aquatic fauna; and
- Badger.

Designated Sites:

- Kinveachy Forest SAC;
- Carn nan Tri-tighearnan SAC;
- Slochd SAC;
- River Spey SAC;
- Loch Vaa SSSI;
- Kinveachy Forest SSSI;
- Craigellachie SSSI;
- Carn nan Tri-tighearnan SSSI; and
- Craigellachie NNR.

7.7 Assessment of Potential Effects

Embedded Mitigation Measures

7.7.1 In line with current CIEEM guidelines, the impact assessment in this chapter is carried out in the presence of mitigation measures. The following mitigation measures and good practice measures will be applied to the Proposed Development during construction and operation to ensure that any effects on the IEFs, and Site ecology in general, are reduced.

7.7.2 With respect to Ecology, the following changes have been incorporated into the layout of the Proposed Development to avoid or minimise negative effects.

Design Mitigation

7.7.3 Turbines have been sited at least 50m from watercourses and a distance of at least 50m between turbine blade tip and the nearest woodland has been maintained as per current bat guidance (NatureScot, 2021).

7.7.4 A Peat Management Plan (PMP) has been produced (**Technical Appendix 9.2**) which describes measures taken to minimise the amount of peat excavated at the design stage. Measures include siting of turbines and Proposed Development Site infrastructure in areas of shallower peat wherever possible and selecting 0.5m as a threshold depth above which tracks would be floated.

7.7.5 The design sought to minimise disturbance of GWDTEs through taking account of NVC information, along with other Site constraints, in layout iterations.

7.7.6 The layout has been designed to avoid areas of deeper peat as much as possible - this has reduced the habitat loss of more sensitive, higher quality habitats such as blanket bog.

7.7.7 The access track layout has been designed in order to maximise the use and upgrade of existing tracks as far as reasonably practicable. Where the levels of peat exceed 0.5m in depth, the access tracks would be “floated” over the peat.

7.7.8 New watercourse and ditch crossings have been avoided in the design of the access track layout as far as possible.

7.7.9 A 100m micrositing tolerance for turbines and all other infrastructure would be applied to the Proposed Development enabling impacts on higher quality areas of habitat to be reduced or avoided.

Construction Phase

Good Practice Mitigation Measures During Construction

7.7.10 Full details of construction mitigation measures will be provided in a Construction Environmental Management Plan (CEMP) to be agreed with The Highland Council, in consultation with relevant stakeholders, post-consent but prior to development commencing. An outline CEMP is included as **Technical Appendix 3.1.**

7.7.11 The PMP (**Technical Appendix 9.2** and EIA Report **Chapter 9: Geology, Hydrology and Hydrogeology**) describes measures to be taken when excavating peat during construction such as appropriate storage and handling methods. The PMP also describes where peat will be re-used and restoration methods.

General

7.7.12 Construction works will require a Construction Method Statement (CMS) to be prepared post-determination and in advance of the commencement of works on the Proposed Development.

7.7.13 Works will be overseen by an Environmental / Ecological Clerk of Works (EnvCoW / ECoW) and their role and responsibilities will be detailed in the CEMP. In outline, this role will include ongoing monitoring of environmental / ecological constraints, review and audit of the appointed contractors environmental performance, delivery of toolbox talks, and supervision of construction works.

Protected Species

- a pre-construction survey focussing on otter, water vole and badger will be undertaken, covering suitable habitat within 250m from construction areas. This survey will be undertaken by a suitably qualified ecologist. The survey will aim to identify if otter, water vole and badger activity levels have continued as identified in the baseline surveys (**TA 7.3** refers). The results of the pre-construction surveys will inform whether the CEMP will include further mitigation with regard to protected species. NatureScot will be consulted throughout this process;
- a Site speed limit of 15mph will be in pace at all times to reduce the risk of collision and protected species mortality associated with construction vehicles;

- excavations will be covered at the end of each working day to minimise the risk of faunal species becoming injured or trapped. Alternatively, a wooden plank or similar means of egress will be placed inside to allow a means of escape for animals should they enter the excavation. Any temporarily exposed open pipe system would be capped in such a way as to prevent wildlife gaining access;
- works will be conducted during daylight hours where possible, avoiding the sensitive periods of dawn and dusk when wildlife is most active;
- to ensure compliance with the Wildlife and Countryside Act 1981, mitigation will be required to reduce the chances of inadvertently killing or injuring individual reptiles and amphibians during construction works. Given the large spatial scale of the works, fencing and translocation are not considered appropriate. Proposed mitigation therefore involves habitat management and identification of potential refugia and hibernacula if present. Where appropriate and safe to do so, all construction working areas with potentially suitable open habitats for reptiles and amphibians will initially be cut during the active season for reptiles and amphibians (March to October). Taking into account ornithological sensitivities (detailed in **Chapter 8: Ornithology**), October is likely to be the optimal month for this task. Mitigation works will be carried out to reduce the height of vegetation (e.g. use of a brush cutter or tractor mounted flail) and make it less attractive for reptile and amphibian habitation. The works will be carried out under the supervision of the EnvCoW / ECoW. Working areas would then be kept unsuitable for reptiles and amphibians through regular cutting until construction in that location commences; and
- in the event that a protected species is discovered on the Site, all work in that area would stop immediately and the EnvCoW / ECoW contacted. Increased buffer areas may be required in these locations. Details of the local police Wildlife Crime Officer, NatureScot Area Officer, and Scottish Society for the Prevention of Cruelty to Animals (SSPCA) relevant Officer would be held in the site emergency procedure documents.

Aquatic Fauna

- prior to the commencement of construction, baseline surveys will be undertaken. These will include water quality analyses, fish habitat suitability surveys, and electro-fishing surveys.

Habitats

- the loss of plant communities is an unavoidable consequence of the Proposed Development. However, incidental habitat loss will be avoided by minimising the footprint of construction activities. This will be achieved by operating machinery and storing materials within the footprint of permanent construction features wherever practicable. This will also be achieved through appropriate timing of the site staff and by ensuring that vehicles and their operators do not inadvertently stray onto adjacent habitat areas;
- it is also worth noting that existing access tracks, used currently by estate vehicles, will be retained as part of the Proposed Development and utilised where possible to access proposed turbine locations. This will ensure that both direct and indirect impacts on habitats will be minimised, as work to upgrade the existing tracks will be minimal compared to the impact of constructing new access tracks; and
- re-instatement of habitats – best practice techniques for vegetation and habitat re-instatement will be adopted and implemented on areas subject to disturbance, such as the temporary construction compound area, as soon as is practicable.

Pollution Prevention

- to prevent pollution of watercourses within, and beyond, the Site (with particulate matter or other pollutants such as fuel), best practice techniques will be employed as outlined in **Chapter 9: Geology, Hydrology and Hydrogeology**. Further details of pollution prevention control measures will be provided in the CEMP. The following measures will be included:

– emergency spill kits will be readily available on the Proposed Development to protect against accidental release, leakage or spillage of potentially contaminative substances and materials;
– construction plant to be checked regularly for leakages and will undergo maintenance on a regular basis;
– construction traffic to be limited to allocated areas of the Proposed Development;
– concrete and cement mixing and washing areas will be sited at appropriate distances from any surface watercourses to limit potential pollution of the water environment;
– Proposed Development Site drainage measures, including drainage ditches and silt traps, will be provided to collect and treat increased surface run off; and

- assessment of Earthworks Specification, and chemical analysis and assessment of imported fill materials.

Operational Phase

7.7.14 A Habitat Management and Biodiversity Enhancement Plan (HMBEP) will be established. This has been provided in outline (**Technical Appendix 7.5**) and will be agreed in full with THC and NatureScot before construction commences. It aims to improve the quantity and quality of peatland habitats, and to further the extent of native woodland through the promotion of natural regeneration, thus benefitting site ecology and ornithology, and provides for monitoring the effects of the Proposed Development.

7.7.15 During the operational phase the following mitigation will be in place:

- a Site speed limit of 15mph will be in place at all times to reduce the risk of faunal collisions with construction vehicles; and
- a distance of at least 50m between turbine blade tip and the nearest woodland will be maintained as per current bat guidance (NS, 2021)[35].

7.7.16 Good practice measures designed to protect the hydrological environment, as outlined in **Chapter 9: Geology, Hydrology and Hydrogeology** will also benefit the ecology of the Site.

Assessment of Construction Phase Impacts

7.7.17 During construction it is anticipated that the following impacts may arise:

- habitat loss or damage (permanent and temporary);
- possible change to groundwater flows affecting GWDTEs;
- inadvertent killing or injuring of fauna;
- disturbance to fauna due to vehicular traffic, operating plant and the presence of construction workers; and
- sedimentation or other pollution of watercourses from construction activities and vehicular traffic.

7.7.18 The potential impacts are addressed for each designated site, habitat or species brought forward to assessment in turn.

Habitats

7.7.19 **Chapter 3: Proposed Development Description** includes the proposed dimensions of all permanent and temporary features of the Proposed Development. Permanent features of the Proposed Development consist of turbines, turbine foundations, crane hardstanding, access tracks, and substation / control building. Temporary features of the Proposed Development consist of the construction compound and borrow pits.

7.7.20 The impacts are categorised as follows:

- direct habitat loss: this includes habitats present under the footprint of the Proposed Development, including access tracks, turbine bases, crane hardstanding, substation, construction compound and borrow pits.
- indirect habitat disturbance: this has only been calculated for peatland habitats which lie within 30m of the permanent infrastructure. The allowance of 30m is to account for degradation due to drainage and cable laying and is considered likely to produce a conservative estimate for habitat loss as drainage effects will depend on topology, so not all areas included are likely to be affected.

M6 Carex echinata - Sphagnum fallax / denticulatum mire

7.7.21 A total of 3.28 ha of M6 vegetation communities are present within the Vegetation Assessment Area (VAA). Of this, 0.005 ha (representing 0.15% cover) will be directly and indirectly impacted as a result of the Proposed Development. Ecological effects on M6 vegetation communities as a result of both direct and indirect impacts associated with construction activities are minimal with only 0.005 ha of M6 within the 30m buffer of the infrastructure. As such both direct and indirect impacts associated with construction activities are therefore considered to be **negligible**. Confidence in this prediction is **near certain**. As such, the entirety of the M6 vegetation community will be retained on the Site post development.

M19 Calluna vulgaris - Eriophorum vaginatum blanket mire

7.7.22 A total of 519.55 ha of M19 vegetation communities are present within the VAA. Of this, a total of 116.49ha will be directly (17.69 ha, representing 3.41% cover) and indirectly (98.81 ha, representing 19.02% cover) impacted as a result of the Proposed Development (i.e. is present within 30m of the footprint of the Proposed Development).

[35] NatureScot (2021) Bats and Onshore Wind Turbines: Survey, Assessment and Mitigation

7.7.23 Ecological effects on M19 vegetation communities, as a result of direct impacts associated with construction activities are considered to have a **significant negative effect at a regional level**. It is noted that M19 can, when the habitat is in good condition, be considered a habitat of national interest by NatureScot[36]. As mentioned in Section 7.6.8, no *Sphagnum* or sedge species (specifically *Rhynchospora fusca*) were recorded on Site which would suggest good quality blanket bog. There were no Sphagnum-rich ridges and as a consequence of years of human intervention and management as a grouse moor, as well as high levels of grazing, there are frequent drainage channels cut across the site which significantly disturbs the natural surface pattern of a large portion of the blanket bog on Site.

7.7.24 As such, given that the majority of the blanket bog on site is unlikely to be considered of possible national interest, it is considered that the direct impacts of the construction activities can be successfully mitigated through adherence to the strategies outlined in the PMP (**Technical Appendix 9.2**) and OHMBEP (**Technical Appendix 7.5**), specifically with regards to peatland restoration, particularly given the degraded nature of some areas of blanket bog on Site. Strict adherence to best practise construction methodology as outlined in the CEMP will also play a major role in the successful mitigation of impacts to the M19 blanket bog. Confidence in this prediction is **near certain.**

7.7.25 There are two turbine locations (Turbine 21 and Turbine 15) which are located just above 600m (approximately 610m for both) which technically makes it 'montane' blanket bog. However, the species composition at these locations indicate that the area is transitional between what is considered upland and montane. With reference to **Figure 7.4**, and **Technical Appendix 7.1**, these turbines are located in what is floristically still M19 habitat and not the more montane variant where species such as woolly fringe-moss *Racomitrium lanuginosum*, *Cladonia* sp., cloudberry *Rubus chamaemorus*, crowberry *Empetrum nigrum*, cowberry *Vaccinium vitis-idaea*, and stiff sedge *Carex bigelowii* are prevalent. The true montane habitat can be found higher up the slope to the south-west.

7.7.26 There is potential for indirect impacts and temporary loss associated with the construction zones around infrastructure. With the mitigation measures detailed above including the requirement for EnvCoW / ECoW and the requirement for pollution control during construction (to be taken forward within the CEMP) along with measures detailed within the PMP and as outlined in **Chapter 9: Geology, Hydrology and Hydrogeology**, as well as mitigation measures proposed in the OHMBEP, effects on M19 vegetation communities as a result of indirect impacts **will be minimised** with regards to loss of structure and function.

7.7.27 Ecological effects on M19 communities as a result of indirect impacts associated with construction activities are considered to be **significant negative effects at a local level.** These can be successfully mitigated through strict adherence to best practise construction methodology as outlined in the CEMP and mitigation and enhancement strategies outlined in the OHMBEP. Confidence in this prediction is **near certain**.

H10 Calluna vulgaris -Erica cinerea heath

7.7.28 A total of 402.57 ha of H10 vegetation communities are present within the VAA. Of this, a total of 106.69 ha will be directly (36.88 ha, representing 9.16% cover) and indirectly (69.81 ha, representing 17.34% cover) impacted as a result of the Proposed Development (i.e. is present within 30m of the footprint of the Proposed Development).

7.7.29 Whilst ecological effects on H10 vegetation communities, as a result of direct impacts associated with construction activities are considered to be non-significant, there is potential for **significant negative effects at a local level** in the 30m indirect buffer zone. These can be successfully mitigated through strict adherence to best practise construction methodology as outlined in the CEMP as well as implementation of the mitigation strategies outlined within the OHMBEP. Confidence in this prediction is **near certain**.

7.7.30 This vegetation community also occurs in mosaic with vegetation community U5 *Nardus stricta – Galium saxatile* grassland. There is a total of 59.59 ha of H10 / U5 present within the VAA. Of this, a total of 12.45 ha will be directly (3.08ha, representing 5.16% cover) and indirectly (9.37 ha, representing 15.72% cover) impacted as a result of the Proposed Development (i.e. is present within 30m of the footprint of the Proposed Development).

[36] NatureScot (2023). Advising on peatland, carbon-rich soils and priority peatland habitats in development management

7.7.31 Ecological effects on H10 / U5 mosaic, as a result of both direct and indirect impacts associated with construction activities are considered to be non-significant. Any impacts arising can be successfully mitigated through struct adherence to best practise construction methodology as outlined in the CEMP as well as implementation of the mitigation strategies outlined within the OHMBEP. Confidence in this prediction is **near certain**.

U5 Nardus stricta-Galium saxatile grassland

7.7.32 A total of 92.66 ha of U5 vegetation communities are present within the VAA. Of this, a total of 16.41 ha will be directly (3.10 ha, representing 3.34% cover) and indirectly (13.31 ha, representing 14.37% cover) impacted as a result of the Proposed Development (i.e. is present within 30m of the footprint of the Proposed Development).

7.7.33 Whilst ecological effects on U5 vegetation communities, as a result of direct impacts associated with construction activities are considered to be **significant negative effects at a local level**, the potential for impacts in the 30m indirect buffer zone is considered non-significant. These direct impacts can be successfully mitigated through strict adherence to best practise construction methodology as outlined in the CEMP. Confidence in this prediction is **near certain.**

7.7.34 This vegetation community also occurs in mosaic with vegetation community H10 *Calluna vulgaris - Erica cinerea* heath. There is a total of 59.59 ha of H10 / U5 present within the VAA. Of this, a total of 12.45 ha will be directly (3.08ha, representing 5.16% cover) and indirectly (9.37 ha, representing 15.72% cover) impacted as a result of the Proposed Development (i.e. is present within 30m of the footprint of the Proposed Development).

7.7.35 Ecological effects on H10 / U5 mosaic, as a result of both direct and indirect impacts associated with construction activities are considered to be non-significant. Any impacts arising can be successfully mitigated through struct adherence to best practise construction methodology as outlined in the CEMP as well as implementation of the mitigation strategies outlined within the OHMBEP. Confidence in this prediction is **near certain**.

W4 Betula pubescens-Molinia caerulea woodland

7.7.36 Zero ha of W4 is present within the VAA. As such, the result of both direct and indirect impacts associated with construction activities are therefore considered to be **negligible**. Confidence in this prediction is **near certain**. The entirety of the W4 vegetation community will be retained on the Site post development.

Fauna

Otter

7.7.37 With pre-construction surveys providing up to date information on constraints and ECoW supervision ensuring that construction takes place in an appropriate manner, direct impacts as a result of destruction of otter resting places or disturbance of otter using resting places is considered **unlikely**. Work will primarily take place during daylight hours and as such, direct disturbance of foraging otters, should they venture on to the Site, is also considered to be **unlikely**. There is potential for temporary disturbance of otter foraging during construction of culverts in the watercourses on the Site. This potential disturbance will be of short duration and undertaken under supervision of a suitably qualified ECoW with the abovementioned pre-construction surveys conducted. As such, direct impacts and associated effects are considered to be **non-significant / minor**. Confidence in this prediction is **probable**.

7.7.38 There is potential for indirect impacts on otter to result from pollution from construction activities effecting water quality. With the mitigation measures detailed above (sections 7.7.1 – 7.7.16 refers) including the requirement for ECoW and the requirement for pollution control during construction (to be taken forward within the CEMP), effects will be **non-significant**. Confidence in this prediction is **probable**.

Bat Species

7.7.39 Bat species recorded on the Proposed Development Site during baseline surveys (**Technical Appendix 7.2**) include Common Pipistrelle *Pipistrellus pipistrellus*, Soprano Pipistrelle *Pipistrellus pygmaeus* and *Myotis* sp., see **Technical Appendix 7.2** for a detailed account of survey methodology and results.

7.7.40 *Myotis* sp. are considered a 'low risk' species in terms of harm from wind turbines, and Common and Soprano Pipistrelle are considered to be at 'medium risk' of harm from wind turbines according to Natural England Technical Information Note TIN051[37]. In terms of threats to bat species at a population level from the impacts of wind turbines, all of the above species are considered to be at 'low risk' of harm.

[37] Mitchell-Jones & Carlin, Natural England. (2014) TIN051 Bats and Onshore Wind Turbines

7.7.41 The abundance of prey and therefore conditions for foraging bats differ across habitats, with open habitats being less suitable for foraging bats than edge habitats and watercourse corridors. In the context of the Proposed Development Site, the River Findhorn flows across the north-western edge of the Site. However, the Proposed Development itself will be constructed more than 500m away from the river and its immediate habitat. The Proposed Development Site slopes uphill from the River Findhorn, with several burns, such as Clune Burn and Wester Strathnoon Burn, draining into the River. The vast majority of good bat habitat is located along the River Findhorn to the north of the Site, and to the south east, towards the River Dulnain. Both of these areas are avoided by the Proposed Development. The burns which do run downslope from the Site, are generally suboptimal for bat foraging, given the lack of woodland, with most of the burns comprising moorland habitat or juniper scrub.

7.7.42 Predicted impacts to bat species as a result of the Proposed Development are confined to direct and indirect impacts due to artificial lighting on site. Analysis of bat passes per hour demonstrate that activity across the Site is low, reflecting its exposed, upland geographical location with little to no roosting and / or foraging habitat in the area around the proposed turbine array.

7.7.43 Taking the above into account and that any artificial lighting necessary for construction will be utilised according to best practice guidance and operation confined to daylight hours unless strictly necessary for health and safety reasons, it is predicted that there will **be no significant direct or indirect** effects on bat species present in the vicinity. Confidence in this prediction is **probable**.

Water Vole

7.7.44 Evidence of water vole was recorded along the Allt Lathach, Caochan Leiteir, and Clune Burn. There were 11 individual burrows noted across the Site. Seven of these burrows were recorded within the Vegetation Assessment Area itself (see **Technical Appendix 7.3 Protected Mammal**s for further details).

7.7.45 A pre-construction survey will be undertaken by a suitably qualified ecologist, providing up to date information on constraints regarding water voles. It is considered unlikely that any works will be undertaken within 10m of the water vole burrows. Particularly as the proposed access tracks are going to utilise the existing track infrastructure where possible. Where existing tracks are proposed to be widened or reinforced to the extent that they may encroach on the 10m buffer around the water vole burrows, a licence from NatureScot for the works may be required.

7.7.46 As per the otter section 7.7.34 above, there is potential for temporary disturbance of water vole foraging during construction of culverts in the watercourses on the Site. This potential disturbance will be of short duration and undertaken under supervision of a suitably qualified ECoW with the abovementioned pre-construction surveys conducted. As such, direct impacts and associated effects are considered to be **non-significant to minor**. Confidence in this prediction is **probable**.

7.7.47 There is potential for indirect impacts on water vole to result from pollution from construction activities. With the mitigation measures detailed above including the requirement for ECoW and the requirement for pollution control during construction (to be taken forward within the CEMP), effects will be **non-significant**. Confidence in this prediction is **probable**.

Badger

7.7.48 Two setts were recorded during surveys. With reference to sett 1, two sett entrances were found in spruce plantation within the buffer zone. The second sett was found within the Site, in birch *Betula* sp. woodland in the north of the Site. See **Technical Appendix 7.3 Protected Mammals** and **Technical Appendix 7.8: Confidential Protected Species Survey Report** for further details.

7.7.49 Works will be overseen by an ECoW and their role and responsibilities will be detailed in a Construction Environmental Management Plan (CEMP).

7.7.50 Considering that the two badger setts were recorded outwith the Proposed Development and outwith the vegetation assessment area respectively, it is predicted they will remain unimpacted by Proposed Development works. A pre-construction survey for badger will be undertaken, covering suitable habitat within 250m from Proposed Development infrastructure, by an ECoW. It is predicted that there will be **no direct nor indirect impacts** on badgers. Confidence in this prediction is **probable**.

Aquatic Fauna

7.7.51 The majority of the watercourses within the Original Site comprise low-good quality fish habitat, and the watercourses within the Additional Area contain good and high-quality fish habitat. High quality habitat was recorded along some stretches of the watercourses however impassable obstacles likely prevent migration to most of the upper reaches of these burns. The Allt Lathach was found to be consistently high quality habitat with confirmed fish and otter signs. The Allt An T-Sionnaich, Allt Coire Challich and An Leth-Allt were found to be consistently good and high quality habitat with confirmed fish.

7.7.52 Prior to, during and post-construction, a water quality monitoring plan will be put in place encompassing electrofishing, macro-invertebrate sampling and chemical monitoring of the main three watercourses.

Designated Sites

7.7.53 As detailed in **Table 7.2**, Nine designated sites have been taken forward for assessment:

- Slochd SAC;
- Kinveachy Forest SAC / SSSI;
- River Spey SAC;
- Carn nan Tri-tighearnan SAC / SSSI;
- Loch Vaa SSSI; and
- Craigellachie SSSI / NNR.

Slochd SAC

7.7.54 Slochd SAC is located approximately 0.17km to the north east of the Site at its closest point, and is designated for dry heath habitat. While relatively close to the Proposed Development, the SAC is separated from the Proposed Development by the intervening topography including the A9 trunk road which currently acts as an ecological barrier, breaking any habitat connectivity between the Proposed Development and the SAC. No construction is proposed within the SAC. There is no hydrological connectivity between the SAC and the Proposed Development Site. As a result, there is no pathway for likely significant effects (such as a pollution event affecting downstream SAC habitats) to occur. Therefore **no significant direct or indirect effects** are predicted on the qualifying feature of the SAC. Confidence in this prediction is near certain.

Kinveachy Forest SAC

7.7.55 Kinveachy Forest SAC is located approximately 0.65km to the south-east of the Site at its closest point and is designated for bog woodland and Caledonian forest habitat. The SAC is located downslope of the Proposed Development Site with recognised hydrological connectivity via the An Leth-allt and associated tributaries.

7.7.56 On the basis that appropriate pollution control measures detailed in the CEMP will be in place during construction, **no significant direct or indirect effects** (such as a pollution event affecting downstream SAC habitats) are predicted on the qualifying habitats of the SAC. Confidence in this prediction is near certain.

Kinveachy Forest SSSI

7.7.57 There is a partial overlap of the south-eastern edge of the Site boundary with Kinveachy Forest SSSI, though with no oversail by any proposed turbine.

7.7.58 The SSSI is designated for its breeding bird assemblage (potential impacts on this qualifying feature are addressed in **Chapter 8: Ornithology**) and native pinewood. However, it is noted that where the boundaries overlap the habitat does not currently support native pinewood.

7.7.59 The majority of the SSSI is located downslope of the Proposed Development with recognised hydrological connectivity via the An Leth-allt and associated tributaries.

7.7.60 On the basis that appropriate pollution control measures detailed in the CEMP will be in place during construction, **no significant direct or indirect effects** (such as a pollution event affecting downstream SSSI habitats) are predicted on the qualifying habitats of the SSSI. Confidence in this prediction is near certain.

River Spey SAC

7.7.61 River Spey SAC is located approximately 1.66km to the south-east of the Site at its closest point and is designated for its population of otter *Lutra lutra*, freshwater pearl mussel *Margaritifera margaritifera*, sea lamprey *Petromyzon marinus* and Atlantic salmon *Salmo salar*.

7.7.62 The SAC is located downslope of the Proposed Development Site with recognised hydrological connectivity via the An Leth-allt and associated tributaries.

7.7.63 Of the following qualifying features of the SAC, only historical evidence of otter was recorded within the Proposed Development Site.

7.7.64 As discussed in Sections 7.7.37 and 7.7.38, impacts and associated effects on otter are considered to be **non-significant**. Impacts and associated effects in relation to the River Spey SAC are therefore also considered to be **non-significant**. Confidence in this prediction is probable.

7.7.65 On the basis that appropriate pollution control measures detailed in the CEMP will be in place during construction, **no significant direct or indirect effects** (such as a pollution event affecting downstream SAC habitats) are predicted on the qualifying habitats of the SAC. Confidence in this prediction is near certain.

Carn nan Tri-tighearnan SAC / SSSI

7.7.66 Carn nan Tri-tighearnan SAC / SSSI is located approximately 7.15km to the north of the Site at its closest point and is designated for its blanket bog habitat (applicable to both the SAC and SSSI) and subalpine dry heath (SSSI only).

7.7.67 Given the separation distance between the Proposed Development and the SAC / SSSI, and the intervening topography, and on the basis that appropriate pollution control measures will be in place during construction, **no significant direct or indirect effects** (such as a pollution event affecting downstream SAC / SSSI habitats) are predicted on the qualifying habitats of the SAC / SSSI. Confidence in this prediction is near certain.

Loch Vaa SSSI

7.7.68 Loch Vaa SSSI is located approximated 8.9km to the south-east of the Site at its closest point, and is designated for its aquatic beetles including nationally scarce and notable species such as *Berosus luridus*, *Hydrochus brevis*, *Cyphon punctipennis* and *Agabus labiatus*, and the bird species goldeneye *Bucephala clangula* and Slavonian grebe *Podiceps auritus*.

7.7.69 Given the separation distance between the Proposed Development and the SSSI, and the intervening topography, and on the basis that appropriate pollution control measures will be in place during construction, **no significant direct or indirect effects** (such as a pollution event affecting downstream supporting habitats of the SSSI species) are predicted on the qualifying features of the SSSI. Confidence in this prediction is near certain.

Craigellachie SSSI / NNR

7.7.70 Craigellachie SSSI is located approximately 8.93km to the south-east of the Site at its closest point and is designated for its upland birch *Betula* sp. woodland, and moth assemblage.

7.7.71 Craigellachie NNR is located approximately 9.73km to the south-east of the Proposed Development at its closest point, and shares similar qualifying features with the SSSI.

7.7.72 Given the separation distance between the Proposed Development and the SSSI, and the intervening topography, and assuming that appropriate pollution control measures will be in place during construction, **no significant direct or indirect effects** (such as a pollution event affecting downstream SSSI habitats and supporting habitats of SSSI species) are predicted on the qualifying features of the SSSI / NNR. Confidence in this prediction is near certain.

Assessment of Operational Phase Impacts

Habitats

7.7.73 During the operational phase, only service vehicles will be present on the Site and will be confined to Site access tracks, with the potential for incidents and spillages affecting sensitive habitats being low (see **Chapter 9: Geology, Hydrology and Hydrogeology)**. Therefore, **no significant adverse effects** on mire, wet dwarf shrub heath and blanket bog habitats are predicted. Confidence in this prediction is **near certain**.

7.7.74 The OHMBEP, provided in outline in **Technical Appendix 7.5**, includes aims to improve the quality of peatland habitats through a programme of species diversification and a change of management practices to promote natural regeneration of native woodland with the overall aim being to improve biodiversity, and to monitor the effects of the Proposed Development through post-construction ornithological monitoring, resulting in a beneficial operational effect. Confidence in this prediction is **probable**.

Fauna

Otter

7.7.75 During the operation of the Proposed Development, only occasional service vehicles will be present on the Site and will be confined to Site access tracks with an applied speed limit. As a result, **no significant effects** upon otters are predicted. Confidence in this prediction is **near certain**.

Bat Species

7.7.76 Guidance issued by Natural England[38] provides information regarding the likely risk to individual bat species and populations from wind turbine strike / barotrauma. Common and soprano pipistrelle are considered to have a medium risk of collision at an individual level, and *Myotis* sp. are considered to have a low risk of collision. As described in Sections 7.6.40 and 7.6.41 a low level of bat activity was recorded within the Site and, as such, the risk of impacts from collisions and barotrauma is considered to be low. Therefore, **no significant effects** upon bats are predicted. Confidence in this prediction is **probable**.

Water Vole

7.7.77 During the operation of the Proposed Development, only occasional service vehicles will be present on the Site and will be confined to Site access tracks with an applied speed limit. As a result, **no significant effects** upon water vole are predicted. Confidence in this prediction is **near certain**.

Badger

7.7.78 During the operation of the Proposed Development, only occasional service vehicles will be present on the Site and will be confined to Site access tracks with an applied speed limit. As a result, **no significant effects** upon badger are predicted. Confidence in this prediction is **near certain**.

Aquatic Fauna

7.7.79 During the operation of the Proposed Development, only occasional service vehicles will be present on the Site and will be confined to Site access tracks with an applied speed limit. As a result, **no significant effects** upon otters are predicted. Confidence in this prediction is **near certain**.

Designated Sites

Slochd SAC

7.7.80 During the operation of the Proposed Development, only occasional service vehicles will be present on the Site and will be confined to Site access tracks. The potential for incidents and spillages affecting qualifying habitats is very low (see **Chapter 9: Geology, Hydrology and Hydrogeology**). In addition, there is no recognised hydrological pathway providing connectivity between the Proposed Development Site and the SAC. Therefore, **no significant effects** in relation to the qualifying habitats of the SAC are predicted. Confidence in this prediction is near certain.

Kinveachy Forest SAC / SSSI

7.7.81 During the operation of the Proposed Development, only occasional service vehicles will be present on the Site and will be confined to Site access tracks. The potential for incidents and spillages affecting qualifying habitats is very low (see **Chapter 9: Geology, Hydrology and Hydrogeology**). Therefore, **no significant effects** in relation to the qualifying features of the SAC / SSSI are predicted. Confidence in this prediction is near certain.

River Spey SAC

7.7.82 During the operation of the Proposed Development, only occasional service vehicles will be present on the Site and will be confined to Site access tracks. The potential for incidents and spillages affecting qualifying habitats is very low (see **Chapter 9: Geology, Hydrology and Hydrogeology**). Therefore, **no significant effects** in relation to the supporting habitats of the qualifying features of the SAC are predicted. Confidence in this prediction is near certain.

Carn nan Tri-tighearnan SAC / SSSI

7.7.83 During the operation of the Proposed Development, only occasional service vehicles will be present on the Site and will be confined to Site access tracks. The potential for incidents and spillages affecting qualifying habitats is very low (see **Chapter 9: Geology, Hydrology and Hydrogeology**), especially given the separation distance between the Proposed Development and the SAC / SSSI. Therefore, **no significant effects** in relation to the qualifying habitats of the SAC / SSSI are predicted. Confidence in this prediction is near certain.

[38] Mitchell-Jones & Carlin, Natural England. (2014) TIN051 Bats and Onshore Wind Turbines

Loch Vaa SSSI

7.7.84 During the operation of the Proposed Development, only occasional service vehicles will be present on the Site and will be confined to Site access tracks. The potential for incidents and spillages affecting qualifying habitats is very low (see **Chapter 9: Geology, Hydrology and Hydrogeology**), especially given the separation distance between the Proposed Development and the SSSI. Therefore, **no significant effects** in relation to the supporting habitats of the qualifying features of the SSSI are predicted. Confidence in this prediction is near certain.

Craigellachie SSSI / NNR

7.7.85 During the operation of the Proposed Development, only occasional service vehicles will be present on the Site and will be confined to Site access tracks. The potential for incidents and spillages affecting qualifying habitats is very low (see **Chapter 9: Geology, Hydrology and Hydrogeology**), especially given the separation distance between the Proposed Development and the SSSI / NNR. Therefore, **no significant effects** in relation to the qualifying features of the SSSI / NNR are predicted. Confidence in this prediction is near certain.

Assessment of Decommissioning Phase Impacts

7.7.86 It is difficult to predict impacts which would arise from decommissioning and the confidence in all predictions is therefore considered to be uncertain due to the length of the operational period (40 years). It is assumed, however, that impacts are likely to be similar in nature to the construction phase but of lower magnitude, because infrastructure will be in place, allowing access to the Site.

Habitats

7.7.87 Vegetation clearance will be limited and the land associated with the following components of the Proposed Development which will be reinstated: turbine bases, some access tracks and substation.

7.7.88 Updated surveys will be required before the decommissioning phase begins, and appropriate mitigation measures will consequently be put in place to reduce likely effects to an acceptable level. In addition, appropriate screening and biosecurity measures will be established for materials used in habitat re-instatement if not sourced from the Site itself. Therefore, **no significant effects**, either beneficial or adverse, are predicted for any important habitats as a result of decommissioning.

Fauna

7.7.89 During the decommissioning phase, there is the potential for impacts to protected or otherwise notable faunal species through disturbance and potentially direct mortality and destruction of resting places. The presence and distribution of protected faunal species at the time of decommissioning, potentially including species not currently present on the Site or not currently subject to legal protection, cannot be accurately predicted at this stage. As a result, updated surveys and appropriate mitigation will be identified prior to decommissioning.

7.7.90 On the basis of impact predictions made in relation to disturbance during the construction stage, any effects on protected or otherwise notable faunal species are likely to be **not significant** during the decommissioning phase.

Designated Sites

7.7.91 As described in sections 7.10.2 through 7.10.5, and with the qualifications stated therein, no significant effects on habitats, non-avian fauna, and supporting habitats of qualifying non-avian fauna species are predicted. As such, **no significant effects** on the Slochd SAC, Kinveachy Forest SAC / SSSI, River Spey SAC, Carn nan Tri-tighearnan SAC / SSSI, Loch Vaa SSSI, and Craigellachie SSSI / NNR are predicted.

7.8 Mitigation, Compensation and Enhancement

7.8.1 Embedded mitigation and good practice measures are detailed in Section 7.7, as well as in **Chapter 9: Geology, Hydrology and Hydrogeology**. Further mitigation measures are outlined below to mitigate against potentially significant effects upon important ecological receptors during construction.

7.8.2 General mitigation set out in Section 7.7 will help mitigate the risk of direct mortality to protected species by mitigating threats such as vehicle collisions, entrapment, and contact with harmful chemicals.

7.8.3 To further mitigate the effects of the construction phase on protected species, pre-construction surveys are proposed. These measures will help to identify important habitat and resting sites of these protected species and will ensure that the most robust measures are in place to avoid any impacts on these species.

Construction

Protected Species

7.8.4 Due to the time that will have elapsed since the last surveys and the possibility that protected species activity could have changed in the intervening period, pre-construction surveys focussing on otter, water vole and badger will be undertaken, covering suitable habitat within 250m from construction areas. This survey will be undertaken by a suitably qualified ecologist. The survey will aim to identify if otter, water vole and badger activity levels have continued as identified in the baseline surveys. The results of the pre-construction surveys will inform whether the CEMP will include further mitigation with regard to protected species. NatureScot will be consulted throughout this process.

Aquatic Fauna

7.8.5 Prior to the commencement of construction, baseline surveys will be undertaken. These will include water quality analyses, invertebrate and fish monitoring and fish habitat suitability surveys. Depending on the results of the these, fish surveys may also be required. The Findhorn, Nairn and Lossie Fisheries Trust will be consulted to assist with the pre-construction surveys.

Operation

7.8.6 A Habitat Management and Biodiversity Enhancement Plan (HMBEP) will be produced and agreed with NatureScot and The Highland Council post consent. This would detail measures to compensate for the significant residual effects of habitat loss, where possible, associated with the Proposed Development and provide significant biodiversity enhancement, in accordance with National Planning Framework 4 (NPF4). An Outline HMBEP is provided in **Technical Appendix 7.5.**

7.8.7 The outline HMBEP identifies areas within the Site where peatland restoration works could be undertaken which covers a total area of 390ha, as well as areas of native woodland creation. Other key proposals of the OHMBEP apart from peatland restoration, include for ground works and targeted plug planting of suitable native species within the blanket bog habitat; woodland creation, mainly through natural regeneration with some targeted spot planting to enhance the natural process, where conditions and existing habitats allow; control of herbivores including deer and mountain hare; predator control and post construction monitoring surveys to monitor the effect of the development on both habitats and species.

7.8.8 Prior to any grazing management protocols being implemented, specific surveys to establish deer and mountain hare numbers will be undertaken by suitably qualified ecologists. The results of these surveys will provide an ecological baseline upon which the subsequent management regime can be informed by and designed.

7.9 Cumulative Effects

7.9.1 The primary reason to undertake an assessment of cumulative impacts is to identify situations where impacts on important ecological features are judged to be unacceptable when combined with nearby existing or proposed wind developments.

7.9.2 Two wind farm developments (Glen Kyllachy and Farr) are located within 10km of the Proposed Development[39], and each of these was reviewed. Distances over-estimate proximity as they relate to distances between the Proposed Development boundary and the boundary of the listed site but not necessarily to infrastructure locations within either development.

7.9.3 CIEEM EcIA guidelines[40] require that consideration is given to other development projects when predicting the baseline. The reason for this is that other development projects, which are consented, recently constructed or which are considered to have an ongoing operational effect, may influence the baseline and this should be taken into account.

7.9.4 Cumulative impacts are only considered likely in relation to watercourses or fauna associated with watercourses. IEFs identified as part of this assessment which fit these criteria are otter, common pipistrelle bats, soprano pipistrelle, and *Myotis* sp.

7.9.5 **Glen Kyllachy** is located 4.7km north-west of the Site. It comprises mostly of modified blanket bog, dry heath and montane heath. The presence of otters was noted on site during initial surveys. Significant impacts to protected species are considered unlikely. Impacts to habitats are predicted only in a local context.

[39] The Highland Council (2024). Wind Turbine Map. Available at: https://www.highland.gov.uk/info/198/planning_-_long_term_and_area_policies/152/renewable_energy/4

[40] CIEEM (2022) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine version 1.2. Chartered Institute of Ecology and Environmental Management, Winchester.

7.9.6 **Farr windfarm** is located 6.4km north-west of the Site, very close to Glen Kyllachy. The site was dominated by blanket bog with small areas of acidic flush, dry heath and wet heath. Evidence of otter and water vole were recorded. It was concluded that the only residual effects on ecological receptors would be of minor significance.

7.9.7 As discussed in Sections 7.7.37 – 7.7.43, 7.7.75 – 7.7.76, and 7.7.89 – 7.7.90, the Proposed Development will not introduce any significant effects on common or soprano pipistrelle, *Myotis* sp. or otter during construction, operation or decommissioning. Therefore, no significant cumulative effects on otter or common and soprano pipistrelle bats and *Myotis* sp. from the Proposed Development and the other development projects are predicted.

7.10 Residual Effects

7.10.1 Taking into account the successful implementation of the mitigation measures contained within the CEMP, OHMBEP and PMP, there will be no significant residual effects on IEFs in terms of the EIA Regulations (Table 7-10 refers).

7.10.2 It is noted that a full suite of aquatic faunal surveys are yet to be undertaken, specifically electrofishing. These are proposed to be completed post-consent, pre-construction. Fish habitat suitability surveys have been completed on site.

7.10.3 The potential effects of the Proposed Development on ecological receptors found within and in close vicinity to the Site have been assessed. Taking into account the successful implementation of the mitigation measures contained within the CEMP and OHMBEP, there will be **no significant residual effects** in terms of the EIA Regulations (**Table 7.10** refers).

Table 7-10: Summary of Residual Effects

Important Ecological Feature (IEF)	Evaluation	Construction Phase	Operation Phase	Decommissioning Phase
Slochd SAC	International	Negligible - not significant	Negligible - not significant	Negligible - not significant
Kinveachy Forest SAC	International	Negligible - not significant	Negligible - not significant	Negligible - not significant
River Spey SAC	International	Negligible - not significant	Negligible - not significant	Negligible - not significant
Carn nan Tri-tighearnan SAC	International	Negligible - not significant	Negligible - not significant	Negligible - not significant
Kinveachy Forest SSSI	National	Negligible - not significant	Negligible - not significant	Negligible - not significant
Carn nan Tri-tighearnan SSSI	National	Negligible - not significant	Negligible - not significant	Negligible - not significant
Loch Vaa SSSI	National	Negligible - not significant	Negligible - not significant	Negligible - not significant
Craigellachie SSSI	National	Negligible - not significant	Negligible - not significant	Negligible - not significant
Craigellachie NNR	National	Negligible - not significant	Negligible - not significant	Negligible - not significant
M19 Calluna vulgaris - Eriophoprum vaginatum blanket mire	Regional	Moderate	Negligible - not significant	Negligible - not significant
M6 Carex echinata - Sphagnum fallax / denticulatum mire	Local	Negligible - not significant	Negligible - not significant	Negligible - not significant
H10 Calluna vulgaris - Erica cinerea dry heath	Local	Negligible - not significant	Negligible - not significant	Negligible - not significant
U5 Nardus stricta - Galium saxatile grassland	Local	Negligible - not significant	Negligible - not significant	Negligible - not significant
W4 Betula pubescens - Molinia caerulea woodland	Local	Negligible - not significant	Negligible - not significant	Negligible - not significant
Otter	Local	Negligible - not significant	Negligible - not significant	Negligible - not significant
Common pipistrelle	Local	Negligible - not significant	Negligible - not significant	Negligible - not significant
Soprano pipistrelle	Local	Negligible - not significant	Negligible - not significant	Negligible - not significant
Myotis sp.	Local	Negligible - not significant	Negligible - not significant	Negligible - not significant
Water vole	Local	Negligible - not significant	Negligible - not significant	Negligible - not significant
Badger	Local	Negligible - not significant	Negligible - not significant	Negligible - not significant
Aquatic fauna	Local	Negligible - not significant	Negligible - not significant	Negligible - not significant

7.11 Summary

7.11.1 The ecological baseline conditions have been described and evaluated in order to identify IEFs associated with the Proposed Development. Proposed mitigation measures have been identified, including those embedded in design, and with reference to the Proposed Development CEMP, OHMBEP and PMP where applicable.

7.11.2 Potential impacts upon IEFs as a result of the Proposed Development have been identified and the effect of these impacts on IEFs has been assessed in line with current guidance (CIEEM, 2018). No significant residual effects on IEFs were identified apart from the M19 habitat, where it is considered moderate residual effects will arise from direct and indirect impacts during the construction phase. However, with the implementation of the abovementioned mitigation and compensation, as outlined in the OHMBEP and PMP, it is considered that ultimately, no significant effects will arise post construction.