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Introduction

5.1 This Chapter describes and evaluates the current nature conservation interest of the site and surrounding area. It goes on to assess the potential effects of the Ben Sca Redesign Wind Farm (referred to hereafter as the 'Proposed Development') on important habitats and species and, where necessary, to describe the proposed mitigation and compensation measures. It also provides details of proposed biodiversity enhancements. This Chapter considers habitats and non-avian animal species. Potential effects on birds are considered separately in **Chapter 4: Ornithology**. Together Chapters 4 and 5 provide an assessment of the potential effects of the Proposed Development on biodiversity.

5.2 As detailed in **Chapter 1: Introduction and Project Description**, the Proposed Development would replace the consented Ben Sca Wind Farm and Ben Sca Wind Farm Extension, referred to hereafter as the 'consented development'.

5.3 This Chapter is supported by a number of Technical Appendices, as listed below:

- Technical Appendix 5.1: Habitats and Vegetation Survey Report;
- Technical Appendix 5.2: Protected Mammals Report;
- Technical Appendix 5.3: Outline Habitat Management Plan (HMP); and
- Technical Appendix 5.4: Forestry Report.

Scope and Consultation

Consultation and Scoping Responses

5.4 A scoping report (SLR, 2023a) was submitted to The Highland Council (THC) in September 2023. Scoping responses containing comments relating to non-avian ecology and nature conservation were obtained from the following organisations:

- The Highland Council (THC) (17 November 2023);
- Scottish Environment Protection Agency (SEPA) (30 October 2023); and
- NatureScot (08 October 2023).

5.5 Further consultation with NatureScot was undertaken via email (29 November 2023 and 14 February 2024) and a telephone call (23 January 2024), during which the proposed scope of the assessment and proposed restoration approach was outlined and agreed with Alex Turner of NatureScot.

5.6 A summary of the key points from relevant scoping responses and consultations, and details of how comments have been addressed in the Environmental Impact Assessment (EIA) report are provided in **Table 5-1**.

Table 5-1: Consultation Responses

Consultee	Summary of Key Issues	Where Addressed in Chapter
THC	THC stated that the redesign EIA Report should provide a baseline survey of the bird and animal interest on site.	Results of protected mammal surveys are provided in paragraphs 5.26 to 5.27 and **Technical Appendix 5.2**. Full details of non-avian baseline of the site are provided in paragraphs 5.66 to 5.86.

Consultee	Summary of Key Issues	Where Addressed in Chapter
		Birds are addressed separately in **Chapter 4**.
	THC stated that the EIA Report should provide an account of the habitats present on the Proposed Development site, identify rare and protected habitats or those contained within local Biodiversity Action Plans (BAP).	Habitat descriptions, along with their conservation and legal status are provided in **Table 5-4** and **Technical Appendix 5.1**.
	THC stated that habitat enhancement and mitigation measures should be detailed particularly in respect to blanket bog. Specifically in the context of both conservation of biodiversity and risk of peat slide. Details of planned habitat enhancements should be provided, and the EIA Report should address the potential impact of the Proposed Development on the delivery of elements of relevant BAPs.	Details of proposed habitat compensation (peatland restoration) and enhancement are provided in paragraphs 5.142 to 5.149 and **Technical Appendix 5.3: Outline HMP**. Mitigation measures are detailed in paragraphs 5.95 to 5.96. A peat slide risk assessment is provided in **Technical Appendix 6.2: Peat Landslide and Hazard Risk Assessment**.
	THC stated that a specific Phase 2 peat probing assessment should be undertaken to inform design and mitigation aspects of the Proposed Development in order to overcome significant effects on peatland and Carbon Rich Soils, Deep Peat and Priority Peatland Habitat.	The Peat Management Plan (PMP) (**Technical Appendix 6.1**) contains results of the peat probing assessment.
	THC advised that they expect an up to date National Vegetation Classification (NVC) survey including information on habitat condition and a commitment to '*undertake peatland restoration of an area of increased size to that of the application site'*. They also stated that the EIA Report should provide details of all potential impacts to bog habitats present and advise that habitat compensation and enhancement must be in line with NPF4 and NatureScot Guidance.	The results of the update NVC survey are provided in paragraphs 5.59 to 5.635 and **Table 5-4.** Full details can be found in **Technical Appendix 5.1**. The assessment of effects on bog habitats is provided in paragraphs 5.112 to 5.116. Details of proposed peatland restoration and enhancement, in line with NPF4 Policy 3b) are provided in paragraphs 5.142 to 5.149 and **Technical Appendix 5.3**.
	THC requested the EIA Report '*address the likely impacts on the conservation interest of all the designated sites in the vicinity of the Proposed Development'*, and include proposals for mitigation required to avoid these impacts/ reduce them to a level where they are not significant.	Designated sites within 10km of the Proposed Development are shown on **Figures 1.3** and **5.1**. Impacts on designated sites have been scoped out as detailed in paragraph 5.8.
	THC advised that if wild deer are present or utilise the site, then an assessment of potential impact on deer will be required.	An assessment of the effects on deer is provided in paragraphs 5.127 to 5.131 following NatureScot (SNH, 2016) guidance.

Consultee	Summary of Key Issues	Where Addressed in Chapter
	THC stated that the EIA Report needs to address the aquatic interests within local watercourses, including downstream interests, that may be affected by the development. They also stated that the EIA Report should evidence consultation input from local fisheries boards where relevant.	An assessment of the potential effects on fish has been scoped out of the EIA as detailed in paragraphs 5.10 and 5.68. An assessment of potential cumulative effects on aquatic receptors (including otters) is provided in paragraph 0.
	THC advised that the EIA Report should include an assessment of the effects on Groundwater Dependent Terrestrial Ecosystems (GWDTE) and the NVC survey should include a map demonstrating the locations of all GWDTE and existing groundwater abstractions, to demonstrate that they are outwith a 100m radius of all excavations shallower than 1m and outwith 250m of all excavations deeper than 1m and proposed groundwater abstractions.	An assessment of potential GWDTEs and groundwater abstractions, along with details of peat depth and engineering activities affecting the water environment are detailed in Chapter 6: Hydrology, Hydrogeology and Soils. **Figure 6.8** shows the location of all areas of potential GWDTE. **Figure 6.8** which accompanies **Chapter 6** shows all areas of potential GWDTE.
SEPA	SEPA requested plans showing all permanent and temporary infrastructure, with extent of excavation required, clearly demonstrating how the mitigation hierarchy outlined in NPF4 has been applied. Plans should be overlaid on i) peat depth survey ii) peatland condition mapping and iii) NVC habitat mapping.	Chapter 1 outlines the layout of infrastructure and design principles and rationale, in line with the mitigation hierarchy outlined in NPF4. The location of all permanent and temporary infrastructure associated with the Proposed Development is shown on **Figure 1.6**. **Figure 6.1.1** within Technical Appendix 6.1 shows the location of infrastructure in relation to peat depth, **Figure 5.1.2** which accompanies Technical Appendix 5.1 provides information in relation to peatland condition and **Figure 5.1.4** within **Technical Appendix 5.1** in relation to NVC communities.
	SEPA requested an outline Peat Management Plan (PMP) and outline HMP be submitted.	An Outline PMP is provided in **Technical Appendix 6.1**. An Outline HMP is provided in **Technical Appendix 5.3**.
	SEPA advised that the submission should demonstrate that the Proposed Development avoids peatland in near natural condition, minimises the total area and volume of peat disturbance and demonstrates how the infrastructure layout design has targeted areas where carbon rich soils are absent or the shallowest peat reasonably practicable, and that peat >1 m in depth has been avoided.	See **Chapter 6** and **Chapter 1** in respect of the layout design and avoidance of peat. **Figures 6.1.1 – 6.1.3** show how the alignment has avoided the areas of deepest peat.

Consultee	Summary of Key Issues	Where Addressed in Chapter
	SEPA stated that the submission should include adequate peat probing information to inform the site layout and as a minimum, follow the requirements of 'Peatland Survey – Guidance on Developments on Peatland' (2017).	Results of peat probing surveys are detailed in the Outline PMP (**Technical Appendix 6.1**) and shown on **Figures 6.1.1 – 6.1.3**.
	SEPA stated that the development proposal should include plans to restore/enhance the site into a functioning peatland system and the outline PMP should include information on peatland condition, demonstrate avoidance and minimisation of peat disturbance and include extraction volumes of peat, proposals for storage and handling, and reuse volumes in different elements of site reinstatement and restoration.	The Outline PMP is contained in **Technical Appendix 6.1**, which details areas avoided, handling and storage of peat and proposed peat extraction and re-use volumes associated with different elements of the Proposed Development. Details of peatland restoration are provided in paragraphs 5.142 to 5.149 and the Outline HMP (**Technical Appendix 5.3**).
	SEPA advised that the outline HMP should include proposals for the reuse of disturbed peat in habitat restoration, details of restoration to compensate for areas of peatland impacted both directly and indirectly, outline proposals for peatland enhancement in other areas of the site, and proposals for the monitoring of the measures implemented.	The Outline HMP (Technical Appendix 5.3) contains details of proposed peatland restoration and enhancement, and details of proposed monitoring of measures implemented. The materials calculator contained in **Annex 6.1A** of **Technical Appendix 6.1** details the small amount of reuse of peat.
	SEPA requested a location plan of the proposed peatland re-use restoration areas showing the size of individual areas and total area to be restored along with photos and aerial imagery to demonstrate that the areas identified are appropriate for peat re-use and can support carbon sequestration.	**Technical Appendices 5.3** and **6.1** confirms that a small amount of peat can be reused within the peatland restoration area. The final detail of exactly how this would be implemented on site would be developed during detailed design with the Principal Contractor and EnvCoW.
	SEPA requested that a NVC survey map showing all areas of GWDTE which demonstrates that they are outwith 100 m radius of all excavations shallower than 1 m and outwith 250 m of all excavations deeper than 1 m and proposed groundwater abstractions.	**Figure 6.8** which accompanies **Chapter 6** shows all areas of potential GWDTE.
NatureScot	Naturescot confirmed proposed survey scope (as set out in email dated 29 November 2023) was acceptable and that they are happy to scope out further surveys for bats and fish, rather referring to previous survey results and assessments conducted for the consented development.	Details of effects scoped out is found in paragraphs 5.7 to 5.10.
	Naturescot advised that the 1:10 ratio for compensation of peat as stated in guidance (REF) is not black and white	Details of peatland restoration are provided in paragraphs 5.142 to 5.149

Consultee	Summary of Key Issues	Where Addressed in Chapter
	where a site has already been consented. It was also stated that what had been proposed for the consented development was not likely to be acceptable, but increasing the level of restoration towards 1:10 (not necessarily meeting it) could be acceptable.	and the Outline HMP (**Technical Appendix 5.3**).

Effects Scoped Out

5.7 The assessment concentrates on the effects of construction, operation and decommissioning of the Proposed Development upon important ecological receptors Ecological receptors have been scoped out of further assessment where there is no potential for significant effects upon the ecological receptor, or where the ecological receptors is not considered important at a local level or above (see **Table 5-4** and **Table 5-5**), is not a GWDTE or is not subject to legal protection. This approach is in accordance with Chartered Institute of Ecology and Environmental Management (CIEEM) Guidelines for Ecological Impact Assessment (CIEEM, 2022), which state: "*It is not necessary to carry out detailed assessment of features that are sufficiently widespread, unthreatened and resilient to project impacts and will remain viable and sustainable*".

5.8 Impacts upon designated sites for nature conservation have been scoped out, due to the fact that the only designated sites within 10km of the application site are designated either for their geological interest or for marine receptors. There are therefore unlikely to be any impacts on receptors for which these sites are designated. Specifically, An Cleireach Site of Special Scientific Interest (SSSI) is located 2.3km south of the site but is designated for its geological interest (tertiary ingneous intrusion) and therefore is unlikely to be impacted. The Inner Hebrides and the Minches Special Areas of Conservation (SAC) is located 3.7km north of the site at its closest point and is designated for its harbour porpoise (*Phocoena Phocoena*) population, which would not be affected by the Proposed Development. Ascrib, Islay and Dunvegan SAC is situated 7.2km west of the site at its closest point and is designated for harbour seal (*Phora vitulina*), for which similarly no pathways for potential effects have been identified. Impacts upon areas classified on the Ancient Woodland Inventory[1] have also been scoped out, due to the fact that only one area of ancient woodland was identified within a 2km radius of the site, which is approximately 1.95km northeast of the site within Edinbane. There is no direct connectivity that could provide a pathway for effects upon ancient woodland.

5.9 Habitats which are considered to be of relatively low ecological value (see **Table 5-3**), are not potential GWDTE, or would not be impacted upon by the Proposed Development have been scoped out of detailed assessment. These habitats are as follows:

- coniferous plantation woodland – assessed as having less than local value.

5.10 Based on the desk study produced for the consented development (Atmos, 2017, SLR, 2020a and SLR, 2021), and consideration of the extent and nature of the Proposed Development, effects on the following species or species groups have been scoped out of the assessment. For more information on each species/group, please refer to **Table 5-3**.

[1] https://magic.defra.gov.uk/

- invertebrates: NatureScot (2024) general pre-application/ scoping advice to developers for onshore wind farms states that: ”there are some species that, with standard mitigation, are unlikely to experience a significant environmental effect during construction/ operation of onshore wind farms (e.g. moths and other invertebrates, reptiles, amphibians, etc.). Such species will not require surveys to inform the EIA. Instead, we advise that you should be able to apply mitigation during construction to avoid committing an offence”. Due to the area of land take being small in comparison with the availability of similar habitats in the wider area, significant negative effects on invertebrate species are not considered likely, therefore invertebrates have been scoped out of further assessment;
- roosting bats: there is no potential bat roosting habitat within the site and at least 200m plus rotor radius of proposed turbine locations (SLR, 2020a) therefore in line with current guidance (NatureScot, 2021) the assessment of effects on roosting bats has been scoped out of this assessment;
- operational impacts on bats: bat activity surveys were conducted in 2019 to inform the consented Ben Sca Wind Farm EIA Report (SLR, 2020a). The EIA report found no significant impacts to bats during operation and further bat activity surveys were therefore scoped out of the application for the consented Ben Sca Wind Farm Extension (SLR, 2021) in consultation with NatureScot. On that basis operational effects on bats have been scoped out of this assessment;
- red squirrel (*Scuirus vulgaris*), wildcat (*Felis sylvestris*), and water vole (*Arvicola amphibius*) were scoped out of the assessment due to the site being outside their known range (Atmos, 2017). There are no historical records of red squirrel, wildcat and water vole on Skye, and it is considered that these species are likely to be absent from the island and therefore very unlikely to be impacted upon by the Proposed Development;
- brown hare (*Lepus europaeus*) records were returned in the data search for the consented development (Atmos, 2017), however due to the mobility of this species and the limited habitat loss which would occur as a result of the Proposed Development it is considered unlikely to be significantly affected and detailed assessment of effects on this species has been scoped out;
- hedgehog (*Erinaceus europaeus*) records were returned in the data search for the consented development (Atmos, 2017), however due to the suboptimal habitat for this species on site, and the occurrence of more suitable habitat within the surrounding landscape, it is considered unlikely to be significantly affected and detailed assessment of effects on this species has been scoped out; and
- fish: previous fish habitat surveys were conducted in May 2019 and July 2021 to inform the EIAs for the consented development (SLR, 2020a, SLR, 2021). The majority of the watercourses on site were found to have low suitability for fish and no significant effects upon habitat of fish species of conservation concern, including salmonid habitats, was anticipated for the consented developments. The Proposed Development includes one existing watercourse crossing (which will require clearance works only) Given that all mitigation committed to for the consented development are considered to be inherent in the Proposed Development it is concluded that there would be no change to the conclusion of the previous assessment, and therefore assessment of effects on fish have been scoped out as agreed with NatureScot.

Approach and Methods

5.11 This Chapter takes an appropriate and topic specific approach to assessment of the Proposed Development within the parameters identified in **Table 1-5 in Chapter 1.** This Chapter provides a worst case assessment for non-avian ecology and presents enough information for consultees and the decision makers to comment on and determine the application within the parameters of the Proposed Development.

5.12 The assessment contained within this chapter assesses potential effects of the Proposed Development against the future baseline of the site in the absence of the Proposed Development. However, results of the assessment conducted for the consented development have also been included where relevant, to allow direct comparison.

Study Area

5.13 The study area used for the EIA varies according to the ecological receptor in question, based on relevant good practice guidance. The study area used for habitats and vegetation is shown on **Figure 5.1.2** and **Figure 5.1.3** within **Technical Appendix 5.1**.

5.14 Data collected during the habitat survey in 2023 was compared against that collected for the consented development and found to be broadly comparable, although the data collected for the consented development provided more detail of smaller habitat pockets. The habitat data for the consented development was therefore utilised in the assessment within this Chapter.

5.15 The study area utilised for the consented development covered all areas within the site and includes all areas within a 250m buffer of the Proposed Development (SLR, 2020, SLR 2021). SEPA guidelines (2017) stipulate survey of a 250m buffer from excavations deeper than 1m, and a 100m buffer for excavations less than 1m. The area surveyed therefore complies with SEPA guidelines.

5.16 The study area for protected mammals covered all suitable habitat within the site, including watercourses, within 250m of proposed infrastructure.

Information and Data Sources

5.17 An ecological desk study was produced for the consented Ben Sca Wind Farm (Atmos, 2017), after which updated desk study information was presented within the consented Ben Sca Wind Farm EIA Report (SLR, 2020a) and the consented Ben Sca Wind Farm Extension EIA Report (SLR, 2021). Previous desk-based information was gathered as follows:

- Highland Biological Recording Group (HBRG) was commissioned in 2019 to provide data relating to non-statutory Sites and records of protected and notable species within the Ben Sca site plus a 5km radius of the site. Non-statutory Site information provided included Scottish Wildlife Trust (SWT) Reserves, RSPB Reserves, National Trust for Scotland (NTS) Reserves, THC Local Nature Reserves (LNRs) and THC Sites of Local Nature Conservation Interest (SLNCIs);
- the NBN Atlas was searched for bat records within 10km of the site.
- the relevant Geographic Information System (GIS) databases were searched for woodland recorded on the Ancient Woodland Inventory (AWI) within a 2km radius of the site;

- NatureScot's Carbon and Peatland 2016 Map (NatureScot, 2016) was reviewed, which indicates the likely presence of carbon rich soils, deep peat and priority peatland habitat, at a coarse scale across Scotland; and
- A search of the THC Planning Portal for relevant reports submitted as part of the application for other nearby developments within 10km of the site was made, and where relevant information could be obtained, these reports were reviewed for relevant ecological information:
    - Ben Aketil Wind Farm ES (operational) (West Coast Energy, 2002) – located west of the site;
    - Ben Aketil Wind Farm Extension ES (operational) (Atmos Consulting, 2009) – located west of the site; and
    - Glenn Ullinish Wind Farm ES (consented) (Green Cat Renewables, 2014).

5.18 In addition to the above, the results of the previous assessments conducted to inform the consented developments were reviewed. These are contained within the relevant chapters and appendices of:

- Ben Sca Wind Farm EIA Report (SLR, 2020a);
- Ben Sca Wind Farm Supplementary Information (SI) (SLR, 2020b); and
- Ben Sca Wind Farm Extension EIA Report (SLR, 2021).

5.19 An updated search of THC Planning Portal was undertaken in January 2024 in order to inform this assessment and the following EIA Reports relating to other proposed wind farm developments within 10km of the site were reviewed for relevant ecological information:

- Balmeanach Wind Farm EIA Report (SLR, 2023b) – located southeast of the site;
- Ben Aketil Repowering and Extension EIA Report (RSK, 2023) – located west of the site; and
- Glen Ullinish II Wind Farm EIA Report (Muirhall Energy Ltd, 2023) – located southeast of the site.

Field Survey

5.20 Surveys were previously undertaken within the site to inform the consented development as follows:

- Phase 1 Habitat survey and NVC in 2018 and 2019 (SLR, 2020a) and 2021 (SLR, 2021);
- protected mammals in 2019 (SLR, 2020a); and
- protected mammals in 2021 (SLR, 2021).

5.21 These surveys were updated in 2023 and 2024 in order to inform the assessment of the Proposed Development. A UK Habitat Classification (UKHab) and NVC Survey was undertaken within the site between September and October 2023 and a protected mammals survey was undertaken in January 2024. The methodology for the survey work is briefly outlined in the sections below, for full methodology please refer to **Technical Appendices 5.1** and **5.2**.

Vegetation Surveys

UKHab Surveys

5.22 A UKHab survey was undertaken in September and October 2023 (see **Technical Appendix 5.1**). The survey followed methods described in the UKHab user manual (Butcher *et al*., 2023. The survey aimed to identified habitats of conservation concern, protected or notable plant species and invasive/ non-native species. Target notes were taken to describe any notable receptors such as flushes, bog pools and areas with habitat disturbance.

NVC Surveys

5.23 An NVC survey was undertaken simultaneously with the UKHab Survey in September and October 2023 using the NVC system (Rodwell, 1991) and in accordance with survey guidelines (Rodwell, 2006) (see **Technical Appendix 5.1**).

Comparison with Previous Surveys

5.24 As stated in paragraph 5.20, habitat data for the consented development was collected using Phase 1 methods. This was then transformed using UKHab transformation recommendations (Butcher et al, 2023), allowing comparison of this dataset with that collected in 2023.

5.25 As stated in paragraph 5.14 results of habitat surveys undertaken to inform the Proposed Development are broadly similar to habitat survey results presented for the consented development. The habitat data for the consented development was therefore utilised in the assessment within this Chapter, using the updated UKHab categories.

Mammal Survey

5.26 A survey for protected mammals (excluding bats) was undertaken in January 2024 (see **Technical Appendix 5.2**). The species specifically targeted were based on the likelihood of occurrence of each species, ascertained from previous survey results, known species distribution and habitat suitability. The mammal survey particularly focussed on otter (*Lutra lutra*), however the survey recorded evidence of all protected or notable mammal species encountered.

5.27 Surveys followed standard methodologies, e.g. Chanin (2003), Ward *et al.* (1994), Neal and Cheesman (2006) and Velander (1983). The survey area encompassed all potentially suitable habitats within the site, as well as watercourses within 250m of potential infrastructure locations, in line with relevant guidance, e.g. NatureScot, 2024.

Assessment Methods

5.28 The CIEEM Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine (CIEEM, 2022) (henceforth referred to as the CIEEM guidelines) form the basis of the impact assessment presented in this Chapter. The CIEEM guidelines have been endorsed by NatureScot.

5.29 As stated in paragraph 5.12, the results of the assessments for the Proposed Development have been compared with those for the consented development in order to highlight any differences in impacts between the two.

Sensitivity of Receptor

5.30 In accordance with the CIEEM guidelines only ecological receptors (habitats, species, ecosystems and their functions/processes), which are considered to be important and potentially affected by the Proposed Development should be subject to detailed assessment. It is not necessary to carry out detailed assessment of receptors that are sufficiently widespread, unthreatened and resilient to impacts from the Proposed Development and will remain viable and sustainable.

5.31 Ecological receptors should be considered within a defined geographical context. For this assessment the following geographic frame of reference has been used:

- international;
- national (i.e. Scotland);
- regional (i.e. Highland);
- Natural Heritage Zone (NHZ) (i.e. the Western Seaboard NHZ);
- local (i.e. within circa (c.) 5km); and
- less than local.

5.32 For designated sites, importance should reflect the geographical context of the designation. For example, a SSSI would normally be considered nationally important.

5.33 In accordance with CIEEM guidelines the value of habitats has been measured against published selection criteria and other relevant data where available. Examples of relevant criteria include Annex 1 of the Habitats Directive, the Scottish Biodiversity List (SBL), and Highland Nature BAP (Highland Environment Forum, 2021).

5.34 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. Reference has therefore been made to published lists and criteria where available. Examples of relevant lists and criteria include: species of European conservation importance (as listed on Annexes II, IV, and V of the Habitats Directive); species considered to be of principal importance for biodiversity in Scotland as listed on the SBL; and priority species listed on the Highland Nature BAP.

Impact Assessment

5.35 The ecological impact assessment process involves the following steps:

- identifying and characterising impacts;
- incorporating measures to avoid and mitigate (reduce) these impacts;
- assessing the significance of any residual effects after mitigation;
- identifying appropriate compensation measures to offset significant residual effects (if required); and
- identifying opportunities for ecological enhancement.

5.36 When describing ecological impacts, reference has been made to the following characteristics, as appropriate:

- positive or negative;
- extent;

- magnitude;
- duration;
- timing;
- frequency; and
- reversibility.

5.37 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 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. the creation of access tracks which cause hydrological changes, which, in the absence of mitigation, could lead to the drying out of adjacent peatland habitats.

5.38 For the purposes of this assessment, in accordance with CIEEM guidelines, a 'significant effect' is defined as an effect that either supports or undermines biodiversity conservation objectives for 'important ecological receptors' or for biodiversity in general. Conservation objectives may be specific (e.g. for a designated site) or broad (e.g. national/local nature conservation policy). Effects can be considered significant at a wide range of scales from international to local (paragraph 5.31). For example, a significant effect on a SSSI is likely to be of national significance whilst a significant effect on a regionally important population of a species is likely to be of regional significance.

5.39 Consideration of conservation status is important for evaluating the effects of impacts on individual habitats and species and assessing their significance:

- for habitats conservation status is determined by the sum of the influences acting on the habitat that may affect its extent, structure and functions, as well as its distribution and its typical species within a given geographical area; and
- for species – conservation status is determined by the sum of influences acting on the species concerned that may affect its abundance and distribution within a given geographical area.

Avoidance, Mitigation, Compensation and Enhancement

5.40 A sequential process has been adopted to avoid, mitigate and compensate for ecological impacts. This is often referred to as the 'mitigation hierarchy'.

5.41 It is important for the EIA to clearly differentiate between avoidance, 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 reduce or remedy a specific negative impact *in situ*;
- compensation describes measures taken to offset residual effects, i.e. where mitigation *in situ* is not possible; and
- enhancement is the provision of new benefits for biodiversity that are additional to those provided as part of mitigation or compensation measures, although they can be complementary.

Cumulative Effects Assessment

5.42 Cumulative effects can result from individually insignificant but collectively significant actions taking place over a period of time or concentrated in a particular location. The potential for cumulative effects with other development proposals has been assessed here.

5.43 For aquatic receptors (including otter) potential cumulative effects are only likely to be significant for other developments located relatively close by (i.e. within 2km) and within the same hydrological sub-catchments (in line with the cumulative effects assessment for the consented development).

5.44 For habitats, potential cumulative effects are only likely to be significant for other developments within the application boundary, or the same hydrological catchment.

5.45 For (non-avian) terrestrial receptors potential cumulative effects are only likely where other developments are located within the regular range of more mobile species, e.g. bats. As bats have been scoped out of this assessment, the cumulative assessment has therefore been restricted to other developments within 2km. The assessment includes operational projects, projects under construction, consented projects which are not yet under construction, and projects for which planning applications have been submitted.

Assumptions, Limitations and Confidence

5.46 Presented here is a summary of limitations detected during the update surveys carried out to inform the assessment, further details are presented in **Technical Appendices 5.1-5.2**. It should be noted that none of these limitations are considered likely to significantly affect the assessment.

5.47 Part of the site was subject to a fire in spring 2018, this area was found to be mostly recovered when habitat surveys were carried out in 2023, although the area may still be undergoing long term recovery from fire damage.

5.48 Habitat surveys undertaken in 2023 surveyed to a buffer of 200m around the proposed infrastructure in order to focus on any changes (rather than 250m as required by SEPA guidance), however as stated in paragraph 5.14, comparison with data collected for the consented development indicated very little change, and therefore this data was used to inform the assessment. Therefore, this limitation has not affected the assessment.

5.49 During the days prior to the protected mammal surveys in January 2024 there had been some rain and snow melt leading to high water levels. There is therefore a possibility that some signs of target species had been washed away. However, survey results from the 2024 surveys are comparable to those from surveys previously conducted for the consented developments and it can therefore be assumed that this has not had a significant effect on survey results.

5.50 An ecological survey provides only a ‘snapshot’ of the conditions prevailing at the time of survey. Whilst it is considered unlikely that any significant evidence of protected or otherwise notable species were overlooked during the survey work, due to the nature of the subjects of ecological surveys, it is feasible that species that use the site may not have been recorded by virtue of their seasonality, cryptic behaviour, habit or random chance. This is a standard limitation that is common to all ecological survey work. It is considered unlikely, however, that additional surveys of the site would materially alter the conclusions of the baseline survey work, particularly given the availability of previous survey data collected to inform the EIAs for the consented development. Pre-construction surveys for protected mammal species are proposed in paragraph 5.97, which are intended to

address any issues resulting from future changes in the distribution of protected mammals.

Baseline Conditions

Current Baseline

Desk Study

5.51 As stated in paragraph 5.17, desk study data referred to in this assessment are based on a desk study report (Atmos, 2017) which previously informed the EIA Reports produced for the consented development: Ben Sca Wind Farm EIA Report (SLR, 2020a), Ben Sca Wind Farm SI Report (SLR, 2020b) and the Ben Sca Wind Farm Extension EIA Report (SLR, 2021). In addition, a review of more recent EIA Reports from other nearby developments was also undertaken (as detailed in paragraph 5.19).

Statutory Designated Sites

5.52 There are no statutory designated sites within the application boundary. There are three statutory designated sites within a 10km radius of the application boundary as detailed in **Table 5-2** and illustrated on **Figure 5.1**.

Table 5-2: Statutory Designated Sites within 10km of the application boundary

Site Name	Designation	Approximate Distance and Direction from Site	Reasons for Designation
An Cleireach	SSSI	2.3km south	Geological (tertiary igneous intrusion)
Inner Hebrides and the Minches	SAC	3.7km north	Harbour porpoise
Ascrib, Islay and Dunvegan	SAC	7.2km west	Harbour seal

5.53 The only designated sites within 10km are designated either for their geological interest or for marine receptors. There are therefore unlikely to be any impacts on receptors for which these sites are designated and impacts upon designated sites are scoped out of detailed assessment. This approach was agreed with NatureScot for the consented development (SLR, 2020a, SLR, 2021) and as part of the scoping process for the Proposed Development.

Non-statutory Sites

5.54 No non-statutory designated sites for nature conservation were identified within a 5km radius of the site.

5.55 One small block of ancient woodland listed on the Ancient Woodland Inventory was identified within 2km of the site, located approximately 1.95km northeast of the site, within Edinbane, as illustrated on **Figure 1.3**.

5.56 Given the lack of non-statutory designated sites within 5km of the site, non-statutory designated sites would be unlikely to be affected by the Proposed Development and are scoped out of further assessment. Similarly, effects on areas listed under the Ancient Woodland Inventory have been scoped out, due to the distance from the site and lack of connectivity, and therefore a lack of potential pathways for effects.

5.57 The site lies within a Class 1 area on NatureScot's Carbon and Peatland map (NatureScot, 2016), which is described as "*nationally important carbon-rich soils, deep peat and priority peatland habitat. Areas likely to be of high conservation value."* The purpose of the map is to give a value to indicate the *likely* presence of carbon-rich soils, deep peat and priority peatland habitat on a coarse scale, rather than confirming that these are present. Site-specific information relating to carbon-rich soils and deep peat (including a peat depth survey) is contained in **Chapter 6**. A description and evaluation of the habitats present on site, based on field survey data, is contained in **Table 5-3**.

Existing Records of Protected and Notable Species

5.58 **Table 5-3** provides a summary of the results of the protected and notable species search (excluding marine and avian species) detailed as outlined in paragraphs 5.17 to 5.18. Please note, records from surveys undertaken for the consented development are not included in **Table 5-3**, but are included in the respective sections in the 'Faunal Baseline' section (see paragraphs 5.67 to 5.86).

Table 5-3: Existing Records of Protected and Notable Species[2]

Species	Status*	Notes
Lichens		
Lichen (*Stricta fuliginosa*)	SBL, LBAP	Single record within 5km of the Site (per HBRG)
Invertebrates		
Small heath (*Coenonypha pamphilus*)	SBL	Records within 5km of the Site (per HBRG)
Large heath (Coenonypha tullia)	WCA Sch5 (in respect of Section 9(5) only), SBL	Single record within 5km of the Site (per HBRG)
Moss carder bee (*Bombus muscorum*)	SBL, LBAP	Single record within 5km of the Site (per HBRG)
Broom moth (*Ceramica pisi*)	SBL	Single record within 5km of the Site (per HBRG)
Fish		
European eel (*Anguilla anguilla*)	SBL	Records within 5km of the site dating from 1990 (per NBN)
Atlantic salmon (*Salmo salar*)	SBL, LBAP, SFF	Records within 5km of the site dating from 1985 and 1990 (per NBN)

[2] Including species protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended in Scotland), Schedule 2 of the Habitats Regulations (as amended in Scotland), listed on the SBL (Scottish Government, 2020) and Highland Nature BAP priority species (Highland Environment Forum, 2021).

Species	Status*	Notes
Brown / sea trout (*Salmo trutta*)	SBL, LBAP	Records within 5km of the site dating from 1980, 1990 and 2012 (per NBN); nine records within 5km of the site dating from 2012 (per HBRG), including two trout records from the Abhainn Choishleader, the upper reaches of which form the eastern boundary of the site.
Herpetofauna		
Palmate newt (*Lissotriton helveticus*)	WCA Sch5 (in respect of Section 9(5) only)	Single record within 5km of the Site (per HBRG/NBN)
Common toad (*Bufo bufo*)	WCA Sch5 (in respect of Section 9(5) only), SBL	Single record within 5km of the site (per HBRG). Single record during surveys for Glen Ullinish II.
Common frog (*Rana temporaria*)	WCA Sch5 (in respect of Section 9(5) only)	Records within 5km of the site (per HBRG/NBN)
Common lizard (*Zootoca vivipara*)	WCA Sch5 (in respect of Section 9(1) and 9(5) only), SBL	Single record located approximately 2.9km west of the site dating 2016 (per HBRG/NBN); two incidental records during surveys for Balmeanach Wind Farm; four incidental records during surveys for Glen Ullinish II.
Mammals		
Common pipistrelle (*Pipiestrellus pipistrellus)*	HR Sch2, WCA Sch5, SBL, LBAP	Low numbers recorded during surveys for Glen Ullinish Wind Farm (4-5km south of site). Single record within 5km of the site (per NBN) and 12 further records within 10km dating from between 1980 and 2019 (NBN). Six unspecified *Pipistrellus* and Chiroptera bats between 5 and 10km of the site (NBN) Low numbers recorded during surveys for Ben Aketil Repowering and Extension, Balmeanach Wind Farm and Glen Ullinish II Wind Farm.
Natterer's bat (*Myotis nattereri*)	HR Sch2, WCA Sch5, SBL, LBAP	Summer roost identified to south end of Edinbane Wind Farm (record reported by NatureScot in consented Ben Sca Wind Farm scoping response) 3km south east of the site.

Species	Status*	Notes
Brown long-eared bat (*Plecotus ouritus*)	HR Sch2, WCA Sch5, SBL, LBAP	Low numbers recorded during surveys for the Glen Ullinish II Wind Farm.
Noctule (*Nyctalus noctula*)	HR Sch2, WCA Sch5, LBAP	Low numbers recorded during surveys for Ben Aketil Repowering and Extension.
Otter	HR Sch2, WCA Sch5, SBL	Records within 5km of the site (per HBRG/NBN), several spraint records during surveys for Ben Aketil, Ben Aketil Extension and Glen Ullinish Wind Farms. Five spraints recorded during surveys for Ben Aketil Repowering and Extension. Resting site 0.3km west of Proposed Development site during Ben Aketil surveys, and an otter couch recorded 1.3km west of site during Ben Aketil Extension surveys.
Pine marten (*Martes martes*)	HR Sch4, WCA Sch5; SBL, LBAP	12 pine marten scats recorded within forestry to north and east of Glen Ullinish II Wind Farm.
Hedgehog	SBL, LBAP	Records within 5km of the site (per HBRG)
Brown Hare	SBL, LBAP	Records within 5km of the site (per HBRG)
Red Deer (*Cervus elaphus*) / Roe deer (*Capreolus capreolus*)		Both species recorded incidentally during surveys for Ben Aketil Repowering and Extension.

*Table Key: Status

HR Sch2= Included on Schedule 2 of the Conservation (Natural Habitats &c) Regulations 1994 (as amended in Scotland)

HR Sch4 = Included on Schedule 4 of the Conservation (Natural Habitats &c) Regulations 1994 (as amended in Scotland)

WCA Sch5 = Listed on Schedule 5 of the Wildlife and Countryside Act 1981 (as amended in Scotland)

SFF= Salmon spawning beds protected under the Salmon and Freshwater Fisheries (Consolidation) (Scotland) Act 2003

SBL= Listed on Scottish Biodiversity List (SBL) (Scottish Government, 2020)

LBAP= Highland Nature Biodiversity Action Plan (BAP) 2021-2026 (Highland Environment Forum, 2021)

Vegetation Baseline

Evaluation of Floral Receptors

5.59 UKHab habitats and NVC communities within the site are shown in **Table 5-4**.

5.60 Full details of habitat surveys carried out in 2023 can be found in **Technical Appendix 5-1**. The mapped results are shown on **Figure 5.1.3** and **Figure 5.1.4** within **Technical Appendix 5-1**.

5.61 Full details of the surveys carried out to inform the consented development can be found in the Ben Sca Wind Farm EIA Report (SLR, 2020a) and the Ben Sca Wind Farm Extension Report (SLR, 2021). As stated in paragraph 5.21, the habitat data collected for the consented development was utilised in this assessment, and the mapped results are shown on **Figure 5.2** and **Figure 5.3**.

5.62 **Table 5-4** also summarises the conservation status for each habitat/community and evaluates the importance of each habitat/community within the study area.

5.63 No plant species listed on Schedule 8 of the Wildlife and Countryside Act 1981 were recorded, and it is considered unlikely that any Schedule 8 plant species are present within the study area. No SBL higher plant, moss or liverwort priority species were recorded within the study area during the botanical surveys in 2023 or previous surveys undertaken to inform the consented development.

5.64 The Highland Nature BAP does not reference specific botanical species as priority species and is therefore not referenced within **Table 5-4**.

5.65 Rather, the BAP highlights priority habitat types, including '*Upland and moorland*' and '*Peatland and wetland'*, both of which make up the main habitats contained within the site.

Table 5-4: Evaluation of the UKHab Habitats and NVC Communities present within the site

UK Hab Habitat Type	NVC Community Name	Conservation Status*	Likely Groundwater Dependency	Area (ha)	Reason for Evaluation	Evaluation
f1a5 Blanket Bog (H7130)	M17 *Trichophorum cespitosum – Eriophorum vaginatum* blanket mire	Annex 1 (priority habitat[3]), SBL	-	106.5	There is an estimated 2.2 million ha of blanket bog in the UK (BARS, 2012), and 1.8 million ha in Scotland, representing an estimated 23% of the Scottish land area (Bruneau and Johnson, 2014). Blanket bog is a rare habitat globally, and Scotland holds a significant proportion of the world resource (Bruneau and Johnson, 2014). On a more regional scale, blanket bog is considered to be widespread in Skye and Lochalsh, often occurring as a mosaic with heathlands (Skye and Lochalsh Biodiversity Group, 2003). Blanket bog is the dominant habitat type in the south-east open upland part of the Site, which is typical for this area of Skye. Some areas of M17 are located over deeper peat, and some are found in mosaic with M25 *Molinia caerulea* mire or with M15 wet heath. Some smaller patches of M2 and M3 bog pools have formed. The blanket bog habitats have recovered well from the fire in 2018, with dwarf shrub and *Sphagnum* species present.	National Value[4]
	M2 *Sphagnum cuspidatum/recurvum* bog pool community	Annex 1 (priority habitat[3]), SBL	-	1.4		
	M3 *Eriophorum angustifolium* Bog Pool Community	Annex 1 (priority habitat[3]), SBL	-	1.6		

[3] Active bog is a priority habitat under the Habitats Directive
[4] This habitat was evaluated as having 'Regional' importance in the EIA for the Consented Development (SLR, 2020a, SLR, 2021)

UK Hab Habitat Type	NVC Community Name	Conservation Status*	Likely Groundwater Dependency	Area (ha)	Reason for Evaluation	Evaluation
Flush	Small sedge mire	-	High	0.01	There is a small area dominated by small sedges that does not fit easily into any NVC category noted within the forest ride to the west of the site. Due to the limited extent of this area it has been assessed as having local value.	Local value
h1b Dry Heath, Upland (H4030)	H12 *Calluna vulgaris-Vaccinium myrtillus heath*	Annex 1 (priority habitat), SBL	-	2.9	These community types were limited in extent and only occurred in small areas, where steep, shallow, free-draining soils were present. These heath communities were found in mosaic with the wet heath M15 community and with the U5 and U6 acid grassland community. There is an estimated 1.7 to 2.5 million ha of upland heathland in Scotland (SNH n. d.), and heathland is considered widespread in Skye and Lochalsh, often in a mosaic with blanket bog (Skye and Lochalsh Biodiversity Group, 2003). H10 and H12 are some of the most common forms of dry heath in Scotland. Given the very limited and fragmented amount of these habitats on the site, and the very small proportion of the Scottish heathland resource, the dry heath habitat is assessed as being of no more than local value.	Local value
	H14 *Calluna vulgaris-Racomitrium lanuginosum* heath	Annex 1 (priority habitat), SBL	-	11.6		

UK Hab Habitat Type	NVC Community Name	Conservation Status*	Likely Groundwater Dependency	Area (ha)	Reason for Evaluation	Evaluation
h1b6 Wet Heathland with Cross-leaved Heath; Upland (H4010)	M15 *Scirpus cepitosus – Erica tetralix* Wet Heath	Annex 1 (priority habitat, SBL)	Moderate	22.9	This community in the open upland in the south of the site. These areas were found on the sloping ground where the land is recovering from fire damage. The areas may recover naturally to blanket bog communities over time as seen in the surrounding habitat.. There is an estimated 462,000 ha of wet heathland in the UK (JNCC, 2011). Given the degraded nature of this habitat the wet heath habitat is assessed as being of no more than local value. Its potential groundwater dependence is assessed in **Chapter 6,** where it is confirmed that it is not sustained by groundwater but rather sustained by incident rainfall and surface water runoff.	Local value
g1b Upland Acid Grassland	U4 *Festuca ovina – Agrostis capillaris - Galium saxatile* grassland	-	-	1.8	Acid grasslands U4, U5 and U6 were found on the high ground with thin, dry soil in the southeast part of the application boundary. The acid grassland areas contain heath species, grading towards a dry heath community. Given the very small and fragmented nature of these habitats, and the lack of significant species associated with them, they are considered to be of less than local value. Potential groundwater dependence is assessed in **Chapter 6,** where it is confirmed that it is not sustained by groundwater but rather sustained by incident rainfall and surface water runoff.	Less than Local value
	U5 *Nardus stricta- Galium saxatile* grassland	SBL	-	In mosaic only		
	U6 *Juncus squarrosus – Festuca ovina* grassland	SBL	Moderate	In mosaic only		

UK Hab Habitat Type	NVC Community Name	Conservation Status*	Likely Groundwater Dependency	Area (ha)	Reason for Evaluation	Evaluation
Rushy grassland	No NVC	-	-	4.7	A small patch within the conifer plantation was dominated by *Juncus effusus* with a mix of heath and grassland species throughout, matching poorly to UKHab and NVC categories. This area likely differs from the blanket bog vegetation within the forest rides due to increased drainage. The evaluation is based on the small size of the area and the low importance of the habitat.	Less than local value
w2c Other Coniferous Woodland	NA	-	-	54.0	The northwest half of the site supports blocks of conifer plantation woodland, comprising densely planted Lodgepole pine *Pinus contorta* and Sitka spruce *Picea sitchensis,* planted in 1990 but with mostly stunted growth indicative of trees planted on wet, deep peat. The woodland lies on peat mostly 0.5-1.5m deep, the rides between the forest coupes support blanket bog vegetation and the area lies adjacent to a large area of extant blanket bog habitat to the east and southeast, strongly suggesting that this area used to support blanket bog vegetation before being planted, although bog species are no longer present except in the rides. Its evaluation is based on its current value as coniferous plantation, although the value of this area could be enhanced if restoration of the former blanket bog communities was undertaken.	Less than local value

UK Hab Habitat Type	NVC Community Name	Conservation Status*	Likely Groundwater Dependency	Area (ha)	Reason for Evaluation	Evaluation
r1 Standing open water	N/A	SBL	-	Too small to map	The watercourses present are very minor, mostly <1m wide, and represent small tributaries which feed into more significant watercourses off-site. The tributaries are not particularly notable in habitat terms, however they provide suitable habitat for a range of faunal species and are connected to more significant watercourses, and therefore are considered to be of local value.	Local value

**Table Key: Conservation Status*

Annex 1 = Listed on Annex 1 of the EC Habitats Directive (Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora)

SBL = listed on Scottish Biodiversity List (SBL) (Scottish Government, 2020)

Faunal Baseline

5.66 A summary of the protected or otherwise notable fauna recorded within the protected mammal study area during protected mammal surveys in 2024, 2021, 2018 and 2019 and/or for which records were provided during the desk study is provided in paragraphs 5.67 to 5.86. Further details are provided in **Technical Appendix 5.2**, the Ben Sca Wind Farm EIA Report (SLR, 2020a) and the Ben Sca Wind Farm Extension EIA Report (SLR, 2021).

Invertebrates

5.67 The desk-based information gathered to support the consented development provided records of the SBL species small heath, large heath, moss carder bee and broom moth within the 5km search area and it is possible that some of these species could be present within the site. However, as detailed in paragraph 5.10, invertebrates have been scoped out of detailed assessment, in accordance with NatureScot (2024) advice, due to the lack of potential for legally protected species and due to the area of land take being small in comparison with the availability of similar habitats in the wider area.

Fish

5.68 The desk study data search returned records of European eel, Atlantic salmon and brown trout within the 5km search area, and two records of brown trout within the Abhainn Choishleadar, the upper reaches of which form the eastern boundary of the site.

5.69 A habitat suitability assessment for fish species of conservation importance was conducted in May 2019 and July 2021 to inform the assessment of the consented development (SLR, 2020a, SLR, 2021). No significant effects upon habitat of fish species of conservation concern, including salmonid habitats, was anticipated for the consented development with the implementation of good practice mitigation measures. As detailed in paragraph 5.10, impacts on fish have been scoped out of further assessment given that changes in the suitability of habitat for fish species is unlikely to have significantly changed since previous assessments were undertaken, and on the basis that mitigation committed to for the consented development is considered inherent to the Proposed Development.

Amphibians and Reptiles

5.70 Desk study data collected to inform the consented development returned records of palmate newt, common toad and common frog within 5km of the site.

5.71 The survey conducted in 2024 was outwith the active season for amphibians and reptiles, however no amphibian or reptile species were previously noted incidentally during the surveys conducted to inform the consented development or Proposed Development. The site falls well outside the known range of great crested newt (*Triturus cristatus*) (Oldham *et al.*, 2000). The habitat within the site is not considered to be of particular importance for amphibians, therefore these species have been scoped out of further assessment.

5.72 Desk study data collected to inform the assessment of the consented development returned a single record of common lizard approximately 3km from the site in 2016. Additionally, two incidental records of common lizard were recorded during surveys to inform the proposed Balmeanach Wind Farm (SLR, 2023a), and four during surveys to inform Glen Ullinish II Wind Farm (Muirhall Energy Ltd, 2023).

5.73 The majority of the site provides suitable habitat for common lizard (i.e. open bog and heath habitats). It is also possible that the site could support other reptile species such as adder (*Vipera berus*), although no records have been provided within 5km of the site for this species. The fire in 2018 is likely to have temporarily reduced the suitability of the site for reptiles however the majority of the habitat is now considered to have recovered.

Otter

5.74 Desk study data collected to inform the assessment of the consented development returned records of otter within 5km of the site, including a resting site and otter couch recorded to the west of the site at a distance of 0.3km and 1.3km respectively during surveys to inform the Ben Aketil Repowering and Extension EIA.

5.75 No otter field signs were recorded within the site during the January 2024 survey, however otter anal jelly was recorded 124m outwith the application boundary, confirming recent otter presence in the wider area (see **Figure 5.2.1** in **Technical Appendix 5.2**).

5.76 There are no large waterbodies or watercourses within the site. The majority of the watercourses were previously assessed as being of low suitability for foraging otter due to their small size, predominantly dry/partially dry nature and abundance of higher quality habitat within the surrounding area (SLR, 2020a). However, Abhainn Choishleadar on the eastern boundary of the site is slightly larger in size and was seen to contain some fish, and therefore offers some foraging potential. Additionally, Allt Donchaidh is of a larger size, had consistent water flow and is linked to the larger Red Burn, outwith the site to the west, however the watercourse was very narrow and sometimes flowed completely underground, therefore not offering any permanent habitat for otters but may occasionally be used by individuals moving between river catchments (SLR, 2021).

Pine Marten

5.77 Signs of pine marten were recorded during surveys to inform the assessment of the Glen Ullinish II Wind Farm. No signs of pine marten were noted on site during the January 2024 survey for the Proposed Development or during previous mammal surveys for the consented development in 2021, 2019 and 2018. Pine marten is not historically present on the Isle of Skye and has only recently moved to the island since the erection of the road bridge in 1995. It not yet thought to be widespread across the island though its distribution is currently unknown.

5.78 Pine marten is found in forested areas. The majority of the site is therefore considered unsuitable for pine marten, comprising wet moorland and bog habitat. The conifer plantation blocks in the northwest corner of the site offer some potentially suitable habitat for this species, although the trees are small and stunted, and there are no mature trees with hollows suitable for breeding. Given the low number of records of pine marten on Skye and the relative lack of suitable habitat present, pine marten are assumed to not be present on site and have therefore been scoped out of further assessment.

Badger

5.79 This species was considered to be historically absent from the Isle of Skye, however there are sporadic records for this species since the opening of the Skye Bridge. No previous records of badgers were returned during the desk study data search undertaken for the consented development and no evidence of badger activity recorded during the January 2024 survey or during surveys to inform the assessment of the consented development in 2021, 2019 and 2018. The majority of the site offers limited suitability for badger sett

building and foraging, as it consists largely of open upland habitat with wet ground. The conifer plantation areas in the northwest corner of the site may offer potentially suitable habitat for this species. Given the low number of records of badgers on Skye, the lack of evidence found during surveys and the lack of suitable habitat present, badger are not considered to be present on site and have therefore been scoped out of further assessment.

Bats

5.80 The desk study returned records of four species of bats within the 10km search area (common pipistrelle, Natterer's bat, brown long eared bat and noctule).

5.81 Bat surveys undertaken in 2019 for the consented development recorded only one bat species, common pipistrelle. The survey identified that bat activity was low at all locations sampled. It was therefore concluded that the level of risk to common pipistrelle from Ben Sca Wind Farm was low and significant effects upon common pipistrelle were not likely (SLR, 2020a). Given the low risk to bats concluded for Ben Sca Wind Farm, it was agreed in consultation with NatureScot that additional bat activity surveys were not required to inform the consented Ben Sca Wind Farm Extension and could be scoped out of the assessment (SLR, 2021). Similarly, during consultation in January 2024, NatureScot agreed that no further bat surveys were required to inform the assessment of the Proposed Development. On this basis, and considering that levels of bat activity are unlikely to have changed significantly since the 2019 surveys were conducted, bats have been scoped out of further assessment, as noted in paragraph 5.10.

Deer

5.82 Red deer are known to be present on site. Individual deer and deer droppings were recorded incidentally onsite during surveys undertaken to inform the Ben Sca Wind Farm EIA in 2018 and 2019 (SLR, 2020a). It is understood that the site supports a relatively small population of red deer at low density, and that they can be found at higher densities within off site blocks of forestry such as Glen Vic Askill to the southeast, as detailed in the Ben Sca Wind Farm EIA Report (SLR, 2020a). Red deer generally use the site whilst moving between the surrounding more favoured areas.

5.83 No formal deer management plan is in place covering the site, but there is an informal arrangement as described in the Ben Sca Wind Farm EIA Report (SLR, 2020a) whereby no more than seven hinds and two to three stags are shot per year in the area, to keep numbers in check. The Ben Sca Wind Farm EIA Report (SLR, 2020a) states that deer are counted using thermal imaging equipment, and although exact numbers are not known (due to the lay of the land making counts difficult) it is estimated that there are two to three resident stags on site, and up to 20 hinds have been recorded on site. Whilst 20 hinds have been recorded on site, these deer have a much wider range of which the site only forms a small part of, as the deer move across the site to other areas of better habitat. With this information, although it is not possible to determine a precise deer density estimate, it is concluded that the site is likely to support a density of less than five red deer per km^2.

5.84 Roe deer are also reported to occur in the area (SLR, 2020a), but only on a very occasional basis. In accordance with NatureScot guidance (SNH, 2016), a deer assessment is included in paragraphs 5.127 to 5.131, which assess the potential impacts on deer welfare, habitats, neighbouring and other interests (e.g. access and recreation, road safety, etc.).

Brown Hare

5.85 Records of brown hare were returned within 5km of the site (SLR, 2020a). However, this species was not recorded incidentally onsite during surveys in 2018, 2019, 2021, 2023 or 2024 and the habitats within the site are considered predominantly suboptimal for this species due to their upland peatland and wet nature, with more suitable habitat for this species present in the wider area. As such, this species is scoped out from further assessment.

Hedgehog

5.86 Records of hedgehog were returned within 5km of the site (SLR, 2020a). This species was not recorded incidentally onsite during surveys in 2018, 2019, 2021, 2023 or 2024 and the habitats within the site are considered predominantly suboptimal for this species due to their upland peatland and wet nature, with more suitable habitat for this species present in the wider area. As such, this species is scoped out from further assessment.

Evaluation of Faunal Receptors

5.87 An evaluation of the non-avian faunal ecological receptors, which are either known to be present or considered likely to be present within the protected mammal study area is provided in **Table 5-5**.

Table 5-5: Evaluation of Faunal Receptors

Receptor	Legal/Conservation Status	Reason for Evaluation	Evaluation
Common lizard and adder	WCA Sch5 (in respect of Section 9(1) and 9(5) only), SBL	Much of the site contains suitable habitat for common lizard, for both foraging and basking. Common lizard is described as being widespread throughout Scotland (SWT, n.d) (with the exception of the Central Lowlands and the Northern Isles). Therefore, as common lizard are widespread in the area, and given the size of the site and the abundance of suitable habitat in the surrounding area, the site is not assessed to be of a higher than local value for common lizard. Due to the presence of suitable habitats such as heath, it is possible that adder occur on site, although there are no recorded sightings. Adder is described as being widespread across the Scottish mainland, but not found on many of the Scottish Islands (SWT, n.d), although there are abundant records on Skye. Given the widespread nature of this species and the abundance of suitable habitat in the surrounding area, the site is not assessed to be of higher than local value to adder, should it be present.	Local
Otter	HR Sch2, WCA, Sch5, SBL	No otter signs were recorded on site however otter presence is confirmed in the wider area. The habitat within the site is considered to be predominantly of low suitability for foraging and commuting otter, due to the small nature of the majority of watercourses present. However, given the presence of otter in the wider area, it is likely that this species enters the site from time to time. Due to the lack of records and the abundance of	Local

Receptor	Legal/Conservation Status	Reason for Evaluation	Evaluation
		habitat of higher quality within the surrounding area, the site is assessed as being of no more than local value for this species.	
Deer	-	Red deer are known to be present on site and within the wider area, and it is estimated that the site supports a small population at a relatively low density of less than 5 deer/km^2. Red deer is a common and widespread species in Scotland, and Scotland supports the largest population in Europe. Given the widespread and abundant nature of this species, and the abundance of suitable habitat within the wider area, including more favoured off-site forest areas such as Glen Vic Askill, the site is assessed as being of no more than local value for this species. Roe deer are also reported to occur in the area, but only on an occasional basis, and the site is therefore assessed as being of less than local value for this species.	Less than local

**Table Key: Status*

HR Sch2 = included on Schedule 2 of the Conservation (Natural Habitats &c) Regulations 1004 (as amended in Scotland)

WCA Sch5 = Listed on Schedule 5 of the Wildlife and Countryside Act 1981 (as amended in Scotland)

SBL = listed on Scottish Biodiversity List (SBL) (Scottish Government, 2020)

LBAP = Highland Nature Biodiversity Action Plan (Highland Environment Forum, 2021)

SFF= Salmon spawning beds protected under the Salmon and Freshwater Fisheries (Consolidation)(Scotland) Act 2003

Cumulative Situation

5.88 **Table 1-2** in **Chapter 1** contains details of all known wind developments within approximately 10km of the site.

5.89 When undertaking the cumulative effects assessment, it is important to consider only those projects which could potentially contribute to significant cumulative effects with the Proposed Development. As set out in paragraphs 5.42 and 5.43, for this assessment potential cumulative effects have been assessed for the following receptors and developments:

- cumulative effects on aquatic receptors within the same sub catchments and within 2km; and
- habitats within the application boundary or the same hydrological catchment.

5.90 Projects that meet the criteria in paragraph 5.89 and therefore considered in this cumulative effects assessment are detailed in **Table 5-5**. These include all developments within the relevant areas which are either operational, under construction, consented or for which a planning application has been submitted.

Table 5-6: Other Developments Considered in Cumulative Effects Assessment

Project	Status	No. of Turbines	Closest Distance to Proposed Turbine (km)	Comments
Operational				
Ben Aketil Wind Farm and Extension	Operational	12	1.1km to west	Would be replaced by Ben Aketil Repowering and Extension if consented.
Edinbane Wind Farm	Operational	18	1.5km to east	Would be replaced by Edinbane Repowering if consented.
Approved				
Glen Ullinish Wind Farm	Approved	11	5.5km to southeast	Would be replaced by Glen Ullinish II if consented.
Application				
Balmeanach Wind Farm	Application	10	0.7km to southeast	Currently being considered by THC.
Ben Aketil Repowering and Extension	Application	9	1.1km to west	Currently being considered by Energy Consents Unit (ECU), would replace existing Ben Aketil if consented.

Project	Status	No. of Turbines	Closest Distance to Proposed Turbine (km)	Comments
Glen Ullinish II Wind Farm	Application	47	3.2km to southeast	Currently being considered by ECU, would replace existing Glen Ullinish if consented.

Future Baseline

5.91 In the absence of the Proposed Development, the site is likely to remain as open moorland (with blanket bog and heath habitats) and coniferous woodland plantation, primarily used for game shooting, forestry and grazing.

5.92 Areas of plantation woodland may be felled at some point, although they may never become a commercially viable crop. These areas would be unlikely to be replaced with further plantation woodland, due to the low quality of tree growth and the low suitability of the site (i.e. deep peat).

5.93 In the absence of the Proposed Development, it is possible that badgers, or pine marten may start to utilise the areas of suitable habitat within the site as their range and abundance on Skye increases following recent colonisation, although suitable breeding habitat within the site is limited. It is possible that future use of the site by otter may change, although the majority of watercourses within the site are of limited value for this species and likely to remain so. To allow for possible changes in the distribution of protected species, pre-construction surveys for protected mammal species (otter, badger, and pine marten) would be undertaken to ensure legislative compliance during construction, as detailed in paragraphs 5.97 to 5.99.

Assessment of Effects

5.94 The assessment of effects is based on the project description outlined in **Chapter 1: Introduction and Project Description**.

Embedded Mitigation

5.95 The Proposed Development has been subject to a number of design iterations and evolution in response to the constraints identified as part of the original baseline studies for the consented development (SLR, 2020 and SLR, 2021), to reduce environmental effects (see **Chapter 1** and **Chapter 10: Schedule of Mitigation** for further details). These include:

- minimisation of ‘undercutting’ of peat slopes as far as possible;
- access tracks have been located within forest rides to reduce forestry loss where possible;
- tree clearance would ensure a minimum 50m buffer between wind turbine blade tips and the closest forest edge, in accordance with current guidelines for bats and onshore wind turbines (NatureScot *et al*., 2021);
- a minimum 50m buffer would be ensured between all proposed infrastructure and watercourses during construction with the exception of sediment clearance work at

the existing Ben Aketil access track and installation of a new pipe culvert over a drainage ditch adjacent to the existing Ben Aketil access track to provide access to proposed Turbine 9;

- it was not possible to avoid Annex 1 blanket bog and heath habitats, as these comprise the majority of the site. However, watercourses and the areas of deepest peat have been avoided as far as possible; and
- track length was minimised as far as possible to minimise land take.

Good Practice Measures

Good Practice Mitigation Measures

5.96 Full details of construction mitigation measures would be provided in a Construction Environmental Management Plan (CEMP). An outline CEMP is included as **Technical Appendix 1.1**. Good practice measures in relation to pollution risk, sediment management and watercourse crossings to be adopted during the construction and operation phases are also set out in **Chapter 6**. During the construction phase, good practice techniques with respect to peatland environments, as contained within 'Good Practice during Windfarm Construction' (NatureScot, 2019), would be implemented. Further details on peat and water management during construction are provided in **Technical Appendix 1.1: Outline CEMP** and **Technical Appendix 6.1: Peat Management Plan**. Good practice measures to protect retained habitats during the construction phase would be implemented, including the erection of temporary protective fencing demarcating the working footprint, to be overseen and policed by an Environmental Clerk of Works (EnvCoW) (also see paragraph 5.98); further details are provided in the draft CEMP. Good practice techniques for vegetation and habitat reinstatement would be adopted and implemented on areas subject to disturbance during construction as soon as is practicable.

Pre-Construction Surveys

5.97 Due to the time that will have elapsed since the last surveys and the possibility that otter activity may have changed in the intervening period, and/or pine marten or badger could have colonised the site, a pre-construction survey for otter, badger and pine marten would be undertaken. This would cover all watercourses and other suitable habitat (focussing on forest edges and rides) within 250m of proposed infrastructure. The results of the pre-construction surveys would inform the need for further mitigation (if required) in respect of working practices, or consultation with NatureScot, if required.

Environmental Clerk of Works

5.98 A suitably qualified EnvCoW would be employed to oversee activity at key points for the duration of the construction and reinstatement periods (at a frequency to be agreed with THC and NatureScot), to ensure natural heritage interests are safeguarded. The role of the EnvCoW would include the following tasks:

- to give toolbox talks to all staff onsite, e.g. an ecological induction, so staff are aware of the ecological sensitivities on the site and the legal implications of not complying with agreed working practices;
- to agree and monitor measures designed to minimise damage to retained habitats and proposed peatland restoration areas;

- to undertake pre-construction surveys and checks (otter, badger and pine marten) and advise on ecological issues where required; and
- to carry out pre-construction inspections of areas which require reptile mitigation (i.e. supervision during vegetation clearance) – see paragraph 5.100.

5.99 The EnvCoW would also undertake additional roles such as assisting with hydrological measures, checking for nesting birds and implementing the Bird Protection Plan (BPP) (see **Chapter 4** and **Chapter 6**).

Reptiles

5.100 In order to comply with the Wildlife and Countryside Act 1981 (as amended in Scotland), mitigation would be employed to reduce the chances of inadvertently killing or injuring individual reptiles during construction works. Given the low numbers of reptiles likely to be present, the large areas of suitable habitat that would remain unaffected by the works and given also the large spatial scale of the works, fencing and translocation are not considered appropriate. Proposed mitigation therefore would involve vegetation management and the identification/removal of potential refugia and hibernacula if present. The proposed site speed limit of 15mph would also reduce the likelihood of accidental injury/killing of reptiles by construction traffic.

Otters

5.101 During construction, site speed limits of 15mph would reduce the likelihood of accidental injury/killing of otter by construction traffic.

5.102 All potentially dangerous substances or materials within the temporary construction compound would be carefully stored to prevent them causing any harm to otters which may enter the compound at night.

5.103 During construction, all excavations greater than 1m depth would either be covered at night or designed to include a ramp to allow otters and other animals a means of escape should they fall in.

Construction Effects

Potential Effects

5.104 Potential effects, assuming that the good practice mitigation measures outlined in paragraphs 5.95 to 5.103 are implemented, are addressed for each receptor in turn in paragraphs 5.105 to 5.131. Effects have been assessed only for important ecological receptors (i.e. those with a value of Local level or above, potential GWDTEs or legally protected species). These comprise:

- blanket bog, degraded blanket bog, upland flushes, fens and swamps, upland heath, wet heathland with cross-leaved heath, upland acid grassland, standing open water; and
- otter, deer and reptiles.

Habitats

5.105 As detailed in paragraph 5.25, the habitat data collected in the 2023 surveys were compared with the data collected for the consented development and found to be broadly comparable, and therefore assessment based on these data is considered valid.

5.106 Impacts on habitats are categorised as follows:

- direct habitat loss – this includes habitats present under the footprint of the Proposed Development and includes areas which would be subject to cut and fill, grading and potential cable laying; and
- indirect/ temporary habitat loss – indirect loss has been calculated for blanket bog habitats which lie within 10m of the direct habitat loss areas; the allowance of 10m is to allow for drying effects and vegetation changes due to construction works. For other habitats an allowance for temporary loss of 5m is included to allow for possible temporary loss due to damage during construction. Floating tracks are considered conservatively in the same manner as other tracks; with a 10m buffer in blanket bog as in the consented development, though in reality the drying effect should be reduced.

5.107 While it is appreciated that it is not in line with current guidance (NatureScot, 2023), published after the completion of the EIAs for the consented development, the adoption of a 10m buffer to calculate indirect habitat loss within peatland habitats is to allow direct comparison with habitat loss assessments for the consented development (see paragraph 5.25).

5.108 It should be noted that the habitat loss calculations for the consented development utilised a precautionary 10m buffer for turbine laydown areas as these were included as part of the overall hardstanding area at each turbine location. The same conservative calculations have been included in this assessment.

5.109 Additionally, as stated in paragraph 5.25, habitat data for the consented development was compared to that collected in 2023 and found to be broadly comparable. Only one area covered in rushes on an acidic substrate did not match UKHab or Phase 1 communities well and was therefore classified differently on each survey visit, though the habitat was the same on each visit. This area has been classified as ‘Rushy Grassland’.

5.110 For the purposes of the assessment a precautionary approach has been taken which assumes that direct habitat loss and indirect loss of peatland habitats represents a permanent, irreversible negative effect, although in practice some areas indirectly affected may be able to be utilised as part of the forest-to-bog habitat restoration plans.

5.111 **Table 5-7** details the estimated direct and indirect/temporary land take for habitats with local or greater value; and potential GWDTE communities.

Table 5-7: Summary of Habitat Loss by UKHab/NVC Community Type

UK Hab Name	NVC Community	Direct Habitat Loss (ha)	Infrastructure causing Direct Habitat Loss	Indirect or Temporary Habitat Loss (ha)	Total Loss (ha)
f1a5 Blanket Bog (H7130)	M17 *Trichophorum cespitosum* – *Eriophorum vaginatum* blanket mire and M2	4.25	Borrow pit, construction compound, permanent and temporary crane hardstanding, floating and excavated track, turning head	6.91	11.16

UK Hab Name	NVC Community	Direct Habitat Loss (ha)	Infrastructure causing Direct Habitat Loss	Indirect or Temporary Habitat Loss (ha)	Total Loss (ha)
	Sphagnum cuspidatum/recurvum bog pool community				
h1b5 Dry Heath; Upland (H4030)	H12 *Calluna vulgaris-Vaccinium myrtillus heath*	0.92	Borrow pit, temporary crane hardstanding, substation, excavated track, turning head	0.59	1.51
h1b6 Wet Heathland with Cross-leaved Heath; Upland (H4010)	M15 *Scirpus cespitosus – Erica tetralix* Wet Heath	0.5	Permanent and temporary crane hardstanding, substation, excavated track	0.48	0.98
g1b Upland Acid Grassland	U4 *Festuca ovina – Agrostis capillaris - Galium saxatile* grassland and U5 *Nardus stricta-Galium saxatile* grassland	0.01	Excavated track	0.02	0.03
Rushy Grassland	No NVC	0.02	Temporary crane hardstanding, excavated track	0.04	0.06
w2c Other Coniferous Woodland	NA	1.21	Borrow pit, construction compound, permanent and temporary crane hardstanding, floating and excavated track	0.78	1.99
Total		**6.91**		**8.82**	**15.73**

5.112 The Proposed Development would result in the direct loss of 4.25ha and the indirect loss of 6.91ha of Annex 1 blanket bog communities (a total loss of 11.16ha) (M17 mire and M2 bog pool community).

5.113 For wet and dry heath communities (including as part of an acid grassland mosaic) the direct permanent loss would be 1.42ha, and the indirect or temporary loss would be 1.07ha (a total loss of 2.49ha).

5.114 The direct and indirect loss of up to 11.16ha of regionally important Annex 1 blanket bog habitat is considered to constitute a significant negative effect at a regional level.

5.115 The total loss of up to 2.49ha of locally important Annex 1 wet and dry heath habitat is considered to constitute a significant negative effect at a local level.

5.116 The very small-scale loss of neutral grassland and acid grassland (within mosaics) is considered to be not significant, given the scale and the ubiquitous nature of the habitats in the landscape.

5.117 With the exception of a new pipe culvert within an existing drainage ditch (to provide access to proposed Turbine 9) and sediment removal within an existing watercourse crossing, all infrastructure is situated a minimum of 50m away from watercourses. Assuming that good practice pollution prevention measures are adopted, no significant effect is predicted on the running water environment.

Comparison of Habitat Loss

5.118 **Table 5-8** contains a comparison of the calculations for habitat loss of important habitats present on site, i.e. blanket bog, wet heath and dry heath, between the consented development and the Proposed Development.

Table 5-8: Habitat loss by UKHab category for the consented development and the Proposed Development

UKHab Category	NVC Habitat Category	Consented Development Area (ha) lost			Proposed Development Area (ha) lost		
		Direct Loss	Indirect / Temporary Loss	Total Loss	Direct Loss	Indirect / temporary Loss	Total Loss
f1a5 Blanket Bog (H7130)	M2 *Sphagnum cuspidatum/recurvum* bog pool community; M3 *Eriophorum angustifolium* bog pool community; M17 *Scirpus cespitosus-Eriophorum vaginatum* blanket mire	4.21	4.97	**9.18**	4.25	6.91	**11.16**
h1b5 Dry Heath; Upland (H4030)	H12 *Calluna vulgaris-Vaccinium myrtillus* heath; H14 *Calluna vulgaris-Racomitrium lanuginosum* heath U5 *Nardus stricta-Galium saxatile* grassland; U6 *Juncus squarrosus-Festuca ovina* grassland	0.31	0.2	**0.51**	0.92	0.59	**1.51**
h1b6 Wet Heathland with Cross-leaved Heath; Upland (H4010)	M15 *Scirpus cespitosus-Erica tetralix* wet heath	0.41	0.48	**0.89**	0.5	0.48	**0.98**
Total Loss		4.93	5.65	**10.58**	5.67	7.98	**13.65**

5.119 Based on the calculations shown in **Table 5-8**, the loss of Annex 1 heath, and bog flush habitats is greater for the Proposed Development than for the consented development. Direct and indirect loss of these habitats for the Proposed Development is 5.67ha and 7.98ha respectively which compares with the direct and indirect loss of 4.93ha and 5.65ha respectively for the consented development. The additional habitat loss is due to increased track length, increased footprint of crane hardstandings and an additional construction compound.

5.120 Potentially significant negative effects were identified for the consented development with respect of the permanent loss of 4.93ha and disturbance to 5.65ha of blanket bog wet heath and dry heath habitats included on Annex 1 of the EC Habitats Directive. The area lost and disturbed are larger for the Proposed Development (5.67ha and 7.98ha respectively), however this increase is not sufficiently large enough to change the significance rating of these effects, which remain as a significant negative effect at a regional level.

Potential GWDTE Communities

5.121 For a detailed assessment of the groundwater dependency of these habitats, please refer to **Chapter 6**. In summary, the GWDTE assessment concluded, that all areas of potential GWDTE are sustained by surface water rather than groundwater. As such, no GWDTEs would be affected by the Proposed Development.

Fauna

Reptiles

5.122 Although reptiles have not been recorded on the site, the site is expected to support common lizard and has some potential to support adder, given the suitable habitat present. The construction of the Proposed Development would result in the direct loss of 13.7ha of potentially suitable habitat for these species. This loss is not considered significant, given the extensive availability of similar habitats within the site and the wider area. Indirect/temporary loss of habitat has not been considered here, as it is anticipated that areas subject to drying or other temporary damage would still be used by reptiles for activities such as basking and potentially foraging (following habitat reinstatement).

5.123 Good practice mitigation measures aimed at reptiles (see paragraph 5.100), would be implemented during the construction phase, to prevent the inadvertent injury or killing of individuals. On the basis that the proposed measures are implemented, no significant effects are predicted and no contravention of the relevant legislation is likely.

Otter

5.124 No holts or other resting places have been recorded within the site or 250m buffer and no field evidence such as spraints has been recorded within the survey area, however otter anal jelly was recorded 124m from the application boundary, confirming otter presence in the wider area.

5.125 The death or injury of an otter during construction could potentially have a significant effect on the conservation status of this species in the local area. However, following implementation of good practice measures outlined in paragraphs 5.101 to 5.103, death or injury to otters during construction is not considered likely. As such, no significant effects would be likely to occur.

5.126 Construction activities have some potential to cause temporary disturbance to otters which may occasionally use the watercourses on and around the site for foraging or commuting. This disturbance would likely be via noise and human presence. However, no field evidence of otter was recorded within the site and with the exception of the installation of a new watercourse crossing to provide access to proposed Turbine 9 (which would involve installing a new pipe culvert within an existing drainage ditch) and the use of an existing Ben Aketil track watercourse crossing (sediment clearance works only), there is a 50m minimum stand-off of infrastructure from watercourses. Furthermore, otters have

large home ranges and are able to adapt to a certain level of human disturbance (Chanin, 2003). As such, the likelihood of potential disturbance to otter is low, and no significant effects are considered likely.

Deer

5.127 Red deer are estimated to occur on the site at relatively low density, at an estimated density of less than 5 deer per km^2 (based on information on deer numbers recorded on the site by the site gamekeeper), and roe deer occur on the site very occasionally. The density of red deer on the site is considered to be low in comparison to more favoured areas in the local landscape such as the large forestry block of Glen Vic Askill to the southeast.

5.128 Construction activities have the potential to impact the local wild deer population through displacement during construction. However, it is considered unlikely that construction activities would displace wild deer to an extent that deer could cause damage on neighbouring land, that deer welfare would be negatively affected, or that other significant impacts would be caused, such as an increase in road traffic collisions. This is due to the fact the density of deer on site is estimated to be low, and that construction activities would be restricted to the proposed access tracks and turbine infrastructure areas, with large areas of moorland within the site which do not form part of the construction footprint still be available for deer to use during construction. The fact that red deer and roe deer are primarily crepuscular (i.e. most active at dawn and dusk), and therefore likely to be most active outside of the core construction hours, further reduces the extent to which deer are likely to be displaced off-site during construction.

5.129 Deer welfare is unlikely to be significantly affected by construction activities, as the site and surrounding areas will continue to offer places for food and shelter, such as the forest areas to the north, west and south, and the moorland areas within the site away from the construction footprint. Good practice measures put in place for otter during construction, specifically safe storage of materials and covering of excavations/providing a means of escape (paragraphs 5.101 to 5.103) would also protect deer from harm during construction. It is considered unlikely that construction activities would cause increased road traffic collisions. This is because the majority of the site is distant from any public roads, and because the number of deer potentially displaced would be low. The existing access track joins the A850 road to the north, however there is a large area of forestry providing cover between the road and the main construction areas, such that deer would be unlikely to be displaced onto the road. There would also be an increased presence of construction vehicles on the site, however a site speed limit of 15mph would be implemented, which would minimise the likelihood of deer traffic collisions within the site.

5.130 No signs of over-grazing of vegetation were observed at the site during botanical surveys. NatureScot guidance (SNH, 2016a) states that sustainable deer densities for more sensitive habitats such as woodland establishment and blanket bog sites is <3-5 deer/km^2, while <8-12 deer/km^2 may be appropriate for some less susceptible moorland habitats. In this situation, the estimated density of less than 5 deer/km^2 is considered sustainable for the blanket bog habitats present on the site. Given the relatively low density and expected minimal displacement, it is expected that the retained on-site habitats, and the proposed Peatland Restoration Areas (see paragraphs 5.142 to 5.149), as well as the surrounding off-site habitats including blanket bog habitat, are unlikely to be significantly affected by deer grazing.

5.131 As such, no significant negative impacts on or because of deer during construction are likely, and no management measures such as displacement culls, fencing or diversionary feeding are considered necessary.

Cumulative Effects

Aquatic Receptors

5.132 For the cumulative effects on aquatic receptors during construction, the only potential for significant cumulative effects would be via the discharge or particulate matter into watercourses, or through a pollution incident. Wind farms which are already operational (Ben Aketil Wind Farm and Extension and Edinbane Wind Farm) are not likely to give rise to significant cumulative effects and therefore the assessment has been restricted to wind farms within the same catchment which are yet to be constructed.

5.133 Ben Aketil Repowering and extension lies outwith the hydrological catchment and therefore there is no potential for cumulative effects.

5.134 The watercourses at Ben Sca drain into the Red Burn and Abhainn Choishleadar, which drain into the sea at Loch Greshornish to the north of the site. Glen Ullinish Wind Farm has been consented but not yet been built, and is situated approximately 5.5km southeast of the site. However, it does not sit within the same catchments. Even if constructed simultaneously, there is therefore no potential for cumulative effects. This is also considered to be the case for the proposed Glen Ullinish II Wind Farm.

5.135 The northern sections of the proposed Balmeanach Wind Farm are located in the catchment of Abhainn Choishleadar, within the same catchment as the Proposed Development. Therefore, there is some potential for cumulative effects.

5.136 It is assumed that the proposed Balmeanach Wind Farm would be constructed in line with standard guidance and good practice pollution prevention measures and it is considered that the probability of a pollution event occurring at more than one development is judged to be low, therefore significant cumulative effects are not likely for either watercourses or for the fauna that use them.

Habitats

5.137 For the cumulative effects on habitats during construction, only developments that have not already been constructed and are in close proximity to the Proposed Development have the potential for cumulative effects, therefore the only consented schemes considered are the proposed Balmeanach Wind Farm, and the proposed Ben Aketil Repowering and Extension. Only habitats of conservation interest have been considered in this assessment.

5.138 The construction of the proposed Balmeanach Wind Farm would result in a maximum loss of 27.01ha of blanket bog habitat, 5.49ha of upland wet heath habitat, and 0.13ha of upland dry heath (SLR, 2023b). However, the proposed associated peatland restoration of approximately 77.75ha is expected to offset this loss. This area of restoration is situated next to the Peatland Restoration Area for the Proposed Development (see paragraph 5.153), which is considered to constitute a significant positive cumulative benefit due to habitat connectivity.

5.139 The proposed Ben Aketil Repowering and Extension lies over 1km from the Proposed Development site, and would result in the total loss of 0.11ha wet heath and 33.7ha of modified bog habitat (including blanket bog), of which 13.1ha is direct loss (RSK, 2023). The proposed restoration associated with the scheme would result in the restoration and enhancement of peatland habitat within a 73.5ha area.

5.140 Given the distance of the proposed Ben Akeitil Repowering and Extension from the Proposed Development site and the fact that the direct permanent loss associated with

the proposed Ben Aketil development is relatively small, in addition to the committed peatland restoration within the OHMP, there is unlikely to be potential for cumulative effects due to habitat loss. Although the proposed Balmeanach Wind Farm is only X km from the Proposed Development site, the cumulative positive effect on peatland habitats resulting from restoration outlined in the Balmeanach outline HMP and the Proposed Development HMP, no significant effects are considered likely due to habitat loss.

Additional Mitigation, Compensation and Enhancement

5.141 Embedded mitigation and good practice measures are detailed in paragraphs 5.95 to 5.96, as well as in the draft CEMP (**Technical Appendix 1.1**) and **Chapter 6.** No further mitigation measures are proposed to mitigate against potentially significant effects upon important ecological receptors during construction. However, an HMP would be produced, which would provide full details of measures to compensate for the significant residual effects of habitat loss associated with the Proposed Development and provide biodiversity enhancements. An outline HMP is provided in **Technical Appendix 5.3** and a summary is provided in the following section (paragraphs 5.142 to 5.149).

Habitat Restoration and Management: Peatland Restoration

5.142 Peatland has been identified as a national conservation priority within Scotland's National Peatland Plan (SNPP), for its importance for biodiversity, water quality, and as a carbon store (SNH, 2015b). The SNPP states that peatland restoration is one of the priority projects highlighted in the Scottish Biodiversity Strategy Route Map towards meeting the EU biodiversity target of restoring at least 15% of degraded ecosystems. The most extensive deepest peat soils occur under blanket bog and raised bogs, and these habitats are recognised as internationally important under the EU Habitats Directive (as priority habitats listed on Annex 1).

5.143 The broad principle aim of the outline HMP is to restore and manage 64.73ha of peatland habitat within the afforested area in the northwest corner of the site and similar connected habitat outwith the application boundary (the Proposed Peatland Restoration Area is shown in **Figure 5.3.1** within **Technical Appendix 5.3**). This area currently comprises coniferous plantation forest with poor growth, indicative of trees planted on wet, deep peat. This area has been identified as being appropriate for peatland restoration for the following reasons:

- a peat depth survey (see **Chapter 6**) indicates that peat depth ranges from 0-2.5m but is most frequently 0.5-1.5m;
- the rides between the forest coupes support blanket bog habitat and the forested area lies adjacent to a large expanse of extant blanket bog habitat to the east and southeast, thereby suggesting that the area used to support similar blanket bog communities before being planted;
- the area has been modified via drains to lower the water table and encourage tree growth, indicating that it has good restoration potential via tree felling and ditch blocking to raise the water table; and
- the area lies adjacent to a large area of extant blanket bog to the east and southeast and further areas of blanket bog habitat are located within 1km to the west and south. Restoration of this area would therefore improve the functional connectivity of priority blanket bog habitat within the area.

5.144 Inappropriate tree planting on peat is known to degrade peatland habitat, and can reduce biodiversity, and cause release of greenhouse gases when tree growth is poor and peat soils are heavily drained and disturbed (Forestry Commission Scotland, 2015). It is reasonable to assume that the planting of conifer trees within the proposed peatland restoration area has significantly degraded blanket bog habitat present previously, to the extent where it is no longer peat-forming and has lost its characteristic blanket bog vegetation. As such, the removal of the trees to facilitate the restoration of peatland is considered appropriate in this situation.

5.145 The Scottish Government's Policy on Control of Woodland Removal (Forestry Commission Scotland, 2009) lists criteria where woodland removal, without a requirement for compensatory planting, is most likely to be appropriate. This includes criteria which are applicable here, specifically "*where it would contribute significantly to enhancing priority habitats and their connectivity*". The restoration proposed in **Technical Appendix 5.3** would contribute significantly to enhancing priority blanket bog habitats and their connectivity and it can therefore be concluded that the removal of the conifer trees for the purposes of restoring the peatland, without a requirement for compensatory planting, is appropriate in Scottish Government Policy terms. Further details are also provided in **Technical Appendix 5.4: Forestry Report**.

5.146 The remainder of the site (i.e. the open areas, which are dominated by blanket bog and wet heath habitats) is considered to have limited restoration potential, due to the lack of modification. Most of the areas previously damaged by the fire in 2018 appear to be recovering to a more favourable status without intervention. Additionally, aside from the fire damage, these areas are relatively unmodified and there is therefore limited restoration and management potential. A former borrow pit area to the northwest of the proposed Peatland Restoration Area is not considered to have restoration potential, as it has little soil with peatland restoration potential, and is considered largely unsuitable for tree planting. As such the proposed Peatland Restoration Area for the consented development comprised the only area within the site which has good restoration potential. In order to increase compensation for habitat loss proposed Peatland Restoration Area has been extended into connected similarly suitable habitat outwith the application boundary for the Proposed Development.

5.147 The following measures and specific objectives are proposed within the Peatland Restoration Area (see **Technical Appendix 5.3** for further details):

- to fell trees within a 64.73ha area of conifer plantation within the site, and maintain the area free of trees;
- to increase the water table across the Peatland Restoration Area, through ditch blocking and surface smoothing, in order to restore the underlying processes suitable for blanket bog restoration;
- to create conditions that should, in time, increase the abundance and distribution of bog plants, particularly peat forming *Sphagnum* mosses, and facilitate its recovery back to blanket bog habitat;
- to control threats to regenerating bog/ heath habitats such as grazing and fire;
- to monitor bog/ heath regeneration to assess if the necessary conditions have been created that should, in time, increase the abundance and distribution of bog plants, particularly peat forming *Sphagnum* mosses, and facilitate its recovery back to active peatland habitat; and
- to facilitate the monitoring and evaluation process by identifying areas of reference habitats within/ adjacent to the peatland restoration area against which regeneration

progress can be measured and collecting baseline data within these and the proposed restoration locations.

5.148 The proposed restoration methods are based on published literature, such as Artz *et al.* (2018), SNH (2015a) and Anderson & Pearce (2017). Artz *et al*. (2018) found that the effectiveness of the bog restoration techniques proposed here was very high in terms of restoring the underlying processes (i.e. re-wetting). Anderson & Pearce (2017) also found that the combination of treatments proposed here led to vegetation composition starting to revert back towards open bog over a study period of ten years. Based on these findings at other sites, the methods proposed are considered to have a high likelihood of success, initially in terms of restoring the water table, and in time the reversion of the area to blanket bog.

5.149 Monitoring of the water table height and botanical monitoring would be undertaken to measure the success of the restoration and adapt management if necessary; further details are provided in **Technical Appendix 5.3**.

Residual Effects

5.150 During the construction phase, the permanent loss of up to 11.16ha of bog habitats (Annex 1 blanket bog) is considered to constitute a significant negative effect at the regional level, and the permanent loss of up to 2.49ha of heath habitats (Annex 1 dry heath and wet heath) is considered to constitute a signification negative effect at the local level.

5.151 In order to compensate for the habitat loss, an 64.73ha area, approximately five times the size of the area of habitat to be lost, would be targeted for peatland restoration, as detailed in paragraphs 5.143 and **Technical Appendix 5.3**, as part of an HMP. This would represent a significant positive effect, at a regional level, which would compensate for the predicted loss of habitat.

5.152 The original proposed Peatland Restoration Area for the consented development was 38.53ha. As stated above the proposed Peatland Restoration Area for the Proposed Development would result in the restoration of 64.73ha, which is a 26.2ha increase and results in a significant enhancement when compared with the consented development.

5.153 Furthermore, the proposed Peatland Restoration Area for the Proposed Development is situated directly adjacent to the proposed peatland restoration area for the proposed Balmeanach Wind Farm (approximately 77.75ha) (SLR, 2023b), which will (if Balmeanach is also consented) result in a total area of 142.48ha of peatland restoration, which constitutes a significant positive cumulative benefit due to habitat connectivity.

5.154 Following the employment of mitigation measures, no significant residual effects were predicted for the consented development in relation to faunal species during construction. This is consistent with the assessment of effects for the Proposed Development.

Operational Effects

Potential Effects

5.155 Operational effects (assuming that the stated good practice mitigation measures are implemented) have been addressed for relevant receptors in paragraphs 5.156 to 5.165.

Habitats

5.156 During the operational phase, no significant effects on retained habitats are predicted. Infrastructure would be in place and only occasional service vehicles would be present on the site, with the potential for incidents and spillages affecting sensitive habitats considered to be very low. In addition to this, good practice measures would implemented, further reducing the risk of an incident occurring.

Reptiles

5.157 During the operation of the Proposed Development, only minimal maintenance traffic would be present on the site and this would be restricted to driving along onsite access tracks only, with an applied speed limit similar to that in place during construction. As a result of this, no effects upon reptiles are predicted during operation.

Otter

5.158 Human activity associated with wind farm maintenance would be limited to permanent infrastructure areas and only minimal maintenance traffic would be present, restricted to access tracks and subject to an applied speed limit similar to that in place during construction. As discussed in the 'Construction Effects' section, paragraph 5.126, otter presence within the site and 250m of proposed infrastructure is likely to be occasional at most and therefore the potential for otter to be affected during the wind farm operation is considered to be very low.

5.159 No hazardous chemicals would be stored on the site during the operational phase, and activities involving excavations would have ceased. During major maintenance events, temporary storage of hazardous chemicals could occur onsite, but would be subject to implementation of standard pollution prevention control measures. As a result, there would be limited mechanisms present for causing water pollution.

5.160 Based on the above, assuming that all stated good practice measures are implemented, no significant effects on otter are considered likely during the operational phase.

Deer

5.161 Potential impacts in relation to deer during the operational phase relate to possible grazing impacts upon the proposed Peatland Restoration Area, and collision risk with site traffic/maintenance vehicles.

5.162 As detailed in paragraph 5.127, the estimated density of deer on the site is considered sustainable for blanket bog habitat, and no adverse grazing impacts upon the existing blanket bog vegetation at the site was observed during botanical surveys. As such, it is unlikely that deer grazing would negatively impact the aims of the peatland restoration, and therefore no specific management actions such as deer fencing or additional culling are proposed. As detailed in **Technical Appendix 5.3**, the Peatland Restoration Area would be subject to botanical monitoring, which includes monitoring grazing impacts on vegetation, such that a mechanism would be in place to identify the need for remedial action in the unlikely situation that deer grazing is found to be adversely impacting the establishment of the restored habitat.

5.163 Only minimal maintenance traffic would be present during the operational phase, which would be subject to a site speed limit similar to that in place during construction, such that increased traffic collision risk is considered minimal. Significant displacement, and

therefore any impacts on neighbouring habitats and roads, is not likely during the operational phase due to minimal disturbance.

5.164 Overall, no significant negative effects are predicted upon wild deer or resulting from wild deer during the operational phase. Given that no significant negative effects are predicted for both the construction and operational phases, it is concluded that a draft deer management statement is not required, following the criteria within the SNH (2016a) guidelines.

Cumulative Effects

5.165 There is no potential for significant cumulative effects on ecological receptors during the operational phase (see paragraph 5.155).

Additional Mitigation, Compensation and Enhancement

5.166 Good practice measures in relation to pollution risk, sediment management and watercourse crossings to be adopted during the operational phase are also set out in **Chapter 6**. No additional mitigation measures are required for the operational phase. However, compensation and enhancement measures provided as part of the HMP (paragraphs 5.142 to 5.149 and **Technical Appendix 5.3**) would remain in place during the operational phase.

Residual Effects

5.167 No significant residual effects are anticipated during the operational phase, this is in line with the assessment of residual operational effects for the consented development.

Decommissioning Effects

5.168 Details surrounding the decommissioning phase are yet to be clarified. The anticipated operational life of the wind farm is 30 to 40 years. At the end of the lifetime a decommissioning plan will be prepared. In addition, it is also recognised that policy, legislation and local sensitivities constantly evolve, which limits the relevance of undertaking an assessment at this stage. Nevertheless, any potential effects arising from decommissioning activities are not anticipated to exceed those assessed for the construction phase.

Further Survey Requirements and Monitoring

Habitat Monitoring

5.169 Vegetation monitoring and monitoring of water table height would be undertaken as part of the HMP, as detailed in **Technical Appendix 5.3**, in order to assess the efficacy of the implemented measures.

Summary of Predicted Effects

Proposed Development

5.170 **Table 5-9** provides a summary of effects on important ecological receptors, mitigation and compensation measures and residual effects.

Table 5-9: Summary of Effects on Important Ecological Receptors

Predicted Effect	Good Practice Measures	Significance	Additional Mitigation/ Compensation	Residual Significance
Construction				
Permanent loss (direct and indirect) of up to 11.16ha of Annex 1 blanket bog habitat.	Hydrological mitigation measures and erection of temporary protective fencing to minimise effects on retained habitats.	Significant at a regional level.	Restoration of 64.73ha of peatland habitats as part of the HMP.	Significant negative effect at a regional level, but compensated for through a significant positive effect at a regional level via the proposed peatland restoration.
Permanent loss (direct and indirect) of up to 2.49ha of Annex 1 heathland habitat (heath and wet heath).	Hydrological mitigation measures and erection of temporary protective fencing to minimise effects on retained habitats.	Significant at a local level.	Restoration of up to 64.73ha of peatland habitats as part of the HMP.	Significant negative effect at a local level, but compensated for through a significant positive effect at a regional level via the proposed peatland restoration.
Water quality impacts (running water).	Hydrological and pollution prevention measures (detailed in **Chapter 6** and **Technical Appendix 1.1**); including adherence to SEPA PPGs/GPPs. 50m watercourse buffer zone (aside from single watercourse crossing to provide access to proposed Turbine 9 and sediment clearance at one existing watercourse crossing).	Not Significant.	None.	Not significant.
Loss of up to 13.7ha of suitable habitat for reptiles	Reinstatement of habitats subject to temporary loss.	Not Significant.	None.	Not significant.
Inadvertent disturbance, injury and/or death of reptiles.	Habitat manipulation to make habitat unsuitable (overseen by EnvCoW). Site speed limit.	Not Significant.	None.	Not significant.
Inadvertent disturbance, injury and/or death to otter.	Pre-construction surveys. Covering/ramping of excavations.	Not Significant.	None.	Not significant.

Predicted Effect	Good Practice Measures	Significance	Additional Mitigation/ Compensation	Residual Significance
	Site speed limit. Suitable storage of materials.			
Inadvertent disturbance, injury and/or death of badger and pine marten (if found to colonise the site in the future – currently absent).	Pre-construction surveys. Suitable storage of materials. Covering/ramping of excavations.	Not Significant.	None.	Not significant.
Inadvertent displacement, injury and road collision of deer.	Site speed limit. Suitable storage of materials. Covering/ramping of excavations.	Not Significant.	None.	Not significant.
Operation				
Damage to habitats, and disturbance/injury/ killing of otter and reptiles.	Good practice measures implemented during operational maintenance similar to construction period (see **Chapter 6**). 50m watercourse buffer zone. Adherence to SEPA PPGs/GPPs. Site speed limit. Suitable storage of chemicals.	Not Significant.	None.	Not significant.
Inadvertent displacement and road collision of deer, and deer grazing damage to Peatland Restoration Area.	Site speed limit.	Not Significant.	Monitoring of vegetation in Peatland Restoration Area for grazing damage as part of HMP and implementation of remedial action if necessary.	Not significant.

5.171 In addition to the compensation detailed in **Table 5-9**, there will be an increase of 26.2ha of peatland restoration when compared with the consented development. This is considered to provide significant enhancement at a regional level.

Cumulative Effects

5.172 Significant cumulative effects, during both the construction and operational phases, are considered unlikely, as detailed further in paragraphs 5.141 to 5.166.

Statement of Significance

5.173 Following the avoidance of important receptors during the project design where possible, and with the implementation of the proposed good practice measures and additional mitigation, impacts would be minimised as far as possible.

5.174 The Proposed Development would result in significant residual negative effects during construction including the loss of blanket bog at a regional level, and the loss of wet and dry heath at the local level. However, the habitat loss would be compensated by a significant positive effect at a regional level, through the peatland restoration proposed, to be delivered via an HMP. No other significant effects are predicted during the construction phase, following the implementation of the proposed good practice measures.

5.175 With the implementation of continued good practice measures and the implementation of the proposed HMP, no significant negative effects are predicted during the operational phase.

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Figures

Appendices