6 BIODIVERSITY

6.1 Executive Summary

6.1.1 This chapter has considered potential impacts and their associated effects on ecological features, such as designated nature conservation sites, habitats, and protected species in line with best practice guidance from the Chartered Institute of Ecology and Environmental Management (CIEEM)[1].

6.1.2 The field survey area was surveyed between 2016 and 2021 to provide baseline information on habitats and faunal species. Surveys included an extended Phase 1 habitat survey and National Vegetation Classification (NVC) surveys. The dominant habitats were coniferous woodland plantation, wet modified bog and semi-improved acid grassland. Potential Groundwater Dependent Terrestrial Ecosystems (GWDTEs) were recorded throughout the field survey area. Protected species surveys identified the presence of Bat Roost Potential (BRP) trees, badger *Meles meles*, water vole *Arvicola amphibius*, otter *Lutra lutra*, pine marten *Martes martes*, red squirrel *Sciurus vulgaris*, common lizard *Zootoca vivipara*, common frog *Rana temporaria*, and common toad *Bufo bufo*.

6.1.3 Without the application of mitigation, significant effects are predicted on Ancient Woodland, peatland (wet heath and flushes), BRP trees, water vole, and otter. Following the application of mitigation, such as native woodland retention measures, compensatory planting, peatland restoration, habitat reinstatement, a Construction Environmental Management Plan (CEMP), pollution prevention measures, and inspection of BRP trees to be felled, no significant residual effects are predicted, with the exception of Ancient Woodland. A long-term significant adverse residual effect would remain for the loss of Ancient Woodland until such time as the replacement woodland areas are fully established and functional (from 80-100 years).

6.1.4 Significant cumulative effects are also predicted on Ancient Woodland between the surrounding cumulative developments and the Proposed Development.

6.2 Introduction

6.2.1 This chapter assesses the potential impacts on (non-avian) biodiversity associated with the construction, operation and decommissioning of the Proposed Development. This chapter (and its associated Figures and Appendices) is not intended to be read as a standalone assessment and reference should be made to the introductory chapters of this Environmental Impact Assessment (EIA) Report **(EIAR Volume 2, Chapters 1-5)**.

6.2.2 The assessment has been carried out by Nadine Little of Ramboll UK Limited (Ramboll). Nadine is a senior ecological consultant and Associate member of the CIEEM with a Masters in Wildlife Biology and Conservation and eight years' experience of undertaking ecology surveys and Ecological Impact Assessments (EcIAs).

6.2.3 This chapter is accompanied by the following Figures and Technical Appendices:

- **Figure 6.1: Biodiversity Constraints;**
- **Figure 6.2: Phase 1 Habitats;**
- **Figure 6.3: NVC;**
- **Figure 6.4: Target Notes;**
- **Figure 6.5: Target Notes;**
- **Figure 6.6: GWDTE;**
- **Technical Appendix 6.1: Biodiversity Methodology and Results;**

[1] CIEEM (2018), *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine*. Version 1.1. Available: https://cieem.net/wp-content/uploads/2018/08/ECIA-Guidelines-2018-Terrestrial-Freshwater-Coastal-and-Marine-V1.1.pdf [17th August 2021].

- **Technical Appendix 6.2: Confidential Biodiversity Results; and**
- **Technical Appendix 6.3: Outline Habitat Management Plan.**

6.2.4 **Figure 6.5: Target Notes (EIAR Volume 3a)** and **Technical Appendix (TA) 6.2: Confidential Biodiversity Results (Confidential Volume)** are confidential and must not be shared with members of the public as they contain the locations of protected dwellings of persecuted species, such as badger setts.

6.3 Assessment Methodology and Significance Criteria

Scope of the Assessment

6.3.1 This chapter focuses on the potential impacts of the construction, operation and decommissioning of the Proposed Development upon ecological features, aligning with best practice EcIA Guidelines developed by CIEEM[2]. This chapter has also been prepared with reference to the applicable legislative framework as well as national and local planning policy, outlined in paragraph 6.3.6 onwards. Specific guidance documents for habitats and species are referenced throughout this chapter and the associated Appendices, as appropriate.

6.3.2 The specific objectives of this chapter and the accompanying Technical Appendices are to:

- describe the assessment methodology and significance criteria used in completing the impact assessment;
- describe the ecological baseline of the Proposed Development and its zone of influence (ZOI)[3], including designated nature conservation sites, habitats and protected species, and, thereby, identify the ecological features that will be the focus of this assessment;
- evaluate the sensitivity of each ecological feature;
- describe the potential impacts from the Proposed Development, both direct and indirect, on ecological features and assess whether they result in likely significant adverse effects for the ecological features;
- describe the mitigation measures proposed to avoid, reduce and offset likely significant adverse effects;
- assess the significance of residual effects remaining following the implementation of mitigation; and
- assess the significance of cumulative effects between the Proposed Development and cumulative developments.

6.3.3 Potential impacts and effects on ornithological features and forestry are addressed separately in **Chapter 7: Ornithology** and **Chapter 11: Forestry (EIAR Volume 2)**, respectively.

6.3.4 This chapter is based on the Proposed Development as described in **Chapter 2: Description of the Proposed Development (EIAR Volume 2)**.

Legislation, Policy and Guidelines

6.3.5 The scope of the assessment has been informed by the following policy and legal framework:

Legislation

6.3.6 Relevant legislation has been reviewed and taken into account as part of this biodiversity assessment. Of relevance are:

- EC Directive on the Conservation of Natural Habitats and Wild Flora and Fauna, 92/43/EEC 1992[4];

[2] CIEEM (2018), *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine*. Version 1.1. Available: https://cieem.net/wp-content/uploads/2018/08/ECIA-Guidelines-2018-Terrestrial-Freshwater-Coastal-and-Marine-V1.1.pdf [17th August 2021].

[3] The area over which ecological features may be subject to significant effects as a result of the Proposed Development and its associated activities. In this case, the ZOI is considered to be up to 10 km beyond the site boundary.

[4] EC Directive on the Conservation of Natural Habitats and Wild Flora and Fauna (1992): http://ec.europa.eu/environment/nature/legislation/habitatsdirective/index_en.htm [17th August 2021].

- Conservation of Habitats and Species (Amendment) (EU Exit) Regulation 2019[5];
- The Conservation of Habitats and Species Regulations 2017[6];
- Conservation (Natural Habitats Etc.) Regulations 1994[7];
- Wildlife and Countryside Act 1981[8];
- Nature Conservation (Scotland) Act 2004[9];
- Wildlife and Natural Environment (Scotland) Act 2011[10];
- UK Post-2010 Biodiversity Framework 2012[11];
- Electricity Act 1989[12];
- The Electricity Works (Environmental Impact Assessment) (Scotland) Act 2017[13]; and
- The Ramsar Convention on Wetlands 1971[14].

Planning Policy

6.3.7 Relevant planning policies reviewed for this biodiversity assessment are:

- Scottish Planning Policy 2014[15];
- UK Biodiversity Action Plan (BAP) 2010[16];
- Scottish Biodiversity List (SBL) 2005[17];
- 2020 Challenge 2013[18];
- Argyll and Bute Local BAP[19]; and
- Argyll and Bute Biodiversity Duty Action Plan[20].

Guidance

6.3.8 Best practice guidance has been recognised when undertaking field surveys and is detailed in **TA 6.1: Biodiversity Methodology and Results (EIAR Volume 4)**.

Extent of the Study Area

6.3.9 As detailed in **TA 6.1: Biodiversity Methodology and Results (EIAR Volume 4)**, the Biodiversity Study Area comprises a desk Study Area of a 10 km buffer around the Proposed Development and a field survey area of 250 m on either side of the Proposed Development, as shown on **Figure 6.1: Biodiversity Constraints (EIAR Volume 3a)** and **Figure 6.2: Phase 1 Habitats (EIAR Volume 3a)**.

[5] The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations (2019): https://www.legislation.gov.uk/ukdsi/2019/9780111176573#:~:text=%20The%20Conservation%20of%20Habitats%20and%20Species%20(Amendment),of%20capturing%20or%20killing%20fish%20are%E2%80%94%20More [17th August 2021].
[6] The Conservation of Habitats and Species Regulations (2017): https://www.legislation.gov.uk/uksi/2017/1012/contents/made [17th August 2021].
[7] The Conservation (Natural Habitats Etc.) Regulations (as amended) (1994): http://www.legislation.gov.uk/uksi/1994/2716/contents/made [17th August 2021].
[8] The Wildlife and Countryside Act (as amended) (1981): http://www.legislation.gov.uk/ukpga/1981/69 [17th August 2021].
[9] Nature Conservation (Scotland) Act (as amended) (2004): http://www.legislation.gov.uk/asp/2004/6/contents [17th August 2021].
[10] Wildlife and Natural Environment (Scotland) Act (2011): http://www.legislation.gov.uk/asp/2011/6/enacted [17th August 2021].
[11] UK Post-2010 Biodiversity Framework (2012): http://jncc.defra.gov.uk/page-6189 [17th August 2021].
[12] Electricity Act (1989): https://www.legislation.gov.uk/ukpga/1989/29/contents [17th August 2021].
[13] The Electricity Works (Environmental Impact Assessment) (Scotland) Act (2017): http://www.legislation.gov.uk/ssi/2017/101/contents/made [17th August 2021].
[14] Ramsar Convention on Wetlands (1971): http://www.ramsar.org/about-the-ramsar-convention [17th August 2021].
[15] Scottish Planning Policy (2014): https://www.gov.scot/publications/scottish-planning-policy/pages/2/ [17th August 2021].
[16] UK BAP: http://jncc.defra.gov.uk/default.aspx?page=5155 [17th August 2021].
[17] The Scottish Biodiversity List (2005): https://www.nature.scot/scottish-biodiversity-list-documents [17th August 2021].
[18] The 2020 Challenge: http://www.gov.scot/Publications/2013/06/5538 [17th August 2021].
[19] The Argyll and Bute Local BAP (2010-2015): https://www.argyll-bute.gov.uk/sites/default/files/Unknown/AandB%20BAP%20Draft.pdf [28th September 2021].
[20] Argyll and Bute Biodiversity Duty Action Plan (2016-2021): https://www.argyll-bute.gov.uk/sites/default/files/argyll_and_bute_council_biodiversity_duty_action_plan_final_version_april_2016_2.pdf [28th September 2021].

Consultation Undertaken to Date

6.3.10 Consultation undertaken to date mainly pertains to the EIA Scoping Report. Scoping responses received at the time of writing that are relevant to this chapter are captured in **Table 6.1**. Further information can be found in **TA 4.3: Consultation Register (EIAR Volume 4)**.

Table 6.1: Scoping Responses and Other Consultations of Relevance to Chapter 6

Organisation	Type of Consultation	Organisation Response	How Response has been Considered by the Applicant
NatureScot (NS) (previously Scottish Natural Heritage (SNH))	EIA Scoping Report; March 2021	The key issues NS requires to be addressed in detail as part of the EIA process include impacts on nationally important carbon-rich soils, deep peat and priority peatland habitat.	The avoidance of high-quality habitats that are actively peat-forming has been considered throughout the design process and these areas have been avoided, where possible. The full results of habitat surveys are provided in **TA 6.1: Biodiversity Methodology and Results (EIAR Volume 4)** and summarised in section 6.4. Details of peat-probing surveys are provided in **Chapter 10: Hydrology, Hydrogeology, Geology and Soils (EIAR Volume 2)**.
		The proposed scope of methodologies and surveys of the key ecological receptors identified in Chapter 6, should adequately assess the overall ecological impacts.	The methodology for the field surveys undertaken on the site are provided in **TA 6.1: Biodiversity Methodology and Results (EIAR Volume 4)**. The results of these surveys are provided in section 6.4 and **TA 6.1: Biodiversity Methodology and Results (EIAR Volume 4)**.
		The proposal includes areas of class 2, 3 and 5 peatland[21]. As such, there may be priority peatland habitat present that will need to be identified and best practice taken into account when micro-siting or identifying mitigation for this proposal. The following guidance should be followed for surveying the peatland resource: https://www.gov.scot/publications/peatland-survey-guidance. For information, the following guidance may help with identifying best practice for priority habitat: https://www.nature.scot/advising-carbon-rich-soils-deep-peat-and-priority-peatland-habitat-development-management.	The layout of the Proposed Development has, as far as possible, been designed to avoid habitats of highest ecological importance and highest sensitivity to impacts. This includes priority peatland habitat. Mitigation measures are discussed in section 6.6. Peatland habitat management issues are dealt with in the outline habitat management plan provided in **TA 6.3: Outline Habitat Management Plan (EIAR Volume 4)**. Peatland mitigation is also considered in **Chapter 10: Hydrology, Hydrogeology, Geology and Soils (EIAR Volume 2)**. An outline peat management plan is provided in **TA 10.2:**

[21] Carbon and Peatland Map (2016): https://soils.environment.gov.scot/maps/thematic-maps/carbon-and-peatland-2016-map/ [5th October 2021].

Table 6.1: Scoping Responses and Other Consultations of Relevance to Chapter 6

Organisation	Type of Consultation	Organisation Response	How Response has been Considered by the Applicant
			Outline Peat Management Plan (EIAR Volume 4). Best practice for working in peatland is also considered in **TA 10.3: Peat Landslide Hazard Risk Assessment (EIAR Volume 4)**.
		The National Vegetation Classification (NVC) for the proposed Overhead Line (OHL) alignment 2020 section from T33 to the east appears to be missing. This will need to be completed and submitted as part of the EIAR.	Surveys of this area were completed between May 2019 and February 2021 and the results are shown on **Figure 6.3: NVC (EIAR Volume 3a)**.
		It was noted that the Phase 1 habitats map shows an extensive area of E1.7 wet modified bog that includes a small rectangular area of E1.6.1 blanket sphagnum bog. There is no obvious difference in bog condition between these areas so this may be a mapping error.	Ground-truthing surveys undertaken between May 2019 and February 2021 recorded more areas of blanket bog than recorded during initial surveys as shown on **Figure 6.2: Phase 1 Habitats (EIAR Volume 3a)**. This was due to an increased presence of bog-moss *Sphagnum sp.*
Argyll District Salmon Fishery Board	EIA Scoping Report; March 2021	We would like to draw attention to the important salmon and trout spawning and nursery habitats in the Teatle Water, Allt Fearna and the Cladich River, which the Proposed Development will potentially cross. We ask that the Developer demonstrate that stream crossings, the development of the road network and construction of pylon foundations are undertaken in a sensitive manner that maintain the quality and accessibility of the habitat to fish.	While the Proposed Development crosses a number of watercourses, the OHL design has aimed to locate towers further than 30 m from watercourses, where possible. The design and assessment of watercourse crossings is provided in **TA 10.4: Watercourse Crossing Assessment (EIAR Volume 4)**. General mitigation measures to protect watercourses would be included within the Outline CEMP and the Applicants General Environmental Management Plans (GEMPs) (**TA 2.2 and 2.3, EIAR Volume 4**), on the assumption of the presence of important ecological features (including fish and freshwater pearl mussel) to avoid significant effects. Pollution control measures will be in place to protect watercourses and control the flow of any run-off from construction or operational activities, as described in paragraph 6.6.40.

Table 6.1: Scoping Responses and Other Consultations of Relevance to Chapter 6

Organisation	Type of Consultation	Organisation Response	How Response has been Considered by the Applicant
Royal Society for the Protection of Birds (RSPB)	EIA Scoping Report; March 2021	The EIAR should include a full survey, impact assessment and proposals for mitigation in relation to important habitats on this site. Mitigation should ideally minimise any impact and avoid areas of high-quality habitats found upon the site. Particular attention should be given to peatland. The majority of the site falls into Class 5 and is located within commercial forestry. There are, however, a few towers that are proposed to be built on Class 2 peatland. The majority of the 'preferred route option 3' also falls on Class 2 peatland. We would recommend that when the plans for this develop further that this section should be constructed in the footprint of commercial forestry to safeguard the peatland and open habitat in this area. A full assessment of the carbon implications of this proposal should be undertaken. A mitigation plan for any peatland affected by the proposal should also be put forward.	The layout of the Proposed Development has, as far as possible, been designed to avoid habitats of highest ecological importance and highest sensitivity to impacts. This includes priority peatland habitat. Mitigation measures are discussed in Section 6.6. Peatland habitat management issues are dealt with in the outline habitat management plan provided in **TA 6.3: Outline Habitat Management Plan (EIAR Volume 4)**. Peatland mitigation and carbon implications of the Proposed Development are also detailed in **Chapter 10: Hydrology, Hydrogeology, Geology and Soils (EIAR Volume 2)**. An outline peat management plan is provided in **TA 10.2: Outline Peat Management Plan (EIAR Volume 4)**. Best practice for working in peatland is also considered in **TA 10.3: Peat Landslide Hazard Risk Assessment (EIAR Volume 4)**.
		The proposals footprint also cuts across several areas highlighted under the Ancient Woodland Inventory[22]. Any loss of this habitat should be minimised and, if unavoidable, compensatory planting should be undertaken, with advice taken from NS.	Habitat loss would occur in Ancient Woodland, as detailed in Section 6.6 and in **Chapter 11: Forestry (EIAR Volume 2)**. Mitigation measures includes compensatory native tree planting to enhance existing Ancient Woodland areas, as detailed in **TA 6.3: Outline Habitat Management Plan (EIAR Volume 4)**.
		The EIAR should consider what mitigation measures are required to minimise the impact on important species and contain detailed ecological justification for any such proposals. Ideally, this should include relevant time frames for mitigation in relation to site development.	Mitigation measures required to mitigate for likely significant effects are detailed in Section 6.6.

[22] A Guide to Understanding the Ancient Woodland Inventory (2018): https://www.nature.scot/sites/default/files/2018-11/A%20guide%20to%20understanding%20the%20Scottish%20Ancient%20Woodland%20Inventory%20%28AWI%29.pdf [5th October 2021].

Method of Baseline Data Collation

6.3.11 The methodologies for the desk study and field surveys, and the impact assessment methodology are described in **TA 6.1: Biodiversity Methodology and Results (EIAR Volume 4)**.

Limitations and Assumptions

6.3.12 It should be noted that the availability and quality of the data obtained during desk studies is reliant on third party responses and recorders. This varies from region to region and for different species groups. Furthermore, the comprehensiveness of data often depends on the level of coverage, the expertise and experience of the recorder and the submission of records to the local recorder.

6.3.13 The habitat and faunal surveys provide a snapshot of ecological conditions and do not record plants or animals that may be present in the field survey area at different times of the year. The absence of a particular species cannot be confirmed by a lack of field signs and only concludes that an indication of its presence was not located during the survey effort.

6.3.14 Due to the remote nature of the field survey area, surveys were not impacted by coronavirus restrictions as local surveyors were able to travel separately to the field survey area and maintain social distancing.

6.4 Baseline Conditions

Current Baseline

Desk Study

Statutory Designated Nature Conservation Sites

6.4.1 No statutory designated nature conservation sites for ecological features occur within the field survey area, as shown on **Figure 6.1: Biodiversity Constraints (EIAR Volume 3a)**. The statutory designated nature conservation sites for ecological features that occur in the Biodiversity Study Area are not considered to have potential connectivity with the Proposed Development, as detailed in **TA 6.1: Biodiversity Methodology and Results (EIAR Volume 4)**. As a result, no statutory designated nature conservation sites for ecological features are considered further in this assessment.

Non-statutory Designated Nature Conservation Sites

6.4.2 There are six areas of woodland identified as Ancient Woodland or included on the semi-natural woodland inventory[23] in the Biodiversity Study Area and crossed by the Proposed Development, as shown on **Figure 6.1: Biodiversity Constraints (EIAR Volume 3a)**.

6.4.3 Native and Ancient Woodlands are important for biodiversity and nature conservation. Ancient woodland is defined as an area of woodland that has been continually wooded since 1750, and there is a strong presumption in Scottish Planning Policy against the removal of woodland on Ancient Woodland sites[24]. However, the woodland included on the semi-natural woodland inventory in the Biodiversity Study Area is primarily coniferous woodland plantation, which offers limited support for biodiversity and is, therefore, not considered further in this assessment.

[23] A Guide to Understanding the Ancient Woodland Inventory (2018): https://www.nature.scot/sites/default/files/2018-11/A%20guide%20to%20understanding%20the%20Scottish%20Ancient%20Woodland%20Inventory%20%28AWI%29.pdf [5th October 2021].

[24] The Scottish Government's Policy on Control of Woodland Removal (2009): https://forestry.gov.scot/publications/285-the-scottish-government-s-policy-on-control-of-woodland-removal/viewdocument/285 [5th October 2021].

Argyll and Bute Local BAP

6.4.4 The Biodiversity Study Area is located in the Argyll and Bute BAP area[25]. The BAP covers the period of 2010-2015 but is yet to be updated. It should be read in conjunction with the Argyll and Bute Biodiversity Duty Action Plan[26]. The priority habitats and species present in Argyll and Bute and included in the BAP which are relevant to the Proposed Development based on the habitats and species recorded in the field survey area, are detailed in **Table 6.2**.

Table 6.2 Relevant Habitats and Species Included in the Argyll and Bute BAP

Habitat	Species
Atlantic woodland	Lichen species
Improved grassland	Marsh fritillary *Euphydryas aurinia*
Machair and dune	Bats
Native Caledonian pinewoods	Otter
Peatlands	Pearl-bordered fritillary *Boloria euphrosyne*
Planted conifer forest	Red deer *Cervus elaphus*
Unimproved grassland	Red squirrel
	Brown hare *Lepus europaeus*
	Water vole
	Wildcat *Felis silvestris*
	Slender Scotch burnet *Zygaena loti*
	Sword-leaved helleborine *Cephalanthera longifolia*
	Transparent burnet moth *Zygaena purpuralis*

Field Surveys

6.4.5 Full details of the results of the field surveys undertaken for the Proposed Development are provided in **TA 6.1: Biodiversity Methodology and Results (EIAR Volume 4)**. Summarised results are provided in this chapter.

Phase 1 Habitats

6.4.6 The dominant habitats present in the field survey area are coniferous woodland plantation, wet modified bog and semi-improved acid grassland, as shown on **Figure 6.2: Phase 1 Habitats (EIAR Volume 3a)**. Target notes are shown on **Figure 6.4: Target Notes (EIAR Volume 3a)** and described in **Table 6.1.7** in **TA 6.1: Biodiversity Methodology and Results (EIAR Volume 4)**. Target notes are shown on **Figure 6.5: Target Notes (EIAR Volume 3a)** and described in **TA 6.2: Confidential Biodiversity Results (Confidential Volume)**. Potentially sensitive habitats (excluding coniferous plantation woodland) recorded in the field survey area are detailed in **Table 6.3**[27].

[25] The Argyll and Bute Local BAP (2010-2015): https://www.argyll-bute.gov.uk/sites/default/files/Unknown/AandB%20BAP%20Draft.pdf [28th September 2021].
[26] Argyll and Bute Biodiversity Duty Action Plan (2016-2021): https://www.argyll-bute.gov.uk/sites/default/files/argyll_and_bute_council_biodiversity_duty_action_plan_final_version_april_2016_2.pdf [28th September 2021].
[27] The area within the Proposed Development footprint is considered in Section 6.6. This is the baseline of what is present in the field Study Area and is used to calculate the percentage loss shown in **Tables 6.8 to 6.11.**

Table 6.3 Sensitive Habitat Types

Habitat Type	Area within Field Survey Area (ha)
A1.1.1 Semi-natural Broadleaved Woodland	68.42
A1.1.2 Broadleaved Woodland Plantation	26.43
A2.2 Scattered Scrub	5.29
A4.3 Recently Felled Mixed Woodland	62.02
B1.1 Unimproved Acid Grassland	24.71
B1.2 Semi-improved Acid Grassland	107.30
B2.2 Semi-improved Neutral Grassland	18.99
B5 Marshy Grassland	63.77
D2 Wet Heath	5.69
D5 Dry Heath/Acid Grassland Mosaic	0.27
E1.6.1 Blanket Bog	27.66
E1.7 Wet Modified Bog	187.78
E2.1 Acid/Neutral Flush	4.47
E2.2 Basic Flush	2.71

6.4.7 Running water habitat is also present in the field survey area, including the Teatle Water, Allt Fearna and the Cladich River. A number of watercourse crossings occur as part of the Proposed Development and further details are provided in **TA 10.4: Watercourse Survey (EIAR Volume 4)**. A single acidic pond of good habitat condition occurs 11.26 m from a proposed new stone permanent access track, as shown by Target Note TN3[28] on **Figure 6.4.2**.

6.4.8 No invasive non-native[29] plant species were recorded during field surveys.

GWDTEs

6.4.9 The habitats classified during NVC surveys are shown on **Figure 6.3: NVC (EIAR Volume 3a)**. The NVC results were used to determine the potential groundwater dependency of the habitats present in the field survey area. Six potential moderate GWDTEs were recorded, as shown on **Figure 6.6: GWDTE (EIAR Volume 3a)**, with their NVC types shown on **Figure 6.3: NVC (EIAR Volume 3a)**. A further two small areas of potential high GWDTEs were also recorded as shown by Target Notes 1, 2a and 2b on **Figure 5.5**. **Table 6.4** provides further information on the potential GWDTEs recorded in the field survey area. **TA 6.1: Biodiversity Methodology and Results (EIAR Volume 4)** provides full details on the target notes and the full names of all NVC communities, which have been shortened here for ease.

Table 6.4 Potential GWDTEs

NVC Community	Groundwater Dependency[30]	Area within Field Survey Area (ha)

[28] Non-Confidential target notes are named TN1, TN2 etc. and Confidential target notes are named Target Note 1, Target Note 2 etc.

[29] As Defined by the Wildlife and Countryside Act 1981 (as amended by the Wildlife and Natural Environment (Scotland) Act 2012.)

[30] Guidance on Assessing the Impacts of Wind farm Development Proposals on Groundwater Abstractions and Groundwater Dependent Terrestrial Ecosystems: https://www.sepa.org.uk/media/143868/lupsgu31_planning_guidance_on_groundwater_abstractions.pdf [1 April 2020].

Table 6.4 Potential GWDTEs		
M6	High	0.17
M17/M6		0.05
M23/M6		0.12
U20/M6		1.00
M6d		77.28
M21b		14.34
M23		0.15
M23/M6		0.12
M23a		2.83
W11/W4/W17/W7		1.96
W17/W4/W11		0.66
W4		0.75
W4b		0.70
W7		0.76
W7/W11/W17/W4		2.87
W7/W17		2.92
W7/W4		6.63
M15	Moderate	2.57
M15/M17		0.46
M15/M19		0.61
M15/U20		0.55
M15/U4/U5		0.48
M15/U6		3.68
M17/M15		0.42
M25		5.11
M25/U20		6.11
M25/U6		2.70
M25a		17.36
M25a/M15		12.59
M28		0.17
MG10		0.73
MG10/U20		0.07
MG10/U6		0.12

Table 6.4 Potential GWDTEs		
U4/MG10		1.05
U4/U6/MG10		0.58
U4/U6/U20		0.82
U6		0.40
M15/M6/U20	Mod/High	0.51
M25/M23		3.22
M25/M27/M6d		0.05
M25/M6d		0.92
M25a/M23a/M6d		2.57
M25a/M6		3.11
U20/M23/U4/U6		2.20

6.4.10 Other small areas of potential GWDTEs too small to map were also recorded throughout the field survey area and are detailed in **Table 6.5** and shown on **Figure 6.4: Target Notes (EIAR Volume 3a)**.

Table 6.5 GWDTE Target Notes		
NVC Community	**Groundwater Dependency[31]**	**Target Note**
M23 *Juncus effusus/acutiflorus-Galium palustre* rush-pasture	High	TN15, TN20, TN21, TN22, TN24, TN25, TN29, TN31, TN34, TN38, and TN47.
M10 *Carex dioica-Pinguicula vulgaris* mire		TN25, TN26, and TN33.
M15 *Scirpus cespitosus-Erica tetralix* wet heath	Moderate	TN20, TN28, TN35, TN36, and TN39-TN43.
M25 *Molinia caerulea-Potentilla erecta* mire		TN31, TN42, and TN43.
MG9 *Holcus lanatus-Deschampsia cespitosa* grassland		TN21, TN22, and TN24.

6.4.11 Further information on the hydrological and hydrogeological sensitivity and an assessment of the groundwater dependency of the potential GWDTEs is provided in **TA 10.5: GWDTE (EIAR Volume 4)**.

Bat Roost Potential Trees

6.4.12 Trees with medium to high BRP were recorded along the Eas nan Ruadh, Cladich River as shown by Target Notes TN56 and TN57 on **Figure 6.4a**, Target Notes TN50-TN53, TN55 and TN58-TN60 on **Figure 6.4c**, and Target Notes TN17, TN21, TN30, TN32, and TN48 on **Figure 6.4e**. The closest BRP trees to the Proposed Development are the three trees TN53, TN55 and TN57. TN53 and TN57 occur 26.22 m and 12.42 m, respectively, from the Proposed Development. TN55 occurs directly on the location of a new stone temporary access track.

[31] Guidance on Assessing the Impacts of Wind farm Development Proposals on Groundwater Abstractions and Groundwater Dependent Terrestrial Ecosystems: https://www.sepa.org.uk/media/143868/lupsgu31_planning_guidance_on_groundwater_abstractions.pdf [1 April 2020].

6.4.13 One tree with low BRP that would need to be removed as part of the Proposed Development is shown by Target Note TN54 on **Figure 6.4b**. It is located 16.89 m from the Proposed Development and within the OHL felling corridor.

Protected Terrestrial Mammals

6.4.14 Target notes for protected and notable terrestrial mammals are shown on **Figure 6.4: Target Notes** and **Figure 6.5: Target Notes (EIAR Volume 3a)** and described in **TA 6.1: Biodiversity Methodology and Results** and **TA 6.2: Confidential Biodiversity Results (Confidential Volume)**, respectively. The following protected or notable terrestrial mammals were recorded during field surveys:

- Six active badger setts, including a main breeding sett, were recorded (Target Notes 1, 2, 4, 7, 14, 14.1 and 17 on **Figure 6.5: Target Notes (Confidential Volume)**). These four setts occur 16.15 m, 29.96 m, 8.77 m and 8.15 m from the Proposed Development (Target Note 1, Target Note 2, Target Note 14.1 and Target Note 17, respectively) at their closest points. Target Note 14.1 also occurs 29.60 m from a proposed OHL tower.
- Water vole burrows were recorded on a tributary of the River Aray (Target Notes TN65 and TN68 on **Figure 6.4a**). The closest burrow occurs 70.46 m from the Proposed Development. As neither of these burrows occur within 10 m of the Proposed Development and would, therefore, not be disturbed or damaged[32], the burrows are not considered further in this assessment. Latrines and feeding signs were recorded on a tributary of the River Aray and a tributary of the Cladich River (Target Notes TN63, TN64, TN66 and TN67 on **Figure 6.4a,** and Target Note TN61 on **Figure 6.4b**, respectively). Suitable and potential water vole habitat was also noted further south on the tributary of the River Aray (Target Note TN2 on **Figure 6.4a**) and a tributary of the River Orchy (Target Note TN37 on **Figure 6.4e**) although no confirmed water vole field signs were recorded.
- A potential otter holt was recorded on a tributary of the River Orchy (Target Note 10 on **Figure 6.5b**). A potential couch with an old spraint was recorded on a tributary of the River Orchy (Target Note TN9 on **Figure 6.4e**). Both the holt and the couch occur more than 200 m from the Proposed Development and are, therefore, not considered further in this assessment as they are outwith the maximum disturbance distance for otter[33]. Spraints were also recorded on tributaries of the River Orchy (Target Note TN37 on **Figure 6.4d** and Target Notes TN14 and TN15 on **Figure 6.4e**) and on the River Cladich and a tributary (Target Notes TN69 and TN70 on **Figure 6.4a**).
- Four potential pine marten dens were recorded (Target Notes 10, 11, 15, and 16 on **Figure 6.5b**). None of these dens occur within 30 m[34] of the Proposed Development so would not be disturbed and are, therefore, not considered further in this assessment. Pine marten scat was recorded on a forestry track near An Aodann (Target Note TN1 on **Figure 6.4a**). A potential pine marten shelter was also recorded in a railway hut at Brackley (Target Note TN16 on **Figure 6.4e**). The shelter occurs more than 30 m from the Proposed Development and is, therefore, not considered further in this assessment.
- No red squirrel dreys (resting places) were recorded in the field survey area. Red squirrels were sighted at Brackley and Millside (Target Note TN45 on **Figure 6.4e** and Target Note TN72 on **Figure 6.4c**, respectively). Squirrel feeding signs were recorded on the Eas nan Ruadh (Target Notes TN5 and TN73 on **Figure 6.4c**). Red squirrel scat was also recorded on the River Cladich and near Teatle Water (Target Note TN74 on **Figure 6.4a** and Target Note TN75 on **Figure 6.4c**, respectively).
- No signs of wildcat were recorded and the habitats of the field survey area are largely unsuitable for breeding due to the presence of dense conifer plantation, moorland modified by farming and forestry and

[32] Dean, M., Strachan, R., Gow, D. and Andrews, R. (2016), *The Water Vole Mitigation Handbook*. The Mammal Society Mitigation Guidance Series.

[33] Protected Species Advice for Developers: Otter: https://www.nature.scot/professional-advice/protected-areas-and-species/protected-species/protected-species-z-guide/protected-species-otters [8 December 2021].

[34] Standing Advice for Planning Consultants: Pine Martens: https://www.nature.scot/doc/standing-advice-planning-consultations-pine-martens [8 December 2021].

the lack of rocky cairns or dense scrub for den locations[35]. However, the field survey area could offer suitable habitat for foraging and commuting wildcat, with denning opportunities present in the wider Biodiversity Study Area.

Reptiles and Amphibians

6.4.15 No detailed surveys were completed; however the following incidental observations were recorded:

- A single common lizard by the Teatle Water (Target Note TN82 on **Figure 6.4c**).
- Two common frogs at Millside (Target Notes TN77 and TN79 on **Figure 6.4b**).
- A single common toad on the Eas nan Ruadh (Target Note TN76 on **Figure 6.4c**).

Other Notable Species

6.4.16 American mink *Neogale vison* scat was recorded on a tributary of the River Cladich and on the Allt Fearna, as shown by Target Note TN62 on **Figure 6.4a** and Target Note 71 on **Figure 6.4b**.

6.4.17 Grassland habitat suitable for marsh fritillary occurs throughout the field survey area, as shown by Target Notes TN82-TN98 on **Figure 6.4a - Figure 6.4d**.

Future Baseline

6.4.18 The future baseline of the field survey area under the "do nothing" scenario is unlikely to change significantly in the absence of the Proposed Development.

6.4.19 The coniferous woodland plantation in the field survey area is likely to be harvested by clear-fell methods before the trees reach maturity at 40-70 years old. The forestry areas would typically be restocked for another rotation of the process. **Chapter 11: Forestry (EIAR Volume 2)** contains further details on the future felling schedule for the area and planned native broadleaved planting at Achlian, which would occur regardless of whether the Proposed Development proceeds or not. Broadleaved woodland would provide higher quality habitat for protected species such as red squirrel and badger compared to that presently there, and could support a wider distribution of protected species within the Biodiversity Study Area.

6.4.20 Upland peatland habitats are considered unlikely to change significantly in the absence of the Proposed Development. The majority are already modified by surrounding forestry and farming practices, which are expected to continue unchanged.

6.4.21 Therefore, the distribution of species present within the field survey area and the surrounding habitat is unlikely to change significantly in the future, though the broadleaved woodland planting at Achlian could have a beneficial effect on species distribution in that area. Climate change may have an adverse effect on species distribution and this could be significant depending on the severity of the effect.

Summary of Important Ecological Features

6.4.22 A summary of the ecological features identified as being sensitive to the potential impacts of construction, operation or decommissioning of the Proposed Development and that have been 'scoped-in' to the assessment is given in **Table 6.6**, together with the rationale for their inclusion.

Table 6.6: Summary of Important Ecological Features

Feature	Importance	Rationale
Ancient and semi-natural woodland	Regional	Ancient woodland contains remnants of Scotland's original forests, preserving the integrity of ecological processes in the soil and its

[35] Wildcat Survey Methods: https://www.nature.scot/sites/default/files/2018-04/Guidance-Wildcat-Survey-Methods.pdf [8 December 2021].

Table 6.6: Summary of Important Ecological Features

Feature	Importance	Rationale
		associated biodiversity. Once lost, Ancient Woodland cannot be recreated. Although no legislation specifically protects Ancient Woodland, there is a strong presumption against removing ancient semi-natural woodland or plantations on Ancient Woodland sites[36]. Ancient woodland is present in small, scattered areas in the region and is considered to be of regional importance.
Non-designated broadleaved and mixed native woodland habitats	Local	Woodland covers approximately 19 % of Scotland, with under a quarter of these woodlands considered native[37]. The SBL[38] includes terrestrial woodland habitats, including lowland mixed deciduous woodland, wet woodland, and upland birchwood. These woodland types are frequent but of limited size in the field survey area. Native woodland cover is relatively scarce across the wider Biodiversity Study Area. All broadleaved and mixed woodlands play an important role in the ecosystem, offering shelter and foraging opportunities for a wide range of protected and notable species, including specialists and generalists. However, woodlands included in this category may range from immature to mature and have not been included on the Ancient Woodland inventory. As such, these woodlands are considered to be of local importance.
Peatlands (blanket bog, wet modified bog, wet and dry heath, and flushes)	Regional (blanket bog and flushes) County (wet modified bog, and wet and dry heath)	These habitat types are included in Annex 1 of the EC Habitats Directive[39] and are sensitive to environmental change, such as changes to hydrology, carbon function, species composition and nutrient status. Much of the peatland habitat in the UK is in poor condition due to damage from anthropogenic activities such as drainage, grazing and peat extraction. The examples of blanket bog within the field survey area are of varying condition and subject to modification but do include some areas of higher floral diversity. There are peatlands within Argyll and Bute in better condition than those found within the field survey area. The blanket bog in the field survey area does not have continuous units that are greater than 25 ha and although it supports peat-forming vegetation, a low frequency of drains/peat cutting, a natural surface pattern and an absence of woodland/scrub invasion, it does not support indicators of national importance[40], such as an abundance of bog-moss-rich ridges and hummocks or hollows with brown beak-sedge *Rhynchospora fusca*. As such, this feature is considered to be of no more than regional importance. Flushes present within the peatland habitats support a wide variety of wetland plants and invertebrates, including a range of endangered mosses and liverworts. As such, this feature is considered to be of regional importance. The wet modified bog within the field survey area lacks significant peat-forming vegetation and is generally poorer quality, with low species

[36] Scottish Planning Policy (2014): https://www.gov.scot/publications/scottish-planning-policy/pages/2/ [17th August 2021].

[37] Walton, P., Eaton, M., Stanbury, A., Hayhow, D., Brand, A., Brooks, S., Collins, S., Duncan, C., Dundas, C., Foster, S., Hawley, J., Kinninmonth, A., Leatham, S., Nagy-Vizitiu, A., Whyte, A., Williams, S., and Wormald, K. (2019). The State of Nature Scotland 2019. The State of Nature Partnership.

[38] The Scottish Biodiversity List (2005): https://www.nature.scot/scottish-biodiversity-list-documents [17th August 2021].

[39] EC Directive on the Conservation of Natural Habitats and Wild Flora and Fauna (1992): http://ec.europa.eu/environment/nature/legislation/habitatsdirective/index_en.htm [17th August 2021].

[40] Advising on Carbon-rich Soils, Deep Peat and Priority Peatland Habitat in Development Management (2021): https://www.nature.scot/doc/advising-carbon-rich-soils-deep-peat-and-priority-peatland-habitat-development-management [7th October 2021].

Table 6.6: Summary of Important Ecological Features

Feature	Importance	Rationale
		diversity and rare or absent bog-moss *Sphagnum sp*. However, this habitat has the potential to recover and return to active, peat-forming blanket bog, therefore this feature is considered to be of county importance. The wet and dry heath within the field survey area is also of varying condition, with some areas supporting peat-forming vegetation and other areas dominated by common heather *Calluna vulgaris* and deer grass *Trichophorum cespitosum*. As such, this feature is also considered to be of county importance.
Wetlands (potential GWDTE and marshy grassland)	County	GWDTEs are sensitive to changes in hydrology and hydrogeology and are a priority under the Water Environment and Water Services (Scotland) Act[41]. The examples of these habitat types in the field survey area are generally in good condition, with increased diversity and naturalness compared to the surrounding habitats, such as coniferous woodland plantation. Due to the small and fragmented patches present in the field survey area, with larger expanses present elsewhere in the Biodiversity Study Area, this feature is considered to be of county importance.
Standing and running water	Local	Several watercourses, including the River Cladich and Teatle Water, and a pond with good-quality habitat occur within the field survey area (TN3). Standing and running water provides habitat for otter, water vole, amphibians, fish and invertebrates. As a result, this feature is considered to be of local importance.
BRP trees	County	Bats are an EPS under the EC Habitats Directive[42]. Three trees with moderate to high suitability for bat roosting are present in the field survey area (TN53, TN55 and TN57) and are likely to be impacted by the Proposed Development. One tree with low BRP (TN54) is present in the field Study Area and is likely to be impacted by the Proposed Development. These trees are likely to support species such as common pipistrelle *Pipistrellus pipistrellus*, soprano pipistrelle *P. pygmaeus*, Daubenton's bat *Myotis daubentonii* or Natterer's bat *M. nattereri*. The National Bat Monitoring Programme Annual Report 2019[43] presented positive results indicating the 11 species of bats surveyed (nine of which are present in Scotland) appear to be stable or increasing. This suggests the current legislation and conservation action to protect bats is being successful. The field survey area is dominated by coniferous plantation woodland that offers few roosting opportunities for bats, with smaller, scattered areas of broadleaved trees suitable for roosting bats, including the trees mentioned above that occur closest to the Proposed Development. There are extensive areas of ancient and semi-natural woodland that offer increased roosting opportunities for bats in the Biodiversity Study Area and the wider environment, as shown on **Figure 6.1: Biodiversity Constraints (Volume 3a)**. As a result, this feature is considered to be of county importance.

[41] Water Environment and Water Services (Scotland) Act (2003): https://www.legislation.gov.uk/asp/2003/3/contents [7th October 2021].

[42] EC Directive on the Conservation of Natural Habitats and Wild Flora and Fauna (1992): http://ec.europa.eu/environment/nature/legislation/habitatsdirective/index_en.htm [17th August 2021].

[43] Bat Conservation Trust (2020), *National Bat Monitoring Programme Annual Report 2019*. Bat Conservation Trust: London.

Table 6.6: Summary of Important Ecological Features

Feature	Importance	Rationale
Badger	Local	Badgers and their setts are protected under the Protection of Badgers Act (1992)[44]. Badgers are not included on the SBL; however their level of legal protection has been derived from their persecution. Two setts (Target Note 1 and Target Note 2) occur 16.15 m and 29.96 m, respectively, from the proposed OHL and are likely to be disturbed by construction activities, e.g. low-flying helicopter works. The setts are unlikely to be damaged or destroyed since works would involve pull-through of the wire and no ground works. A third sett (Target Note 14.1) is a main breeding sett and occurs 8.77 m from the proposed OHL and 29.60 m from a proposed tower location. The sett, therefore, has the potential to be disturbed during construction. The sett is unlikely to be damaged or destroyed given the distance from the Proposed Development, with most nesting chambers located 5-10 m underground from a sett entrance[45]. The fourth sett (Target Note 17) occurs 8.15 m from a proposed new stone temporary access track and is likely to be disturbed and damaged by the Proposed Development. The Mammal Society[46] reported that badger populations across the UK have shown an increase, predicted to remain stable. Their range has been and is predicted to also remain stable. As such, this species is considered to be of local importance.
Water vole	Local	Water voles are partially protected under Schedule 5 of the Wildlife and Countryside Act (1981)[47] and it is also an SBL species[48]. The Mammal Society[49] reported an increase in the population size of water vole in Scotland, but a recent decline in their range. Across the UK, populations are predicted to decline whilst the species' range may remain stable. Two water vole burrows (TN65 and TN68) were recorded outwith the disturbance distance of the Proposed Development, alongside latrines and feeding signs. Given the low level of activity recorded in the field survey area, the population of water vole is considered to be of local importance.
Otter	Local	Otter is classified as an EPS under the Conservation (Natural Habitats, &c.) Regulations 1994 (as amended)[50]. Otter is also an SBL species[51]. Since the 1990s, otters have been considered widespread throughout Scotland. The most recently reported national survey results (2011-12) recorded otter presence at approximately 80% of sampled sites (which included all 44 SACs designated for otter in Scotland and other random sites across the countryside). This has slightly decreased since the previous national survey in 2003-04 but could be due to factors

[44] Protection of Badgers Act (1992): https://www.legislation.gov.uk/ukpga/1992/51/contents [17th August 2021].

[45] Badger Setts: https://badgerland.co.uk/animals/sett.html [8 December 2021].

[46] Mathews, F., Kubasiewicz, L.M., Gurnell, J., Harrower, C.A., McDonald, R.A., Shore, R.F. (2018), *A Review of the Population and Conservation Status of British Mammals: Technical Summary*. Natural England: Peterborough.

[47] The Wildlife and Countryside Act (as amended) (1981): http://www.legislation.gov.uk/ukpga/1981/69 [17th August 2021].

[48] The Scottish Biodiversity List (2005): https://www.nature.scot/scottish-biodiversity-list-documents [17th August 2021].

[49] Mathews, F., Kubasiewicz, L.M., Gurnell, J., Harrower, C.A., McDonald, R.A., Shore, R.F. (2018), *A Review of the Population and Conservation Status of British Mammals: Technical Summary*. Natural England: Peterborough.

[50] The Conservation (Natural Habitats Etc.) Regulations (as amended) (1994): http://www.legislation.gov.uk/uksi/1994/2716/contents/made [17th August 2021].

[51] The Scottish Biodiversity List (2005): https://www.nature.scot/scottish-biodiversity-list-documents [17th August 2021].

Table 6.6: Summary of Important Ecological Features

Feature	Importance	Rationale
		affecting detectability, such as weather[52]. The Mammal Society[53] also reports an increase in the geographical range and population size of otter, predicted to continue increasing. An otter holt (Target Note 10) and couch (TN9) were recorded outwith the disturbance distance of the Proposed Development, alongside spraints. Given the low level of activity recorded in the field survey area, the population of otter is considered to be of local importance.
Pine marten	Local	This species receives full protection under Schedule 5 of the Wildlife and Countryside Act 1981[54] and certain methods of killing or taking pine martens are illegal under the Conservation (Natural Habitats, &c.) Regulations 1994 (as amended)[55]. Pine marten is also an SBL species[56]. The Mammal Society[57] reported that there has been an increase in the geographical range and population size of pine marten, with a continuous expansion in Scotland over the last 20 years, which is predicted to continue. All potential pine marten dens were recorded outwith the disturbance distance of the Proposed Development, alongside scats and a potential resting area. Given the low level of activity recorded in the field survey area, the population of pine marten is considered to be of local importance.
Red squirrel	County	Red squirrels and their dreys receive full protection under Schedules 5 and 6 of the Wildlife and Countryside Act 1981[58]. Red squirrel is also an SBL species[59]. The Mammal Society[60] reported that red squirrel population sizes remain stable in Scotland but that their distribution has declined since 1995 and may continue to decline. No dreys were recorded in the field survey area, though two sightings of red squirrels were recorded (TN45 and TN72), alongside feeding signs (TN5 and TN73) and scat (TN 74 and TN75). The sparse distribution of this species in Scotland is considered to enhance its conservation value at localised areas where populations occur. Red squirrels are likely to be scarce throughout the field survey area as the woodland is dominated by dense coniferous plantation, with the species favouring areas of mixed woodland. As a result, this feature is considered to be of county importance.
Reptiles and amphibians	Local	Common lizard is protected from intentional or reckless killing or injury under the Wildlife and Countryside Act (1981)[61]. Common frog and common toad receive limited protection under this Act and only against

[52] SNH (2015). Trend Note 23: Tends of Otters in Scotland. Available: https://www.nature.scot/trend-notes-otters-scotland [Accessed July 2020]

[53] Mathews, F., Kubasiewicz, L.M., Gurnell, J., Harrower, C.A., McDonald, R.A., Shore, R.F. (2018), *A Review of the Population and Conservation Status of British Mammals: Technical Summary*. Natural England: Peterborough.

[54] The Wildlife and Countryside Act (as amended) (1981): http://www.legislation.gov.uk/ukpga/1981/69 [17th August 2021].

[55] The Conservation (Natural Habitats Etc.) Regulations (as amended) (1994): http://www.legislation.gov.uk/uksi/1994/2716/contents/made [17th August 2021].

[56] The Scottish Biodiversity List (2005): https://www.nature.scot/scottish-biodiversity-list-documents [17th August 2021].

[57] Mathews, F., Kubasiewicz, L.M., Gurnell, J., Harrower, C.A., McDonald, R.A., Shore, R.F. (2018), *A Review of the Population and Conservation Status of British Mammals: Technical Summary*. Natural England: Peterborough.

[58] The Wildlife and Countryside Act (as amended) (1981): http://www.legislation.gov.uk/ukpga/1981/69 [17th August 2021].

[59] The Scottish Biodiversity List (2005): https://www.nature.scot/scottish-biodiversity-list-documents [17th August 2021].

[60] Mathews, F., Kubasiewicz, L.M., Gurnell, J., Harrower, C.A., McDonald, R.A., Shore, R.F. (2018), *A Review of the Population and Conservation Status of British Mammals: Technical Summary*. Natural England: Peterborough.

[61] The Wildlife and Countryside Act (as amended) (1981): http://www.legislation.gov.uk/ukpga/1981/69 [17th August 2021].

Table 6.6: Summary of Important Ecological Features		
Feature	**Importance**	**Rationale**
		trade. These species are also widespread in the field survey area and the Biodiversity Study Area[62] [63] [64], therefore, they are considered to be of local importance.
Marsh fritillary	County	Marsh fritillary is listed in the ES Habitats Directive[65] and included in the Argyll and Bute Local BAP[66]. Although this species was not recorded in the field survey area, several areas of grassland suitable for this species were recorded. Four of these areas occur within the footprint of the Proposed Development (TN84, TN90, TN93 and TN95). As a result, this feature is considered to be of county importance.

6.5 Issues Scoped Out

6.5.1 CIEEM EcIA Guidelines[67] state that the assessment process does not require consideration of effects on ecological features deemed to be below a predefined nature conservation value threshold. Therefore, an assessment of the effects upon features less than local importance have been excluded from further assessment (**Table 6.7**).

Table 6.7: Ecological Features Scoped Out of Assessment	
Feature	**Justification**
Scrub	Scrub habitats within the field survey area are relatively species-poor and scattered. Whilst adding a diverse structure to the other habitats, scrub within the field survey area is frequent across the wider landscape. Scrub habitats are not included under legislative or conservation lists as a priority habitat type.
Acid and neutral grassland	Upland acid grassland and neutral grassland are not included under legislative or conservation lists as a priority habitat type, and similar habitat is available for protected or priority species (primarily badgers) in the Biodiversity Study Area.
Coniferous woodland plantation	All stands of coniferous woodland plantation were notably uniform and dense, with limited associated ground flora. Coniferous woodland planation is not included under legislative or conservation lists as a priority habitat type.
Wildcat	No records of wildcat were recorded and the habitats in the field survey area are considered to be of low suitability for this species, therefore, it is not considered further in this assessment. However, due to the elusive nature of this species and the difficulty in identifying field signs, surveying for wildcat would be included in the standard pre-construction protected species survey, as detailed in section 6.6.
Aquatic ecology	Although the Proposed Development crosses many watercourses, other than in exceptional circumstances, towers would be positioned at least 30 m from watercourses. On the basis that the construction work would be carried out following good practice mitigation for pollution prevention and taking a precautionary approach by assuming the presence of sensitive aquatic ecology (including spawning salmonids and freshwater pearl mussel), significant effects

[62] Common Lizard: https://www.arc-trust.org/common-lizard [8 December 2021].
[63] Common Frog: https://www.arc-trust.org/common-frog [8 December 2021].
[64] Common Toad: https://www.arc-trust.org/common-toad [8 December 2021].
[65] EC Directive on the Conservation of Natural Habitats and Wild Flora and Fauna (1992): http://ec.europa.eu/environment/nature/legislation/habitatsdirective/index_en.htm [17th August 2021].
[66] The Argyll and Bute Local BAP (2010-2015): https://www.argyll-bute.gov.uk/sites/default/files/Unknown/AandB%20BAP%20Draft.pdf [28th September 2021].
[67] CIEEM (2018), *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine*. Version 1.1. Available: https://cieem.net/wp-content/uploads/2018/08/ECIA-Guidelines-2018-Terrestrial-Freshwater-Coastal-and-Marine-V1.1.pdf [17th August 2021].

Table 6.7: Ecological Features Scoped Out of Assessment	
Feature	**Justification**
	associated with the Proposed Development on watercourses and aquatic ecology including fish are unlikely and, therefore, this topic is scoped out of further assessment.
American mink	American mink is an Invasive Non-native Species (INNS) that has an adverse impact on native natural heritage, such as through the predation of water vole. The Proposed Development is unlikely to impact the distribution or population size of this species, which would actually be a beneficial effect for native species due to a decrease in predation. As a result, American mink is not considered from an impact assessment perspective but control of mink is included as a good practice measure in **TA 6.3: Outline Habitat Management Plan (EIAR Volume 4)**.
Terrestrial invertebrates (excluding marsh fritillary)	Surveys of this species group were considered unnecessary as the EcIA adopts a precautionary approach and includes appropriate mitigation, where required, to avoid significant effects.

6.6 Assessment of Effects, Mitigation and Residual Effects

6.6.1 The assessment of effects in this section considers the significance of the associated effect in the absence of mitigation, excluding mitigation that has already been undertaken e.g. mitigation by design. The assessment considers the effect of the Proposed Development on the ecological features detailed in **Table 6.6**.

Mitigation by Design

6.6.2 The layout of the Proposed Development has, as far as possible, been designed to avoid the habitats of highest ecological importance and with the highest sensitivity to impacts, as detailed in **Chapter 2: Description of the Proposed Development** and **Chapter 3: Consideration of Alternatives (EIAR Volume 2)**. This included active peatland habitats, potential GWDTE and ancient and semi-natural woodland. Where it has not been possible to avoid peatland habitats, infrastructure has been positioned as close to the edge of areas of those habitat types and on the shallowest peat, where possible, to reduce impacts on the natural functions of those habitats. Furthermore, where the Proposed Development occurs in areas of blanket bog, as far as possible, the locations have been selected to avoid those areas of higher quality, active and deep peat, as detailed in **Chapter 10: Hydrology, Hydrogeology, Geology and Soils (EIAR Volume 2)**. Where peat depth is >1 m, track construction would be of a floating design, where practicable, to minimise disturbance to peat, as detailed in **Chapter 2: Description of the Proposed Development (EIAR Volume 2)**. Smaller, isolated areas of deep peat are not likely to accommodate floating tracks as they don't allow sufficient distance to transition from cut to floated track design. However, where possible, for example in sensitive areas, the floating track design would have due regard to key principles set out in the joint SNH (now NS) and Forestry Commission Scotland (FCS) guide to floating roads on peat[68]. Where deep peat cannot be avoided for tower positions, the Applicant would choose a suitable foundation type, such as mini-pile foundations, to minimise the impacts on peatland, where possible. Habitats would be reinstated as soon as possible following construction of temporary infrastructure, such as temporary access tracks, as detailed in the phased programme in **Chapter 2: Description of the Proposed Development (EIAR Volume 2)**.

6.6.3 Measures already taken into account during design include features that would be incorporated into access tracks, such as culverts, to minimise the potential impacts on the hydrological characteristics of peatland and wetland habitats by maintaining hydrological connectivity between sensitive habitats. Further details of hydrological mitigation to reduce the significance of potential adverse effects on the hydrology are described in **Chapter 10: Hydrology, Hydrogeology, Geology and Soils (EIAR Volume 2)**.

[68] Floating Roads on Peat (2010): http://www.roadex.org/wp-content/uploads/2014/01/FCE-SNH-Floating-Roads-on-Peat-report.pdf [7th October 2021].

6.6.4 The Applicant has sought to avoid areas of woodland in the first instance, particularly by retaining areas of native woodland and avoiding areas of Ancient Woodland. Where this has not been possible, tower locations have been micro-sited to minimise the amount of felling required. It is noted that the direct loss of Ancient Woodland could potentially be further avoided or reduced through the forthcoming detailed design where a combination of factors (e.g. topography, tower height, tree species and height) may reduce the area of Ancient Woodland defined as being within the operational corridor, for example the extent of tree clearance may be reduced where it can be demonstrated through further detailed survey that the trees can be safely overflown by the Proposed Development, or that the trees can be accommodated within closer proximity to the Proposed Development, with either no work being required, or a degree of crown reduction only. Post-construction, compensatory tree planting would occur. Information on felling, compensatory tree planting and forestry management is provided in **Chapter 11: Forestry (EIAR Volume 2)**.

Construction Phase

6.6.5 The assessment of likely effects associated with construction is based on the typical activities described in **Chapter 2: Description of the Proposed Development (EIAR Volume 2)**.

Description of Effects

Non-Statutory Designated Nature Conservation Sites - Ancient Woodland

6.6.6 Tree felling to achieve an operational corridor on either side of the OHL would result in permanent and unavoidable loss of 30 m of tree cover on either side of the OHL in six areas of Ancient Woodland throughout the field survey area and in a single area in the north of the field survey area for a proposed new stone permanent access track (east of Tower 47), including a felling buffer of 20 m on either side of the access track, as shown on **Figure 6.1: Biodiversity Constraints (EIAR Volume 3a)** and in **Table 6.8**. **Chapter 11: Forestry (EIAR Volume 2)** provides further details on forestry loss and mitigation proposals. Ancient Woodland is considered to be an irreplaceable[69] ecological feature and once destroyed, it cannot be recreated. As a result, the loss of Ancient Woodland (12.62 ha) is considered to be a **significant adverse effect** on a feature of regional importance.

6.6.7 While there is also the potential to impact on habitat network connectivity through fragmentation, it is noted that the existing areas of woodland are already subject to a high level of fragmentation at the wider landscape level. The scale of fragmentation proposed (limited to 60 m in width) is considered to represent a negligible permanent effect on the basis that following reinstatement, the Proposed Development operational corridor would be subject to a low level of habitat modification, with the retention or natural regeneration of scrub vegetation providing for species movement between habitat patches, maintaining functional connectivity. This scrub vegetation would also protect the edge habitat of the unfelled Ancient Woodland that would be exposed from felling of the operational corridor. It is also possible that this may have a minor beneficial effect on the ground flora of the edge habitat, which would receive more light, allowing different species to flourish. This fragmentation and edge effect is considered to be **not significant**.

6.6.8 Construction of the Proposed Development could also result in indirect disturbance of Ancient Woodland. Dust produced from increased vehicle movement could smother small plants in the ground flora and the leaves of tree species. This is considered to be a temporary, low magnitude, low frequency, short-term impact on a small extent of the edge of the habitat, particularly as rainfall would naturally mitigate the effects and because the majority of construction activities would occur within coniferous woodland plantation present in the field survey area, which would act as a natural barrier. As a result, the effect is considered to be **not significant**.

[69] The complex biodiversity of ancient woods which has accumulated over hundreds of years, and therefore cannot be replaced. Many species that thrive in Ancient Woodland are slow to colonise new areas. All Ancient Woodlands are unique, and are distinctive of their locality, **Chapter 11: Forestry** states that the loss of Ancient Woodland as 0.03% of the regional resource, however due to its irreplaceable nature, the loss is still deemed significant.

Sensitive Habitats (excluding GWDTEs)

6.6.9 Construction activities have the potential to degrade or destroy sensitive habitats either directly, through excavation, compaction, or modification (e.g. vegetation removal), or indirectly as a result of dewatering or from the accidental release of fuels, lubricants or other chemicals. The construction of tower bases and permanent access tracks would cause permanent habitat loss. The construction of temporary access tracks would cause temporary habitat degradation or loss in the short- to medium-term until habitats are reinstated following completion of the Proposed Development. The significance of these effects per habitat type is considered below.

6.6.10 The locations of temporary site compounds remain unknown at this stage of the assessment; however, this chapter assumes that these would avoid sensitive ecological features primarily through micro-siting.

6.6.11 **Table 6.8** and **Table 6.9** set out the percentage of permanent and temporary habitat loss by habitat type within the field survey area, respectively. Direct habitat loss during construction includes the working areas for each tower base (a working area of approximately 2500 m^2 (50 m x 50 m) for section towers and 6400 m^2 (80 m x 80 m) for angle towers is assumed, with a total of 48 towers), the 80 m operational corridor through coniferous woodland (40 m on either side of the proposed OHL), the 60 m operational corridor through Ancient Woodland (30 m on either side of the proposed OHL), undergrounding of existing line crossings with the proposed OHL, a temporary Tie-In connection and the area of proposed new access track (with a minimum running width of 3.5 m and a felling buffer of 20 m around new permanent access tracks). Six pulling/tensioner working platforms (30 m x 60 m) are located adjacent to access tracks and are considered under the land-take of the access tracks. Indirect habitat modification is calculated as impacting a 15 m buffer around areas of direct woodland habitat loss[70] and a 10 m buffer around the areas of direct loss in other habitats as this is considered to represent the worst-case scenario of habitat that is likely to be indirectly modified by the Proposed Development.

Table 6-8: Permanent Habitat Loss from Proposed Development During Construction

		Direct Habitat Loss		Indirect Habitat Modification/Degradation	
Habitat	**Total Habitat in Field Survey Area (ha)**	**Area Lost (ha)**	**Percentage Lost[71] (%)**	**Area Modified (ha)**	**Percentage Modified (%)**
Ancient Woodland	41.45	6.64	16.02	5.01	12.09
A1.1.1 Semi-natural Broadleaved Woodland	68.42	4.95	7.24	1.57	2.30
B5 Marshy Grassland	63.77	0.05	0.08	0.31	0.49
E1.7 Wet Modified Bog	187.78	0.03	0.02	0.18	0.10
E2.1 Acid/Neutral Flush	4.47	0.01	0.22	0.08	1.79

[70] Ancient Woodland, Ancient Trees and Veteran Trees: Advice for Making Planning Decisions (2022): https://www.gov.uk/guidance/ancient-woodland-ancient-trees-and-veteran-trees-advice-for-making-planning-decisions [21st March 2022].

[71] This is a percentage of the habitat within the field survey area.

Table 6-8: Permanent Habitat Loss from Proposed Development During Construction					
		Direct Habitat Loss		Indirect Habitat Modification/Degradation	
Habitat	**Total Habitat in Field Survey Area (ha)**	**Area Lost (ha)**	**Percentage Lost[71] (%)**	**Area Modified (ha)**	**Percentage Modified (%)**
Totals	**365.89**	**11.68**	**3.19**	**7.15**	**1.95**

Table 6.9: Temporary Habitat Loss from Proposed Development During Construction					
		Direct Habitat Loss		Indirect Habitat Modification/Degradation	
Habitat	**Total Habitat in Field Survey Area (ha)**	**Area Lost (ha)**	**Percentage Lost (%)**	**Area Modified (ha)**	**Percentage Modified (%)**
B5 Marshy Grassland	63.77	1.69	2.65	2.21	3.47
D2 Wet Heath	5.69	0.25	4.39	0.37	6.50
E1.6.1 Blanket Bog	27.66	0.02	0.07	0.06	0.22
E1.7 Wet Modified Bog	187.78	2.49	1.33	5.30	2.82
E2.1 Acid/Neutral Flush	4.47	0.05	1.12	0.24	5.37
E2.2 Basic Flush	2.71	0.05	1.85	0.13	4.80
Totals	**292.08**	**4.55**	**1.56**	**8.31**	**2.85**

Woodland

6.6.12 Without consideration of mitigation, the permanent loss or degradation of Ancient Woodland would comprise 11.65 ha[72] (28.11%) of the total recorded in the field survey area. As the Proposed Development impacts almost a third of the habitat in the field survey area and because Ancient Woodland is an irreplaceable ecological feature and once destroyed, it cannot be recreated, the loss of Ancient Woodland is considered to be a **significant adverse effect**.

[72] Chapter 11: Forestry only considers the direct loss of Ancient Woodland, whereas Chapter 6: Biodiversity considers direct and indirect loss of Ancient Woodland but also the direct and indirect loss of non-designated broadleaved woodland. This has resulted in a compensatory planting area that is higher than the area of woodland loss considered in the forestry chapter (18.17 ha compared to 10.36 ha). The biodiversity chapter incorporates the worst-case scenario of all Ancient Woodland and non-designated broadleaved woodland loss.

6.6.13 Without consideration of mitigation, the permanent loss or degradation of non-designated broadleaved woodland would comprise 6.52 ha (9.53%) of the total recorded in the field survey area. The loss of broadleaved woodland is considered to be an adverse effect at the local level because broadleaved woodland is of high ecological value and provides habitat for a range of other ecological features. However, this effect is considered to be **not significant** in EIA terms as it is a small proportion of a feature of local importance. The effects on ecological features using the broadleaved woodland, such as bat species, are considered below.

6.6.14 Temporary habitat loss is considered to be permanent in areas of woodland since this habitat cannot be immediately reinstated following construction, unlike other habitats, such as blanket bog whereby peat turves can be stored and replaced. Once woodland is felled, replacement depends on planting and a large time interval long-term natural regeneration. Compensatory woodland planting is considered as part of mitigation in **Chapter 11: Forestry (EIAR Volume 2)**. Recommendations for woodland enhancement and creation are also provided in **TA 6.3: Outline Habitat Management Plan (EIAR Volume 4)**.

6.6.15 While there is also the potential to impact on habitat connectivity through fragmentation, it is noted that the existing areas of woodland are subject to a relatively high level of fragmentation at the wider landscape level. The scale of fragmentation proposed (limited to 60 m width in Ancient Woodland and 80 m in width in non-designated broadleaved woodland) is considered to represent a negligible permanent effect on the basis that following reinstatement, the Proposed Development wayleave would be subject to a low level of habitat modification, with scrub vegetation providing for species movement between habitat patches, maintaining functional connectivity. This fragmentation effect is considered to be **not significant**.

Peatlands

6.6.16 No permanent loss of blanket bog would occur as part of the Proposed Development. Without consideration of mitigation, the temporary loss or degradation of blanket bog would comprise 0.08 ha (0.29%) of the total recorded in the field survey area. As blanket bog is an Annex 1 habitat[73] and much of the blanket bog in Scotland is in poor condition, further loss or degradation of this feature is considered to be an adverse effect on a feature of regional importance. However, as this would be a low magnitude, short-term and reversible adverse impact that would still leave functioning habitat, further loss or degradation, though an adverse effect, is considered to be **not significant**.

6.6.17 Without consideration of mitigation, the permanent loss or degradation of wet modified bog would comprise 0.21 ha (0.11%) of the total recorded in the field survey area. The temporary loss or degradation of wet modified bog would comprise 7.79 ha (4.15%) of the total recorded in the field survey area. Although wet modified bog has the potential to return to blanket bog, the examples in the field survey area are species-poor and heavily grazed and would likely require active restoration measures in the medium-term to return to blanket bog. As the wet modified bog in the field survey area is of poor quality and the potential impact occurs on a feature of county importance, further loss or degradation, though an adverse effect, is considered to be **not significant**.

6.6.18 No permanent loss of wet heath would occur as part of the Proposed Development. Without consideration of mitigation, the temporary loss or degradation of wet heath would comprise 0.62 ha (10.90%) of the total recorded in the field survey area. As wet heath is an Annex 1 habitat[74], loss of this feature is considered to be an adverse effect on a feature of county importance. This would be a moderate magnitude, short-term and reversible adverse impact involving over 10% of the habitat present in the field survey area. As there is only a small proportion of wet heath present in the field survey area, this may affect some functioning of the habitat. As a result, the effect is considered to be **significant**.

[73] EC Directive on the Conservation of Natural Habitats and Wild Flora and Fauna (1992): http://ec.europa.eu/environment/nature/legislation/habitatsdirective/index_en.htm [17th August 2021].
[74] *Ibid.*

6.6.19 Without consideration of mitigation, the permanent loss or degradation of flushes comprises 0.09 ha (2.01%) of the total recorded in the field survey area. The temporary loss or degradation of flushes would comprise 0.47 ha (6.55%) of the total recorded in the field survey area. As flushes are peat-forming wetlands, loss of this feature is considered to be an adverse effect on a feature of regional importance. Although, this would be a low magnitude adverse impact that would still leave functioning habitat, much of the flush habitat in the field survey area and Biodiversity Study Area are of poorer quality, therefore further loss or degradation of good quality flushes is considered to be **significant**.

Marshy Grassland

6.6.20 Without consideration of mitigation, the permanent loss or degradation of marshy grassland would comprise 0.31 ha (0.57%) of the total recorded in the field survey area. The temporary loss or degradation of marshy grassland would comprise 3.90 ha (6.12%) of the total recorded in the field survey area. This would be a low magnitude adverse impact involving a small extent of the habitat present in the field survey area and, therefore, would still leave functioning habitat. As a result, the effect is considered to be **not significant**.

Standing and Running Water

6.6.21 Due to the proximity of standing and running water to the Proposed Development, there is potential for pollution or surface water run-off to enter this habitat. Although the magnitude and duration of the impact would depend on the nature of the pollution event, based on a precautionary approach, it has been considered to result in an adverse effect on a feature of local importance but this effect is considered to be **not significant**, particularly as the effect would be localised to watercourse crossing areas, with most standing or running water habitat protected from construction activities by a 30 m buffer. Details on the number of watercourses that are within and outwith the 30 m watercourse buffer are provided in **Table 2.4** in **Chapter 2: Description of the Proposed Development (EIAR Volume 2)**.

GWDTEs

6.6.22 **Table 6.10** and **Table 6.11** set out the percentage of permanent and temporary loss of potential GWDTEs within the field survey area, respectively. Further information on the hydrological and hydrogeological sensitivity and an assessment of the groundwater dependency of the potential GWDTEs is provided in **TA 10.8: GWDTE (EIAR Volume 4)**.

Table 6.10: Permanent Loss of Potential GWDTEs from Proposed Development During Construction

		Direct Habitat Loss		Indirect Habitat Modification/Degradation	
Habitat	**Total Habitat in Field Survey Area (ha)**	**Area Lost (ha)**	**Percentage Lost (%)**	**Area Modified (ha)**	**Percentage Modified (%)**
High	113.17	0.04	0.04	0.25	0.22
Moderate	56.55	0.12	0.21	0.75	1.33
Totals	**169.72**	**0.16**	**0.09**	**1.00**	**0.59**

Table 6.11 – Temporary Loss of Potential GWDTEs from Proposed Development During Construction

		Direct Habitat Loss		Indirect Habitat Modification/Degradation	
Habitat	**Total Habitat in Field Survey Area (ha)**	**Area Lost (ha)**	**Percentage Lost (%)**	**Area Modified (ha)**	**Percentage Modified (%)**
High	113.17	2.80	0.03	0	-
Moderate/High	12.58	0.28	2.23	0	-
Moderate	56.55	3.84	6.79	0.38	0.21
Totals	**182.29**	**6.92**	**3.80**	**0.38**	**0.21**

6.6.23 Without consideration of mitigation, the permanent loss or degradation of high GWDTE and moderate GWDTE would comprise 0.29 ha (0.26%) and 0.87 ha (1.54%) of the total recorded in the field survey area, respectively. No permanent loss or degradation would occur in areas of moderate/high GWDTE. The temporary loss or degradation of high GWDTE, moderate/high GWDTE and moderate GWDTE would comprise 2.8 ha (0.03%), 0.28 ha (2.23%) and 4.22 ha (7.46%) of the total recorded in the field survey area, respectively. However, it is noted that impacts associated with the tower foundation excavations would be of a short-term nature during the construction works. There would be no long-term hydrological and hydrogeological effects on the potential GWDTE habitat within 250 m of tower foundation excavations on the basis that, following construction and reinstatement, the tower foundations would be an impermeable subsurface feature and would not create artificial preferential drainage pathways within the potential GWDTE habitat. There would be no indirect impacts associated with the proposed access tracks on the basis that all tracks within 100 m of potential GWDTE habitat would be of floating construction, where possible, as detailed in paragraphs 6.6.2 and 6.6.3. Overall, this represents a small area of habitat loss and low magnitude impact in the context of the wider Biodiversity Study Area. On this basis, effects on the potential GWDTEs are considered to be **not significant**.

BRP Trees

6.6.24 Felling of BRP trees (TN53, TN54, TN55 and TN57) could lead to the destruction of a bat roost and the accidental killing of individual bats, both of which would be an offence under the EC Habitats Directive[75]. This would be a **significant adverse effect** on a feature of county importance.

6.6.25 Construction has the potential to result in a short-term, low magnitude displacement impact on foraging and commuting bats due to woodland removal. However, the effect is considered to be **not significant** as felling would take place within the operational corridor and within management felling areas, leaving functioning habitat and linear features for foraging and commuting bats. Felling of the operational corridor would itself create further linear features for commuting bats to follow. There are also extensive areas of ancient and semi-natural woodland that offer increased roosting, foraging and commuting opportunities for bats in the Biodiversity Study Area.

[75] EC Directive on the Conservation of Natural Habitats and Wild Flora and Fauna (1992): http://ec.europa.eu/environment/nature/legislation/habitatsdirective/index_en.htm [17th August 2021].

Badger

6.6.26 Construction has the potential to disturb two active badger setts (Target Note 1 and Target Note 2) 16.15 m and 29.96 m from the proposed OHL, respectively, and a main breeding sett (Target Note 14.1) 8.77 m from the proposed OHL and 29.60 m from a proposed tower location. Construction also has the potential to disturb and damage an active badger sett (Target Note 17) 8.15 m from a new stone temporary access track. Construction activities would likely have a localised, short-term, low magnitude disturbance impact on this species. Construction activities would also likely have a localised, short-term, low magnitude impact from the damage of a partially disused sett that is likely only used intermittently by badger. As a result, the effect of construction of the Proposed Development on badger is considered to be **not significant**.

Water Vole and Otter

6.6.27 No water vole burrows, otter holts or otter couches would be disturbed or destroyed during construction. A minimum 30 m buffer has been used around watercourses except where watercourse crossings are required. Construction activities may, therefore, disturb water vole and/or otter foraging and commuting along watercourses as a result of noise, vibration, pollution, bankside habitat loss at watercourse crossings, or artificial lights. A small area of habitat is likely to be lost but is unlikely to extend beyond 15 m along the watercourse at each watercourse crossing. Approximately 16 watercourse crossings would be required, giving a worst-case loss of 240 m of habitat in total. Full details of conceptual watercourse crossing design are provided in **TA 10.4: Watercourse Survey (EIAR Volume 4)**. Disturbance would be localised to watercourse crossings and would be a short-term, low magnitude impact on this species. As a result, the effect of construction of the Proposed Development on water vole and otter is considered to be **not significant**.

6.6.28 Pollution from the accidental release of fuels, lubricants or other chemicals as well as changes in drainage patterns and silt released into aquatic habitats could directly affect water vole and otter e.g. from contact with corrosive substances or by coating fur or indirectly by affecting their food supply of fish and amphibians. However, this would typically occur at watercourse crossing areas. The magnitude and duration of the impacts would depend on the nature of the pollution event however, based on a precautionary approach, it could result in a **significant adverse effect** on ecological features of local importance.

Pine Marten and Red Squirrel

6.6.29 No protected pine marten dens or resting places or red squirrel dreys would be disturbed, destroyed or damaged during construction. Construction of the Proposed Development would result in the permanent loss of some woodland suitable for use by pine marten and red squirrel. This is considered to be a low magnitude impact in the context of the available habitat resource remaining in the field survey area and in the Biodiversity Study Area. Construction activity would also likely have a localised, low magnitude disturbance impact on these species that use the field survey area at a low level. As a result, the effect of construction on pine marten and red squirrel is considered to be **not significant**.

Reptiles and Amphibians

6.6.30 Construction activities could result in the direct disturbance or injury/accidental death of individual reptiles and amphibians (e.g. from vehicle collisions). Construction activities could also have the potential to degrade or destroy reptile and amphibian habitat either directly (e.g. from excavation, compaction, or habitat modification) or indirectly (e.g. from dewatering, or from the accidental release of fuels, lubricants or other chemicals). Some activities could cause permanent degradation or destruction, for example where tower bases are constructed or permanent new access tracks are formed, but in most cases, impacts would be temporary and negligible magnitude due to the small area of habitat involved, and on common and low-sensitivity species groups. As a result, the effects are considered to be **not significant**.

Marsh Fritillary

6.6.31 Although no incidental records of marsh fritillary were recorded in the field survey area, four areas of suitable habitat are likely to be lost or modified/degraded as a result of construction. Two areas of suitable habitat would be permanently lost and modified/degraded (TN84 and TN95) and this impact would be of low magnitude, due to the small area involved, but would be irreversible. Two further areas would be temporarily lost and modified/degraded (TN90 and TN93) and this impact would be of low magnitude and reversible. As there are larger areas of grassland dominated by purple moor-grass *Molinia caerulea* (favoured by marsh fritillary) in the Biodiversity Study Area, the effect of habitat loss and modification/degradation is considered to be **not significant**. Clearance of woodland in the operational corridor may also provide additional purple moor-grass habitat through natural recolonisation.

Mitigation During Construction

6.6.32 In the absence of mitigation, significant effects are predicted on:

- Ancient Woodland;
- peatlands (wet heath and flushes);BRP trees; and
- otter and water vole.

6.6.33 Specific mitigation for these features or the habitats that support them, is provided below. No specific mitigation is required for the other ecological features; however, the Applicant would implement a suite of standard good practice working measures that would provide additional protection. These are summarised below and would be detailed in the CEMP.

Ancient Woodland

Sensitive Felling and Compensatory Woodland Planting

6.6.34 The permanent loss of Ancient Woodland as part of the Proposed Development would be minimised, where possible, by considering alternatives to helicopter wiring at sensitive locations (e.g. by considering hand pulling methods), undertaking crown reduction of tree canopies instead of felling and through a phased approach to fell a minimum width for construction with selective felling during operation and maintenance. Micrositing of access tracks within the 50 m Limit of Deviation (LOD) and micrositing of towers within the 100 m LOD would also be undertaken, where possible, to avoid felling. The loss would also be minimised by retaining scrub/understorey layers in areas where existing tree cover doesn't breach safety clearances. In addition, the Applicant would seek to manage the operational corridor to encourage native scrub vegetation through natural regeneration and/or planting.

6.6.35 Further details of the compensatory woodland planting required following tree felling and other mitigation proposals are provided in **Chapter 11: Forestry (EIAR Volume 2)** and in **TA 11.3: Compensatory Woodland Planting Management Strategy (EIAR Volume 4)**. Recommendations for woodland enhancement and creation are also provided in **TA 6.3: Outline Habitat Management Plan (EIAR Volume 4)**.

Peatlands

Habitat Restoration

6.6.36 Active restoration of the peatland habitats in the field survey area, both the habitats impacted by the Proposed Development and habitats that have already been modified by activities unrelated to the Proposed Development, would be carried out in line with **TA 6.3: Outline Habitat Management Plan (EIAR Volume 4)** and would be secured by planning condition. Active restoration is defined here as the process of actively encouraging the regeneration of degraded peatland habitats. Degraded peatland habitats are those that are reduced in quality. In order to account for the loss and degradation of wet heath and flush habitat, a minimum of 1.18 ha of peatland would be restored in areas of modified bog that no longer contain a significant proportion of peat-forming vegetation. As a good practice measure, a further 8.08 ha of peatland would be restored to account for the area of blanket bog being temporarily lost and degraded and the area of wet modified bog being permanently and temporarily lost and degraded as a result of the Proposed Development. This would restore an area of 9.26 ha of peatland in total. The overall aim would be to restore a larger area of peatland than the area lost. This would mitigate the permanent and temporary loss and modification of peatland as a result of the Proposed Development.

6.6.37 There is also the opportunity for habitat enhancement, as detailed in **TA 6.3: Outline Habitat Management Plan (EIAR Volume 4)**. The creation of riparian woodland could benefit species by providing shelter and feeding opportunities.

BRP Trees

Pre-construction Protected Species Survey - Bats

6.6.38 Where mature trees or trees noted as containing high or moderate BRP (TN53, TN55 and TN57) may be felled or disturbed by the Proposed Development, a licensed tree-climbing bat surveyor would be employed to ensure no bats are roosting in the trees. If bats are found to be roosting in the trees, felling would only occur under an NS licence, with a licensed bat surveyor present during the felling activity. The removal of suitable roosting habitat from the felling of BRP trees would be compensated by the provision of bat boxes. The exact type and location of bat boxes would be advised by the licensed bat surveyor and would depend on the type of roost and species of any bats found to be present.

6.6.39 Where the tree noted as containing low BRP (TN54) may be felled, no further surveys are required but precautionary soft felling of the tree would be undertaken.

Otter and Water Vole

Standard Pollution Prevention Measures

6.6.40 Pollution control measures would be in place to protect watercourses and control the flow of any run-off from construction or operational activities. These would follow Scottish Environment Protection Agency (SEPA) Guidelines for Water Pollution Prevention from Civil Engineering Contracts[76] and Special Requirements[77]. Pollution control measures would be included in the Outline CEMP (**TA 2.2, EIAR Volume 4)** and the relevant GEMPs (**TA 2.3, EIAR Volume 4).**

6.6.41 Further detail on water management and maintaining hydrological connectivity is provided in paragraph 6.6.48 below.

[76] Prevention of Pollution from Civil Engineering Contracts: Guidelines for the Special Requirements (2006): https://www.sepa.org.uk/media/152220/wat_sg_31.pdf [7th October 2021].

[77] Prevention of Pollution from Civil Engineering Contracts: Special Requirements (2006): https://www.sepa.org.uk/media/152233/wat_sg_32.pdf [7th October 2021].

CEMP

6.6.42 The CEMP would be prepared following the determination of the application for s37 consent and would include an outline of the proposed approach to construction methods and environmental protection during all aspects of the construction phase. Species protection plans (SPPs) would form part of the CEMP. These require pre-construction protected species surveys to be undertaken (see paragraph 6.6.44 below).

6.6.43 A suitably qualified and experienced ECoW would be employed to input into the CEMP and oversee the implementation of surface water management and ecological mitigation measures during construction. A draft CEMP is provided in **TA 2.2: Outline Construction and Environmental Management Plan (EIAR Volume 4)**.

Pre-construction Protected Species Survey

6.6.44 SPPs (**TA 2.4, EIAR Volume 4**) would be followed during construction of the Proposed Development. In implementing the SPPs, a pre-construction protected species survey would be undertaken as close to the construction period as possible, and no more than three months before the start of works[78]. The protected species surveys undertaken to inform the EIAR can be used to inform the pre-construction surveys. A suitably qualified ecologist would be appointed to undertake this survey.

Standard Good Practice Working Measures

Habitat Reinstatement

6.6.45 Areas of temporary infrastructure, such as access tracks and tower bases, would be reinstated as soon as possible after construction has been completed to allow the recolonisation of natural habitats, particularly in areas of blanket bog and wet heath, as detailed in the phased programme in **Chapter 2: Description of the Proposed Development (EIAR Volume 2)**. Permanent access tracks would not be narrowed or graded to encourage scrub or vegetation growth as access is required for maintenance purposes. Further details on the proposed approach to habitat reinstatement would be set out in the CEMP and the principal contractor would be required to provide a habitat reinstatement plan prior to the start of reinstatement works. Th methodology for peatland reinstatement is also detailed in **TA 10.2: Outline Peat Management Plan (EIAR Volume 4)**.

Micro-siting

6.6.46 Micro-siting of towers, and/or the configuration of the construction working areas around towers, within the Proposed Development would seek to avoid localised ecological sensitivities wherever possible. This would include, but would not be limited to:

- Maximising the distance of the Proposed Development from areas of Ancient Woodland and BRP trees to minimise the felling required for access track construction and for safety clearances.
- Maximising the distance of the tower location from the main badger sett (Target Note 14.1) to a minimum of 30 m and considering alternatives to helicopter wiring in this area. If this is not possible, an NS licence would be required to disturb the sett during the construction phase.
- Maximising the distance of the OHL from the badger setts (Target Note 1 and Target Note 2) to a minimum of 30 m and considering alternatives to helicopter wiring in this area. If this is not possible, an NS licence would be required to disturb the sett during the construction phase.
- Maximising the distance of the access track from the badger sett (Target Note 17) to a minimum of 30 m. If this is not possible, an NS licence would be required to disturb or damage the sett during the construction phase.

[78] Planning and Development: Protected Species: https://www.nature.scot/professional-advice/planning-and-development/planning-and-development-advice/planning-and-development-protected-species [9 December 2021].

- Minimising the extent of construction work within wetland and peatland habitat, including GWDTEs.
- Maximising the distance of the Proposed Development from the acidic pond with good quality habitat (TN3).

Maintaining Hydrological Connectivity

6.6.47 **Figure 6.6: GWDTE (EIAR Volume 3a)** shows the relevant 100 m and 250 m buffer zones around infrastructure whereby a 100 m buffer zone is required for excavations less than 1 m (such as for access tracks) and a 250 m buffer zone is required for excavations greater than 1 m (such as for tower foundations).

6.6.48 Suitable drainage and surface water measures would be used to maintain hydrological connectivity in peatland habitats, particularly blanket bog, wet modified bog, flushes and wet heath, and in GWDTEs. This would include measures such as diverting drainage around working areas and maintaining hydrological connectivity in track design by using small diameter pipes in the sub-base. Where it is not possible to avoid routing access tracks through GWDTEs, or within a 100 m buffer zone of GWDTEs, a floating track construction would be used. The track design would have due regard to key principles set out in the joint SNH/FCS guide to floating roads on peat[79]. Where there is no clearly defined channel flow through GWDTEs, track construction would use a floating construction that incorporates measures such as a porous granular rock fill blanket, non-alkaline porous layer and perforated pipes to maintain the flow connectivity across tracks.

6.6.49 Where tower foundations are required within a 250 m buffer zone, up gradient of identified GWDTEs, the Applicant would give consideration, subject to detailed geotechnical investigation and foundation design, to alternative tower foundation techniques, such as mini-piles. This would involve less ground disturbance when compared to conventional foundations, potentially using a floated piling platform and no open excavation.

6.6.50 Where conventional foundation excavations are required within a 250 m buffer zone, up gradient of identified GWDTEs, the quality and quantity of the groundwater that feeds the GWDTEs downstream from the excavations would be maintained by over-pumping and dewatering of excavations discharged to ground (via suitable pollution prevention measures) in a suitable location close to the excavation.

6.6.51 Greenfield run-off (i.e. non-silty surface water flow that has not yet passed over any disturbed construction areas) would be kept separate from potentially contaminated water from construction areas, where possible. Where appropriate, interceptor ditches and other drainage diversion measures would be installed immediately in advance of any excavation works in order to collect and divert greenfield run-off around areas disturbed by construction activities. All surface water within disturbed areas would be managed in accordance with sustainable drainage system techniques, using a multi-tiered approach to provide both flow attenuation and treatment through infiltration, where possible, and physical filtration prior to discharge.

6.6.52 Ditches would follow the natural flow of the ground with a generally constant depth to ditch invert. They would have shallow longitudinal gradients, where possible. Regular check-dams would be used where necessary to control the rate of run-off. The ditches would be designed to intercept any stormwater run-off and to allow clean water flows to be transferred independently through the works without mixing with construction drainage. The regular interception and diversion of clean run-off around infrastructure would prevent significant disruption to shallow groundwater flow and peatland. This would also reduce the flow of water onto any exposed areas of rock and soil, thereby reducing the potential volume of silt-laden run-off requiring treatment.

6.6.53 Greenfield run-off would be discharged into an area of vegetation for dispersion or infiltration, mimicking natural flows, so as not to alter downstream hydrology or soil moisture characteristics.

6.6.54 Further details can be found in **Chapter 10: Hydrology, Hydrogeology and Geology and Soils (EIAR Volume 2**).

[79] Floating Roads on Peat (2010): http://www.roadex.org/wp-content/uploads/2014/01/FCE-SNH-Floating-Roads-on-Peat-report.pdf [7th October 2021].

Otter and Water Vole

6.6.55 Where possible, watercourse crossings would be suitably designed to allow continued otter and water vole movement along watercourses and would minimise riparian habitat loss. Full details of conceptual watercourse crossing design is provided in **TA 10.4: Watercourse Survey (EIAR Volume 4)**.

6.6.56 The confirmation of American mink presence and subsequent control is detailed in **TA 6.3: Outline Habitat Management Plan (EIAR Volume 4)**. Mink control could have a beneficial effect on the water vole population in the field survey area through a reduction in predation and an extension of their range into areas previously used by American mink.

Other Protected Species Enhancements

6.6.57 The opportunity exists to enhance the field survey area for pine marten, reptiles and amphibians, as detailed in **TA 6.3: Outline Habitat Management Plan (EIAR Volume 4)**. The provision of den boxes and artificial refugia could have a beneficial effect by providing further sheltering opportunities.

Residual Effects

6.6.58 The majority of habitats would be reinstated following completion of the Proposed Development, resulting in an adverse effect for the short- to medium-term, approximately five to ten years, until habitats (excluding woodland) have re-established. Permanent habitat loss would occur in peatlands and potential GWDTEs due to the excavation of access tracks but this effect is considered to be of low magnitude due to the small footprint involved. As a result, **no significant residual effects** are predicted on habitats.

6.6.59 Following completion of the Proposed Development (including reinstatement work), residual adverse effects are anticipated for the long-term (approximately ten to 20 years) until woodland has re-established. Woodland planting for Ancient Woodland is not a like-for-like replacement as Ancient Woodland is considered to be an irreplaceable resource. Compensatory planting areas are likely to establish and become a functional young woodland over at least 50 years. However, it would take far longer to provide a comparable offset for the loss of Ancient Woodland. As a result, a long-term **significant adverse residual effect** would remain for the loss of Ancient Woodland until such time as the replacement woodland areas are fully established and functional (from 80-100 years).

6.6.60 Inspection of any BRP trees prior to felling and the provision of bat boxes would avoid the accidental killing or disturbance of bats and would provide compensation for the loss of roosts. As a result, **no significant residual effects** are predicted on bat species.

6.6.61 Implementation of the proposed CEMP would avoid likely adverse effects from pollution events on habitats and water vole and otter, with **no residual effects**.

Operational Phase

Description of Effects

6.6.62 During operation of the Proposed Development, maintenance activities would involve regular inspections to identify deterioration or damage, with the possible replacement of short sections. Typically, insulators and conductors need replaced after 40 years and towers are painted every 15-20 years. The vegetation within the operational corridor would also be managed to maintain the required safety clearance. In all cases, maintenance activities would access the Proposed Development from permanent access tracks established during construction. Permanent access tracks would be present into each angle tower, with the other tracks established during construction only being temporary, as shown on **Figure 6.2: Phase 1 Habitats (EIAR Volume 3a)**. As a result, effects from maintenance activities are considered to be **not significant**.

Mitigation During Operation

6.6.63 No significant effects are predicted and, consequently, no mitigation is required.

Residual Effects

6.6.64 There would be no significant effects pre-mitigation and, consequently, no residual effects would occur.

Cumulative Effects

6.6.65 This section considers the potential for cumulative effects on ecological features from those proposed, applied, under construction and consented schemes closest to the field survey area by first describing the known conditions on each of those sites and then summarising the cumulative effect with the Proposed Development. **Table 6-12** shows the cumulative developments that could result in cumulative effects on ecological features in combination with the Proposed Development. These cumulative developments occur within 10 km and are in the same ZOI as the Proposed Development.

Table 6-12: Developments Considered in Cumulative Assessment

Name	Distance from Proposed Development (km)
Consented (not yet constructed)	
New hydro connection at Maltlands, Inveraray, Argyll	8.5 km to the south.
Blarghour Wind Farm and grid connection	4.8 km to the south-west.
Forest access tracks in Succoth Forest and near Kilchurn Castle	300-500 m.
Consented (under construction)	
Inveraray to Crossaig 275 kV OHL reinforcement	7.6 km to the south.
Reasonably Foreseeable	
Proposed Creag Dhubh substation for the proposed Creag Dhubh to Dalmally 275 kV Connection wider project	Within footprint of Proposed Development.
Proposed ITE/ITW tie-in with temporary diversion at Creag Dhubh	Within footprint of Proposed Development.
Proposed Creag Dhubh to Inveraray 275 kV OHL	Within footprint of Proposed Development.

6.6.66 EIA Reports and other relevant environmental reports, such as survey reports, for nearby developments were consulted, and relevant details are presented below.

New Hydro Connection at Maltlands, Inveraray, Argyll

6.6.67 This scheme was consented in November 2018 and would involve the Allt Riabhachan, which flows from Steallaire Ban Loch to the River Aray. The area is dominated by young coniferous woodland plantation. Protected species surveys recorded badger field signs but no setts and no other protected species signs, including BRP trees.

6.6.68 The potential impacts considered are loss of one highly GWDTE M6 *Carex echinata-Sphagnum recurvum/auriculatum* mire and disturbance of badger, though none of the effects were considered to be significant. Mitigation measures would include habitat reinstatement and maintenance of hydrological connectivity. Impacts on migratory fish are considered unlikely due to the inaccessible nature of the watercourse but Atlantic salmon and brown trout are present outwith the cumulative development.

6.6.69 It is noted that the potential in-combination impacts would be minor and not significant given the scale and nature of the works relating to the hydro scheme would be localised and on a much smaller scale when compared to the Proposed Development.

Blarghour Wind Farm and Grid Connection

6.6.70 The wind farm was consented in October 2021 following an appeal, with the initial objection related to significant impacts on nationally important peatland. The objection was removed through demonstrating that the design of the development had avoided the most sensitive peatland locations and that significant effects would be overcome by siting, design and the controls imposed by conditions on the construction methods and future land management.

6.6.71 The proposed grid connection that would connect the wind farm to the new Creag Dhubh substation via approximately 10 km of OHL by 2025 is also reasonably foreseeable. However, there is currently no route in the public domain as consultation is to be undertake in May 2022. It is likely that the proposed grid connection will lead to further peatland loss, and potential further loss of Ancient Woodland.

6.6.72 It is likely that the loss of peatland and Ancient Woodland in combination with the loss from the Proposed Development would amount to a combined low percentage of habitat loss that is considered to be significant.

Forest Access Tracks in Succoth Forest and Near Kilchurn Castle

6.6.73 The areas are dominated by coniferous woodland plantation and Ancient Woodland. As a result, potential effects are likely to include loss of coniferous woodland plantation, Ancient Woodland and BRP trees.

6.6.74 The further loss of coniferous woodland plantation is considered to be not significant due to its low biodiversity value. It is likely that the loss of Ancient Woodland and BRP trees in combination with the losses from the Proposed Development would amount to a combined low percentage of habitat loss that is considered to be significant.

Inveraray to Crossaig 275 kV OHL Reinforcement

6.6.75 The project was consented in July 2019. Phase 1 of this project has been constructed between Inveraray and Lochgilphead. Phase 2 between Lochgilphead and Crossaig is currently under construction. The area is dominated by coniferous woodland plantation, semi-natural broadleaved woodland and marshy grassland. Protected species surveys recorded badger setts, a water vole burrow, otter couches, pine marten and red squirrel activity, common lizard, common frog, and common toad.

6.6.76 The potential impacts considered are loss of Ancient Woodland, BRP trees, peatland, and GWDTEs and disturbance of badger, otter, pine marten, and red squirrel, though none of the effects were considered to be significant.

6.6.77 It is likely that the loss of Ancient Woodland, BRP trees, peatland, and GWDTEs in combination with the losses from the Proposed Development would amount to a combined low percentage of habitat loss that is considered to be significant.

Proposed Creag Dhubh Substation for the Proposed Creag Dhubh to Dalmally 275 kV Connection Wider Project

6.6.78 The area is dominated by coniferous woodland plantation. Protected species surveys recorded water vole burrows and pine marten activity.

6.6.79 The further loss of coniferous woodland plantation is considered to be not significant due to its low biodiversity value. Given the likely use of a 30 m watercourse buffer, water vole are also unlikely to be disturbed as a result of the cumulative development. There may be a low magnitude, localised disturbance of pine marten utilising the coniferous woodland plantation during construction, but this is considered to be not significant given the low pine marten activity and the low magnitude of the impact.

Proposed ITE/ITW Tie-in with Proposed Temporary Diversion at Creag Dhubh

6.6.80 This cumulative development forms associated works for the proposed Creag Dhubh to Dalmally 275 kV OHL connection that connects Creag Dhubh substation to the existing 132 kV Taynuilt to Inveraray OHL. Potential in-combination impacts are anticipated to be similar in nature (but smaller in scale) to the potential impacts identified for the Proposed Development. However, it is noted that the potential in-combination impacts would be minor and not significant given the scale and nature of the works relating to the tie in would be localised and on a much smaller scale when compared to the Proposed Development. Furthermore, potential in-combination effects would be managed by the Applicant in accordance with the project CEMPs, with mitigation measures developed in tandem to mitigate significant cumulative effects.

Proposed Creag Dhubh to Inveraray 275 kV OHL

6.6.81 The area is dominated by coniferous woodland plantation, marshy grassland and broadleaved semi-natural woodland. Protected species surveys recorded a potential otter couch and two active badger setts, plus the presence of pine marten and red squirrel, though no protected dwellings.

6.6.82 The potential impacts considered are the loss of Ancient Woodland, BRP trees, spread of INNS (Himalayan balsam *Impatiens glandulifera*, Japanese knotweed *Fallopia japonica* and rhododendron *Rhododendron ponticum*) and the disturbance of badger, otter and pine marten. Only the loss of BRP trees and the spread of INNS were considered to be significant.

6.6.83 Construction works would be managed in accordance with measures set out in the CEMP, which would ensure potential effects would be mitigated as appropriate. Furthermore, both projects form part of The Applicant's wider Argyll and Kintyre 275 kV strategy and in-combination impacts relating to habitat loss, with secondary impacts to ecology, would be managed through landscape plans, which would include proposals for woodland planting, habitat restoration and biodiversity net gain. Furthermore, the existing 132 kV OHL between Inveraray and the Proposed Development would be removed and the land would be reinstated, offsetting impacts relating to ecology and providing enhancements, where possible. However, it is likely that the further loss of Ancient Woodland and BRP trees in combination with the losses from the Proposed Development would amount to a combined low percentage of habitat loss that is considered to be significant.

Summary of Cumulative Effects

6.6.84 The main cumulative effects are considered to be a small loss of Ancient Woodland, BRP trees, peatlands (some of which is blanket bog), GWDTEs and disturbance of protected species, such as badger, otter and pine marten. Implementing mitigation, including the provision of bat boxes and peatland restoration could result in an overall beneficial cumulative effect on habitats by improving the availability of bat roosts and the quality of peatland in the field survey area. Standard pollution prevention measures, habitat reinstatement and maintenance of hydrological connectivity would minimise impacts on GWDTEs. As a result, the overall effect of the cumulative loss of BRP trees, peatland, and GWDTEs is considered to be **not significant**.

6.6.85 A combined disturbance of protected species could occur due to the overlapping timeframes of many of the cumulative developments, resulting in a combined displacement of commuting and foraging species that have larger ranges, such as bats, otter and pine marten. Construction activities would likely have a localised, short-term, low magnitude disturbance effect on these species. As a result, the effect is considered to be **not significant**.

6.6.86 Taking into account the likely low cumulative effects of the surrounding cumulative developments with the Proposed Development, no significant cumulative effects are considered to occur on BRP trees, peatlands, GWDTEs, and protected species. However, as Ancient Woodland is an irreplaceable resource, a **significant cumulative effect** is considered likely to occur from any addition loss from the surrounding cumulative developments with the Proposed Development.