

# Annex G - Ext Phase 1 Survey Report

**August 2022**





## Argyll and Kintyre 275 kV Substations: LT288 An Suidhe

Extended Phase 1 Habitat Survey and  
Protected Species Survey

July 2022

Project No.: 0607366

<b>Document details</b>	The details entered below are automatically shown on the cover and the main page footer. PLEASE NOTE: This table must NOT be removed from this document.
Document title	Argyll and Kintyre 275 kV Substations: LT288 An Suidhe
Document subtitle	Extended Phase 1 Habitat Survey and Protected Species Survey
Project No.	0607366
Date	July 2022
Version	0.1
Author	Aaron Nugent, Alexander Sharp, Amelia Hodnett
Client Name	SSEN

**Document history**

Version	Revision	Author	Reviewed by	ERM approval to issue		Comments
				Name	Date	
Draft	0.1	AN, AS, AH,	AC, SW, HB	Nicola Lee		

## CONTENTS

<b>1.</b>	<b>INTRODUCTION .....</b>	<b>1</b>
1.1	Background to the Project.....	1
1.2	Consent Requirements .....	1
1.3	The Project .....	1
1.4	Scope.....	2
1.5	Site Location and Description .....	3
<b>2.</b>	<b>METHODOLOGY .....</b>	<b>4</b>
2.1	Desk Study .....	4
2.2	Extended Phase 1 Habitat Survey .....	4
2.3	National Vegetation Classification Survey .....	5
2.4	Fauna Surveys as Part of the Extended Phase 1 .....	5
2.4.1	Bats.....	5
2.4.2	Otter ( <i>Lutra lutra</i> ) .....	6
2.4.3	Water Vole ( <i>Arvicola amphibious</i> ).....	6
2.4.4	Badger ( <i>Meles meles</i> ).....	6
2.4.5	Pine Marten ( <i>Martes martes</i> ) .....	7
2.4.6	Red Squirrel ( <i>Sciurus vulgaris</i> ) .....	7
2.4.7	Wildcat ( <i>Felis silvestris</i> ) .....	7
2.4.8	Birds.....	7
2.4.9	Other Fauna.....	7
2.5	Survey Personnel and Timing.....	7
2.6	Limitations.....	8
<b>3.</b>	<b>DESK STUDY FINDINGS .....</b>	<b>9</b>
3.1	Designated Sites.....	9
3.2	Non-Statutory Designated Sites and Ancient Woodland.....	11
3.2.1	Non-statutory Sites .....	11
3.2.2	Ancient Woodland.....	11
3.2.3	Protected and Priority Species Records .....	13
<b>4.</b>	<b>SURVEY FINDINGS.....</b>	<b>14</b>
4.1	Extended Phase 1 Habitat Survey Results .....	14
4.1.1	Broadleaved woodland – semi natural (A 1.1.1) .....	14
4.1.2	Coniferous woodland – plantation (A 1.2.2).....	14
4.1.3	Mixed woodland - semi-natural (A 1.3.1) .....	14
4.1.4	Mixed woodland – plantation (A 1.3.2).....	15
4.1.5	Coniferous woodland - recently felled (A 4.2) .....	15
4.1.6	Acid grassland - semi-improved (B 1.2) .....	15
4.1.7	Neutral grassland - semi-improved (B 2.2) .....	15
4.1.8	Marsh/marshy grassland (B 5).....	15
4.1.9	Bracken – continuous (C 1.1) .....	15
4.1.10	Running water (G 2).....	15
4.1.11	Standing Water (G 1).....	15
4.1.12	Bare ground (J 4).....	15
4.1.13	Invasive Non-Native Species .....	16
4.2	NVC Habitats with the potential to support GWDTE .....	16
4.2.1	W4 <i>Betula pubescens</i> - <i>Molinia caerulea</i> woodland.....	16
4.2.2	M25 <i>Molinia caerulea</i> - <i>Potentilla erecta</i> mire .....	16
4.2.3	MG10 - <i>Holcus lanatus</i> - <i>Juncus effusus</i> rush-pasture .....	16
4.3	PROTECTED SPECIES SURVEY FINDINGS .....	16
4.3.1	Bats.....	16
4.3.2	Otter.....	17

4.3.3	Water Vole .....	17
4.3.4	Badger .....	17
4.3.5	Pine Marten .....	18
4.3.6	Red Squirrel .....	18
4.3.7	Wildcat .....	18
4.3.8	Birds.....	18
4.3.9	Other Fauna.....	19
<b>5.</b>	<b>SUMMARY AND RECOMMENDATIONS.....</b>	<b>20</b>
5.1	Summary .....	20
5.2	Recommendations.....	20

**APPENDIX A FIGURES**

**APPENDIX B TARGET NOTES**

**APPENDIX C SPECIES LIST**

**APPENDIX D NORTH ARGYLL ORNITHOLOGY CONSULTATION SEPTEMBER 2021**

**List of Tables**

Table 2.1: BCT Categories of Roosting Habitats and Commuting and Foraging Habitats.....	5
Table 2.2: Survey details.....	7
Table 3.1 Statutory Designated sites of International / National Importance within 10 km of the Project .....	10
Table 3.2 Named and Unnamed Ancient Woodlands within 2 km of the Redline Boundary.....	11
Table 5.1 Target Notes .....	30
Table 5.2 Species List.....	42

**List of Figures**

Figure 1 An Suidhe Red Line Boundary .....	23
Figure 2 An Suidhe Survey Area .....	24
Figure 3 An Suidhe Designated Sites within 10 km Buffer .....	25
Figure 4 Extended Phase 1 Habitat Survey for An Suidhe Substation.....	26
Figure 5 National Vegetation Classification for An Suidhe Substation .....	27
Figure 6 GWDTE Classification for An Suidhe Substation .....	28

**Acronyms and Abbreviations**

Name	Description
ABReC	Argyll Biological Record Centre
ABC	Argyll and Bute Council
BCT	Bat Conservation Trust
BNG	Biodiversity Net Gain
°C	Centigrade
CC	Cloud Cover
DEL	Direct Ecology Ltd
EA	Environmental Appraisal
ECoW	Ecological Clerk of Works

EP1HS	Extended Phase 1 Habitat Survey
ERM	Environmental Resources Management Ltd
pGWDTE	Potential Groundwater Dependent Terrestrial Ecosystem
HGV	Heavy Goods Vehicle
JNCC	Joint Nature Conservation Committee
Km	Kilometre
kV	Kilovolt
NBN	National Biodiversity Network
NNR	National Nature Reserve
NVC	National Vegetation Classification Survey
OHL	Overhead Line
SAC	Special Area of Conservation
SBL	Scottish Biodiversity List
SHE Transmission	Scottish Hydro Electric Transmission plc
SPA	Special Protected Area
SSEN Transmission	Scottish and Southern Electricity Networks
SSSI	Site of Special Scientific Interest
Temp	Temperature
TN	Target Note
WS	Wind Speed



## 1. INTRODUCTION

### 1.1 Background to the Project

Scottish Hydro Electric Transmission plc ("the Applicant") who, operating and known as Scottish and Southern Electricity Networks Transmission ("SSEN Transmission"), own, operate and develop the high voltage electricity transmission system in the north of Scotland and remote islands.

The Applicant has a statutory duty under Schedule 9 of the Electricity Act 1989 to develop and maintain an efficient co-ordinated and economical electrical transmission system in its licence area.

The Applicant proposes to construct a new 275 kV electricity substation, with associated overhead line works in the vicinity of the existing An Suidhe substation (located at Grid Ref 204861 705524). The new substation will connect into the recently completed overhead line between Inveraray and Crossaig which is capable of operation at 275kV but at present is routed into the existing substation, so the overhead line requires to be realigned to connect into the new substation. The substation and overhead line will support the export of renewable energy generated within the Argyll area.

### 1.2 Consent Requirements

The Applicant is seeking consent from Argyll and Bute Council under the Town and Country Planning (Scotland) Act 1997 (as amended) for construction and operation of the substation (hereby referred to as 'the Proposed Development').

The size of the grid transformers falls under the National Planning Framework 3 Annex 3 description of High Voltage Electricity Transmission Network and is therefore categorised as 'National Development' under the Town and Country Planning (Hierarchy of Development) (Scotland) Regulations 2009 (The Hierarchy Regulations).

The works to the overhead line (hereby referred to as 'the Associated Development') which comprise the construction of six steel lattice towers to support overhead line conductors will be the subject of an application to the Scottish Ministers under section 37 application of the Electricity Act 1989.

### 1.3 The Project

Although the Proposed Development and the Associated Development are being submitted under separate planning applications, as discussed above, both developments contribute to the overall reinforcement programme at An Suidhe and will therefore hereby be referred to as 'the Project'.

The location of the Project is shown on **Appendix A Figure 1**.

- A substation platform in the region of 1.3 ha;
- A transformer building, control building and Gas Insulated Switchgear (GIS)<sup>1</sup> building;
- A temporary works area (TWA) adjacent to the Proposed Development site, of approximately 0.69 ha. Half of this area would be for permanent operational purposes and the remaining half would be used as a construction site on a temporary basis and reinstated after construction;
- Access to the substation platform over an existing forestry access track, approximately 1.7 km in length, to the new access track being constructed for the new substation referred to below;

---

<sup>1</sup> Within a GIS, live electrical equipment uses special gas as the insulating medium, usually sulphur hexafluoride (SF<sub>6</sub>) gas. The live electrical equipment is enclosed in a building, rather than exposed. The use of gas reduced the clearance distances required between electrical equipment, resulting in a small footprint, when compared to using an Air Insulated Switchgear (AIS) solution.

- Construction of a new access track from the existing forestry track to the substation, approximately 174 m long; and
- Landscape planting to screen the Proposed Development and provide biodiversity enhancement.

Components of the Associated Development which is the subject of an application under section 37 of the Electricity Act 1989 are:

- Construction of seven new steel lattice towers to support the realigned overhead line which will connect into the new substation;
- Construction of three new permanent access tracks leading to the three northern most towers:
  - One of approximately 164 m;
  - One of approximately 109 m; and
  - One of approximately 14 m.
- Approximately 465 m of temporary access tracks leading to the 3 southern-most towers;
- Temporary overhead line (OHL) diversions required during construction;
- Dismantling of seven redundant towers.

In addition, the proposed 33 kV interconnector cable would be undergrounded to make way for the Associated Development and can be carried out under Permitted Development rights.

Although the Red Line Boundary (RLB) extends over a large area, the only habitats to be directly impacted due to the Project will be those under the footprint of the works listed above and immediate surrounds to allow the works to take place, as shown in **Appendix A Figure 1**.

Access to the substation site will be along an existing access track that is used by vehicles involved in the management of the commercial forests. The track was used as an access route for the development of SSEN Transmission's Inveraray to Crossaig 275 kV OHL Reinforcement Project and also the construction of An Suidhe Wind Farm. .

## 1.4 Scope

Environmental Resources Management Ltd (ERM) was commissioned by SSEN Transmission to undertake an Extended Phase 1 Habitat Survey (EP1HS), and protected species survey of land at the Project site in October 2021<sup>2</sup>. The Survey Area comprised the PAN boundary plus a buffer of 250 m around this boundary where the Project is located<sup>3</sup> and a 50 m buffer around the Pan Boundary along the proposed main access track<sup>4</sup>. The Survey Area also included a 250 m buffer around the Associated development boundary. A National Vegetation Classification (NVC) survey was undertaken alongside the EP1HS where potential was noted for habitats to be groundwater dependent.

This report presents the findings of the EP1HS, protected species survey and NVC survey undertaken in October 2021 by ERM within the Survey Area.

---

<sup>2</sup> As part of the consenting process, SSEN Transmission have also commissioned ERM to undertake the Environmental Appraisal (EA) and Biodiversity Net Gain (BNG) assessment of the project. Reporting for both these works will be submitted at a later date.

<sup>3</sup> The 250 m buffer follows Scottish Environment Protection Agency Guidance Note 31: Guidance on Assessing the Impacts of Development Proposals on Groundwater Abstractions and Groundwater Dependent Terrestrial Ecosystems. Available at [lups-gu31-guidance-on-assessing-the-impacts-of-development-proposals-on-groundwater-abstractions-and-groundwater-dependent-terrestrial-ecosystems.pdf \(sepa.org.uk\)](https://www.sepa.org.uk/guidance/gu31-guidance-on-assessing-the-impacts-of-development-proposals-on-groundwater-abstractions-and-groundwater-dependent-terrestrial-ecosystems.pdf)

<sup>4</sup> The 50 m buffer was determined as sufficient for assessment for the access track as it is pre-existing with no planned upgrades associated with the works planned. Therefore, habitat connectivity will be maintained.



## 1.5 Site Location and Description

The Survey Area is situated approximately 5 km south west of Inveraray, with the proposed 275 kV substation centred at grid reference NN 04861 05524. The Survey Area and immediate surrounds predominantly consists of coniferous and mixed woodland plantation with continuous sections of bracken and areas of running water.

The Project location, Survey Area and SSEN Transmission's Inveraray to Crossaig 275 kV OHL Reinforcement Project (which runs adjacent to the Project) is shown in **Figure 2**.

## 2. METHODOLOGY

### 2.1 Desk Study

A desk study was undertaken to determine the presence of any designated nature conservation sites, within 10 km of the Survey Area and for any ancient woodland, tree preservation orders and records of protected species within 2 km of the Survey Area. Only records within the last 25 years have been included.

The following sources were consulted:

- NatureScot SiteLink<sup>5</sup> - data on designated sites and notable species in Scotland;
- NatureScot Scottish Biodiversity List (SBL)<sup>6</sup> - a list of species which are important for Scotland's Biodiversity;
- Scotland's Environment Web Map<sup>7</sup> - an interactive map which shows biodiversity areas across Scotland;
- National Biodiversity Network (NBN) Atlas<sup>8</sup> - a national interactive map that shows biodiversity areas;
- Scottish Forestry<sup>9</sup> - Guidance Note 33: Forest operations and red squirrels: November 2006;
- Argyll Biological Record Centre (ABReC) - a data request was submitted for information over the last ten years regarding designated sites, species records and, information on the habitats present (see **Section 2.6**).
- Argyll Raptor Species Group (ARSG) and Scotland's Raptor Study Group (SRSG): a data request was submitted for information over the last ten years regarding raptor species records. At the time of writing, responses from the ARSG and SRSG had not been received;
- In September 2021, ERM consulted with NatureScot on behalf of SSEN Transmission to agree an approach to ornithology surveys for the North Argyll 275 kV Upgrade, which includes the proposed substation at Craig Murrail (see **Annex D**). It was agreed with NatureScot that the use of ornithology data collected during surveys undertaken in 2015/2016 to inform the Environmental Impact Assessment (EIA) for SSEN Transmission's Inveraray to Crossaig 275 kV OHL Reinforcement Project was deemed acceptable and no additional ornithology surveys would be required, assuming baseline conditions had not changed; and,
- EIA for SSEN Transmission's Inveraray to Crossaig OHL 275 kV Reinforcement Project was also reviewed in relation to the wider ecological findings.

Before the EP1HS was undertaken, preliminary mapping of the habitats within the Project and survey buffers was undertaken using the Habitat Map of Scotland (HabMoS)<sup>10</sup> open source data. This mapping was then ground truthed during the survey.

### 2.2 Extended Phase 1 Habitat Survey

An EP1HS was undertaken by ERM within the Survey Area (see **Appendix A Figure 2**). The survey was based on the methods described in Joint Nature Conservation Committee (JNCC) Handbook for

<sup>5</sup> NatureScot SiteLink. Available at <https://www.nature.scot/information-hub/snhi-data-services>

<sup>6</sup> NatureScot Scottish Biodiversity List. Available at <https://www.nature.scot/scotlands-biodiversity/scottish-biodiversity-strategy/scottish-biodiversity-list>

<sup>7</sup> Scotland's Environment Web Map. Available at <https://map.environment.gov.scot/sewebmap/>

<sup>8</sup> National Biodiversity Network Atlas. Available at <https://nbnatlas.org/>

<sup>9</sup> Scottish Forestry: Forest Operations and Red Squirrels in Scottish Forests. Available at, <https://forestry.gov.scot/publications/24-forest-operations-and-red-squirrels-in-scottish-forests>

<sup>10</sup> Habitat Map of Scotland. Available at <https://www.environment.gov.scot/our-environment/habitats-and-species/habitat-map-of-scotland/>

Phase 1 Habitat Survey (2010)<sup>11</sup> as extended for use in Environmental Assessment<sup>12</sup>. The alphanumeric Phase 1 habitat codes have been reported in the findings. Target notes of features of interest were recorded, each with a geographic reference and accompanying photograph(s) (see **Appendix B Target Notes**)

## 2.3 National Vegetation Classification Survey

An NVC survey of habitats with the potential to support Groundwater Dependent Terrestrial Ecosystem (GWDTE) was undertaken by ERM within the RLB (see **Appendix A Figure 2**). The survey was based on the methods described in JNCC National Vegetation Classification: Users' handbook<sup>13</sup> with communities identified by eye. Target notes of features of interest were recorded with a geographic reference and photograph taken (see **Appendix B Target Notes**).

## 2.4 Fauna Surveys as Part of the Extended Phase 1

Signs of fauna including protected species were recorded during the EP1HS, taking account of species likely to occur in the locality and in the habitats present. The survey method for each species is detailed in **Sections 2.4.1 to 2.4.9**.

### 2.4.1 Bats

Habitats suitable for bats were identified and an assessment undertaken of their likely suitability to support foraging / commuting bats and bat roosts, taking account of guidance from the Bat Conservation Trust (BCT)<sup>14</sup> (see **Table 2.1**). The assessment of the potential for bat roosts in the habitats was made based on ground observations focused in areas that would be directly affected and selected areas adjacent to within at least 30 m of the RLB. In areas of more mature dense conifers, it was restricted largely to the edges of the plantations along tracks / rides, as access into the plantation was not possible (see **Section 2.6 Limitations**).

**Table 2.1: BCT Categories of Roosting Habitats and Commuting and Foraging Habitats**

BCT Categories	Roosting Habitats	Commuting and Foraging Habitats
Negligible	Negligible habitat features on site likely to be used by roosting bats.	Negligible habitat features on site likely to be used by commuting or foraging bats.
Low	A structure with one or more potential roost sites that could be used by the individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e., unlikely to be suitable for maternity or hibernation).	Habitat that could be used by small numbers of commuting bats such as fragmented hedgerows or an unvegetated stream, but isolated, i.e., not very well connected to the surrounding landscape by other habitat.  Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub.

<sup>11</sup> Joint Nature Conservation Committee (2010 reprint) Handbook for Phase 1 Habitat Survey - A Technique for Environmental Audit, Joint Nature Conservation Committee, Peterborough. Reprinted in 2010, with minor corrections addressed in 2016.

<sup>12</sup> Institute of Environmental Assessment (1995) Guidelines for Baseline Ecological Assessment, Spon, London.

<sup>13</sup> Joint Nature Conservation Committee National Vegetation Classification: Users' handbook (2006), Peterborough.

<sup>14</sup> Collins, J. (ed.) (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines. 3rd edition. The Bat Conservation Trust, London.

	A tree of sufficient size and age to contain potential roost features (PRFs) but with none seen from the ground or features seen with only very limited roosting potential.	
Moderate	A structure or tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only – the assessments in this table are made irrespective of species conservation status, which is established after presence is confirmed).	<p>Continuous habitat connected to the wider landscape that could be used by bats for commuting, such as lines of trees and scrub or linked back gardens.</p> <p>Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.</p>
High	A structure or tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.	<p>Continuous, high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by commuting bats such as river valleys, streams, hedgerows, lines of trees and woodland edge.</p> <p>High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree-lined watercourses and grazed parkland.</p> <p>Site is close to and connected to known roosts.</p>

### 2.4.2 Otter (*Lutra lutra*)

Accessible areas of suitable habitat to support otters within the Survey Area were surveyed for evidence of otter activity in the form of spraints, slides, holts, couches, tracks, and resting up sites (survey limitations are detailed in **Section 2.6**). The suitable habitat surveyed included, running freshwater, field drains, culverts, semi natural broadleaved and coniferous plantation woodland where adjacent to watercourses and, areas of continuous bracken.

### 2.4.3 Water Vole (*Arvicola amphibious*)

Within the Survey Area, there are areas of running fresh water (burns and field drains) offering suitable habitat for water vole. Where accessible, these watercourses were surveyed for evidence of water vole activity (in the form of droppings, latrines, feeding remains, nests, and burrows) (survey limitations are detailed in **Section 2.6**).

### 2.4.4 Badger (*Meles meles*)

A walkover survey for evidence of badger activity was undertaken within the Survey Area, where access was available (survey limitations are detailed in **Section 2.6**). Any evidence of badger activity (in the form of set entrances, bedding, scratch marks, paths, prints, guard hairs, latrines, dropping and signs of foraging) was recorded. Within the Survey Area, there are areas of semi-natural broadleaved woodland and coniferous plantation offering suitable habitat for badgers.

### 2.4.5 Pine Marten (*Martes martes*)

Areas accessible to surveyors were searched for signs of pine marten activity, including dens and feeding signs (survey limitations are detailed in **Section 2.6**). Suitable habitat for pine marten includes substantial areas of coniferous plantation to the north and south of the proposed access track. Within the Survey Area, there are areas of semi-natural broadleaved woodland and coniferous plantation offering suitable habitat for pine marten.

### 2.4.6 Red Squirrel (*Sciurus vulgaris*)

Areas accessible to surveyors were searched for signs of red squirrel activity, including dreys and feeding signs (survey limitations are detailed in **Section 2.6**). Suitable habitat for red squirrel includes substantial areas of coniferous plantation to the north and south of the proposed access track.

### 2.4.7 Wildcat (*Felis silvestris*)

Accessible areas of suitable habitat to support wildcat within the Survey Area were surveyed for evidence of wildcat activity in the form of dens, feeding signs and scat (survey limitations are detailed in **Section 2.6**). Within the Survey Area, there are areas of coniferous plantation offering suitable habitat for wildcat.

### 2.4.8 Birds

As mentioned in **Section 2.1**, following a consultation with NatureScot in September 2021, it was agreed the use of ornithology data collected during surveys undertaken in 2015/2016 to inform the EIA for SSEN Transmission's Inveraray to Crossaig 275 kV OHL Reinforcement Project was deemed acceptable and that no additional ornithology surveys would be required, assuming baseline conditions had not changed.

As the baseline had not changed to the extent that additional bird surveys were deemed to be required, only incidental records of bird species seen and heard during the EP1HS were recorded to supplement the existing bird data available.

### 2.4.9 Other Fauna

The presence, or potential presence, of any other species of note (e.g., Scottish Biodiversity List species, Local Biodiversity Action Plan species, reptiles, and amphibians) was recorded, or direct field signs of species themselves, was recorded.

## 2.5 Survey Personnel and Timing

The EP1HS was carried out by Amelia Hodnett (ERM Senior Ecologist) who has 10 years' experience, supported by Aaron Nugent (ERM Ecologist).

Survey timing and conditions are detailed in **Table 2.2**.

**Table 2.2: Survey details**

Date	Surveyor	Survey Type	Approximate survey start/end	Weather
11 October 2021	Amelia Hodnett (ACIEEM) Aaron Nugent (Qualifying CIEEM member)	Extended phase 1 survey  European Protected Species walkover	1400/1800	Rain: Intermittent drizzle; Temp: 14°C; Beaufort wind force scale (WS) <sup>15</sup> :

<sup>15</sup> Met Office Beaufort wind force scale. Available at <https://www.metoffice.gov.uk/weather/guides/coast-and-sea/beaufort-scale>

				2; Cloud cover (CC) <sup>16</sup> : 8.
13 October 2021	Amelia Hodnett Aaron Nugent	Extended phase 1 survey  European Protected Species walkover	0930/1730	Rain: 1; Temp: 13°C; WS: 4; CC: 6.

## 2.6 Limitations

As stated in **Section 2.1**, a data request was submitted to the ABReC. However, on 9 December 2021, ABReC contacted ERM to advise they are currently unable to produce data search reports.

Although all burns and drainage ditches within the Survey Area were assessed, it was not possible to fully survey along all of the smaller burns which cross the site west to east for the presence of otter or water vole. Reasons for this include the extent of dense vegetation and unsafe, steep sided margins and unsafe fast flowing water.

Due to the extent of dense woodland vegetation across some of the Survey Area, it is possible badger setts, squirrel dreys and pine marten dens could be present within the Survey Area but not recorded as they were inaccessible and obscured from view. Therefore, the suitability for these areas of dense woodland habitats to support these and other protected species was undertaken from the woodland edges and considered further in the context of other desk study information.

<sup>16</sup> Royal Meteorological Society Weather Symbols and Synoptic Charts. Available at <https://www.metlink.org/resource/student-charts/>



### 3. DESK STUDY FINDINGS

#### 3.1 Designated Sites

Three sites designated for nature conservation value were identified within 10 km of the Project. These sites are listed in **Table 3.1** and shown in **Appendix A, Figure 3**.

**Table 3.1 Statutory Designated sites of International / National Importance within 10 km of the Project**

Site Name	Designation	Proximity to the Project (km)	Reason for Designation	Considered further in the assessment
Ardchyline Wood	SSSI	4.9	This site is designated as it supports upland oak woodland.	No, due to: <ul style="list-style-type: none"> <li>■ lack of connectivity between the Project and the designated site; and</li> <li>■ lack of connectivity between potential impact pathways and designated features of the site.</li> </ul>
Craignure Mine	SSSI	5.6	This site is designated as it contains 'Mineralogy of Scotland' features.	
Strone Point, North Loch Fyne	SSSI	6.8	This site is designated as it contains 'Structural and metamorphic geology: Dalradian'.	
Key: SSSI – Site of Special Scientific Interest				

## 3.2 Non-Statutory Designated Sites and Ancient Woodland

### 3.2.1 Non-statutory Sites

No non-statutory sites designated for nature conservation value were identified within 2 km of the Project.

### 3.2.2 Ancient Woodland

A review of the Ancient Woodland Inventory (using publically available data from NatureScot<sup>17</sup>) identified eighteen unnamed Ancient Woodlands and three named areas of Ancient Woodland (with the same name) within 2 km of the Project (see **Table 3.2** and **Figure 3**). The closest Ancient Woodlands are shown as being 0 km to the Project as they are located adjacent to the existing access track.

**Table 3.2 Named and Unnamed Ancient Woodlands within 2 km of the Redline Boundary**

Protected Area Name	Designation	Approximate Distance to Substation Redline Boundary (km)	Considered further in the assessment
Unnamed Woodland	Ancient (of semi-natural origin)	0	The unnamed ancient woodland which is adjacent to the existing access track, could be impacted by potential pruning and removal of the trees. Further recommendations are detailed below with regards to this Ancient Woodland.
Unnamed Woodland	Ancient (of semi-natural origin)	0	
Unnamed Woodland	Ancient (of semi-natural origin)	0.05	The existing access track is currently used for commercial forestry access purposes and the frequency of vehicles using the track will not increase significantly.
Unnamed Woodland	Ancient (of semi-natural origin)	0.12	
Balmore	Ancient (of semi-natural origin)	0.24	
Unnamed Woodland	Ancient (of semi-natural origin)	0.25	The second unnamed ancient woodland within the RLB is east of the Douglas water and will not be affected by the Project (located 250 m away).
Balmore	Ancient (of semi-natural origin)	0.31	
Balmore	LEPO	0.34	
Unnamed Woodland	LEPO	0.39	
Unnamed Woodland	LEPO	0.58	
Unnamed Woodland	LEPO	0.58	
Unnamed Woodland	LEPO	0.84	
Unnamed Woodland	Ancient (of semi-natural origin)	0.98	
Unnamed Woodland	LEPO	1.04	
Unnamed Woodland	Ancient (of semi-natural origin)	1.05	
Unnamed Woodland	Other (on Roy map)	1.30	
Unnamed Woodland	LEPO	1.36	

17 SNH - SNH Natural Spaces - Ancient Woodland Inventory Available at <https://gateway.snh.gov.uk/natural-spaces/dataset.jsp?dsid=AWI>

Protected Area Name	Designation	Approximate Distance to Substation Redline Boundary (km)	Considered further in the assessment
Unnamed Woodland	LEPO	1.49	
Unnamed Woodland	Ancient (of semi-natural origin)	1.57	
Unnamed Woodland	LEPO	1.98	
Unnamed Woodland	Ancient (of semi-natural origin)	1.99	

**Key:**

LEPO – long established (of plantation origin)

### 3.2.3 Protected and Priority Species Records

As detailed in **Section 2.1**, a request to ABReC for protected and priority species data within 2 km of the RLB of the Project. However, as stated in **Section 2.6**, ABReC contacted ERM in December 2021 to advise they are currently unable to produce data search reports.

In the absence of local records, a review was undertaken of the findings of surveys reported in SSEN Transmission's Inveraray to Crossaig 275 kV OHL Reinforcement Project EIA, as the route of this OHL crosses the RLB of the Project including the substation location. Whilst protected species including bats, otter, badger, pine marten, water vole and red squirrel were recorded in the wider area along the alignment of the OHL, none was reported in the area of the Project. Water vole was not recorded although the Project lies in a part of Argyll area where they are known to exist. In addition, the consultation responses within the EIA did not highlight any protected species within the Project.

The breeding bird surveys undertaken in 2015-2016 to inform SSEN Transmission's Inveraray to Crossaig 275 kV OHL Reinforcement Project EIA within the vicinity of the proposed An Suidhe substation location recorded siskin (*Carduelis spinus*), willow warbler (*Phylloscopus trochilus*), tree pipit (*Anthus trivialis*), wren (*Troglodytes troglodytes*), chaffinch (*Fringilla coelebs*), song thrush (*Turdus philomelos*), stonechat (*Saxicola rubicola*), wheatear (*Oenanthe oenanthe*), and great tit (*Parus major*). No Schedule 1 species were recorded within the RLB. Although some activity of Schedule 1 species has been reported within the wider area. The confidential annex for SSEN Transmission's Inveraray to Crossaig 275 kV OHL Reinforcement Project EIA reports this and is only available for the ABC and NatureScot.

## 4. SURVEY FINDINGS

### 4.1 Extended Phase 1 Habitat Survey Results

The following habitat categories were recorded within the Survey Area during the field survey:

- broadleaved woodland – semi natural (A 1.1.1);
- coniferous woodland – plantation (A 1.2.2);
- mixed woodland - semi-natural (A 1.3.1);
- mixed woodland – plantation (A 1.3.2);
- coniferous woodland - recently felled (A 4.2);
- acid grassland - semi-improved (B 1.2);
- neutral grassland - semi-improved (B 2.2);
- marsh/marshy grassland (B5);
- bracken – continuous (C 1.1);
- running water (G2);
- standing water (G 1);
- bare ground (J 4); and,
- invasive non-native species.

These habitats are described below. They are listed in the order found within the *Handbook for Phase 1 Habitat Survey* (JNCC, 2016), not in order of ecological value.

The mapped findings of the EP1HS are presented in **Figure 4**. Target Notes are presented in **Appendix B**.

#### 4.1.1 Broadleaved woodland – semi natural (A 1.1.1)

Areas of broadleaved semi-natural woodland (TN 7 and TN 8) were recorded along the burns and Douglas Water across the Survey Area. The canopy is dominated by downy birch (*Betula pubescens*) with grey willow (*Salix cinerea*), ash (*Fraxinus excelsior*), eared willow (*Salix aurita*), rowan (*Sorbus aucuparia*) and hazel (*Corylus avellana*). The trees were generally of semi-mature age in good condition. The ground flora is variable, in some places dominated by bracken (*Pteridium aquilinum*), while elsewhere it comprises purple moor grass (*Molinia caerulea*) with heather (*Calluna vulgaris*), cross-leaved heath (*Erica tetralix*), hard fern (*Blechnum spicant*), bilberry (*Vaccinium myrtillus*), *Sphagnum capillifolium*, *Sphagnum fallax*, *Sphagnum papillosum* and *Sphagnum palustre*.

#### 4.1.2 Coniferous woodland – plantation (A 1.2.2)

Planation woodland was recorded across the Survey Areas the woodland was a monoculture of semi-mature Sitka spruce (*Picea sitchensis*). Trees were noted to be in good condition with no damage. There was a section of woodland to the north of the Project which had come down due to wind blow.

#### 4.1.3 Mixed woodland - semi-natural (A 1.3.1)

Along the northern side of the existing substation building was an area of land which comprised of semi-natural mixed woodland. Sitka spruce had self-seeded from the neighbouring plantation woodland along with European larch (*Larix decidua*), birch species (*Betula* species) and rowan, all were saplings.



#### 4.1.4 Mixed woodland – plantation (A 1.3.2)

An area of plantation mixed woodland was recorded in the east of the Survey Area surrounded by a deer fence. The newly planted woodland comprised of sapling lodgepole pine (*Pinus contorta*), Norway spruce (*Picea abies*), European larch and birch species.

#### 4.1.5 Coniferous woodland - recently felled (A 4.2)

Large areas of recently felled woodland were recorded across the Survey Areas. The areas were starting to be re-colonised by bracken, hard fern, marsh thistle and nettle (*Urtica dioica*).

#### 4.1.6 Acid grassland - semi-improved (B 1.2)

Acid grassland along the east of Douglas Water consisted of dominate common bent (*Agrostis capillaris*) and sheep's fescue (*Festuca ovina*) and was grazed by sheep.

#### 4.1.7 Neutral grassland - semi-improved (B 2.2)

Semi – improved neutral grassland borders the proposed access track from the main road. The grassland comprised of dominate Yorkshire fog grass (*Holcus lanatus*), perennial ryegrass (*Lolium perenne*) abundant, crested dog's tail (*Cynosurus cristatus*), frequent meadow foxtail (*Alopecurus pratensis*), cocksfoot (*Dactylis glomerata*), and soft rush (*Juncus effusus*), with occasional meadow buttercup (*Ranunculus acris*), jointed rush (*Juncus articulatus*), dock species (*Rumex species*), white clover (*Trifolium repens*), common daisy (*Bellis perennis*) and marsh thistle (*Cirsium palustre*). The grassland was grazed by sheep and due to the species composition of dominate perennial ryegrass has been improved.

#### 4.1.8 Marsh/marshy grassland (B 5)

Areas of marshy grassland were recorded within the plantation rides, and along the north west hill side which consisted of dominate purple moor grass and abundant tufted hair grass, with frequent devil's bit scabious (*Succisa pratensis*), marsh thistle, meadow sweet (*Filipendula ulmaria*), occasional star sedge (*Carex echinata*), selfheal (*Prunella vulgaris*), *Sphagnum palustre* and *Sphagnum capillifolium*. A separate area of marshy grassland occurred adjacent to the existing substation that was dominated by Yorkshire fog and soft rush.

#### 4.1.9 Bracken – continuous (C 1.1)

Areas of continuous bracken were recorded along the hillside to the north west of the Survey Area and within the broadleaved woodland areas as the understorey habitat.

#### 4.1.10 Running water (G 2)

There are five burns (TN 4 and TN 9) which flow across the Survey Area west to east, all flowing into the Douglas Water (TN 5). The burns are steep sided approximately 30 degree angle with fast flow.

#### 4.1.11 Standing Water (G 1)

Small pond (TN 10) was recorded adjacent to the wind farm access track within the Survey Area, approximately 235 m north west of the footprint of the Project. The pond was too small to map and is noted as a target note on **Figure 4**. The pond was approximately 1.5 m deep, 3 m wide and the water was clear, though no emergent vegetation was recorded.

#### 4.1.12 Bare ground (J 4)

Areas of bare ground are spread across the Survey Area, which consisted of the access tracks of gravel.

### 4.1.13 Invasive Non-Native Species

No invasive non-native species were recorded at the time of the survey. Non-native plant species recorded along the access track and within the Survey Area were Himalayan honeysuckle (*Leycesteria formosa*) and butterfly bush (*Buddleja davidii*) (TN 1).

## 4.2 NVC Habitats with the potential to support GWDTE

The following potential GWDTE were recorded within the NVC Survey Area during the field survey and are described below:

- W4 - *Betula pubescens* - *Molinia caerulea* woodland;
- M25 - *Molinia caerulea* - *Potentilla erecta* mire; and,
- MG10 - *Holcus lanatus* - *Juncus effusus* rush-pasture.

The mapped results of the NVC survey are presented in **Appendix A Figure 5**. The GWDTE classification for the Survey Area is presented in **Appendix A Figure 6**. Target notes are presented in **Appendix B**.

### 4.2.1 W4 *Betula pubescens* - *Molinia caerulea* woodland

Extents of woodland scattered within the Survey Area are assessed to have an affinity for W4 *Betula pubescens* - *Molinia caerulea* woodland. The canopy is dominated by downy birch and with grey willow, ash, eared willow, rowan and hazel. The ground flora is variable, in some places dominated by bracken, while elsewhere it comprises purple moor grass with heather, cross-leaved heath, hard fern, bilberry, *Sphagnum capillifolium*, *Sphagnum fallax*, *Sphagnum papillosum* and *Sphagnum palustre*. The community has high potential to be groundwater-dependent, although it is associated with drains and small watercourses, indicating a surface water influence.

### 4.2.2 M25 *Molinia caerulea* - *Potentilla erecta* mire

Within the rides of the plantation woodland to the west and the hillside to the north west of the Survey Area, are areas of M25 *Molinia caerulea* - *Potentilla erecta* mire. The community is dominated by purple moor grass, with frequent heather, tufted hair grass, and occasional star sedge, soft rush, marsh thistle, *Polytrichum commune* and *Sphagnum palustre*. The community has a moderate potential to be groundwater-dependent.

### 4.2.3 MG10 - *Holcus lanatus* - *Juncus effusus* rush-pasture

The grassland area to the south of the existing substation within the Survey Areas comprised of MG10 *Holcus lanatus* - *Juncus effusus* rush-pasture. This community is dominated by Yorkshire fog grass and soft rush. The community has a moderate potential to be groundwater-dependent. The community was recorded approximately 230 m from the proposed sub-station location and the topography between the sites suggest that they would not be hydrologically connected if the community was a GWDTE.

## 4.3 PROTECTED SPECIES SURVEY FINDINGS

### 4.3.1 Bats

#### 4.3.1.1 Bat roost potential

No buildings or trees were recorded during the survey which offered bat roosting potential. The trees located within the broadleaved woodland were not mature and offered no roosting features. It was not possible to check all of the trees within the plantation woodland for their potential to support roosting bats as it was so dense and inaccessible due to health and safety reasons. No roosting

features were recorded in trees along the plantation edge (which are the only trees with the potential to be directly impacted by the Project). However, the Sitka spruce plantation trees are semi-mature and will not reach an age prior to commercial felling where roosting features for bats can form.

There will be no habitat loss and no significant increase in vehicle activity, as well as no planned regular works at night time along the existing access track<sup>18</sup> (where large sections of coniferous woodland are present), hence the risk of effects on any bats present along the existing access track will be negligible.

#### 4.3.1.2 *Bat Habitat Assessment*

The broadleaved woodland and associated woodland burns and Douglas Water offer good foraging and commuting habitat for bat species, which are not to be affected by the Project which is over 60 m south.

The remaining woodland within the Survey Area is dominated by coniferous plantations and areas where trees have been felled in the past, or more recently. Those areas that will be directly affected are dominated by Sitka spruce, or include areas of more recent felling, and are considered to be less favoured by foraging bats. The loss of woodland edge is unlikely to affect any commuting routes across the area used by bats in any significant way and bats were not reported from this area in SSEN Transmission's Inveraray to Crossaig 275 kV OHL Reinforcement Project EIA (see **Section 2.1**).

Given the above, no further bat surveys are recommended.

#### 4.3.2 *Otter*

No definite field signs of otter were recorded during the walkover survey. However, the burns and Douglas Water offer suitable habitat for commuting and foraging across the Survey Area and a potential lay-up site was observed along the river (see TN 6).

The majority of the suitable habitat broadleaved woodland which is adjacent to the Douglas Water is over 250 m from the Project. The burn (TN 9) is located within 60 m of the Project which at the time of the survey found no evidence of otters' usage

Given these findings, it is not proposed that any additional surveys for otters are required.

#### 4.3.3 *Water Vole*

No field signs of water vole were identified during the EP1HS within the Project. No suitable habitat to support water vole was identified along the watercourses which flow into the Douglas Water. The burns flow was fast and generally boarded by rocky steep sided banks. No suitable aquatic vegetation was recorded which would provide food for water vole. No further surveys for water vole are considered necessary.

#### 4.3.4 *Badger*

No field signs of badger were noted during the walkover survey, which is mirrored in the finding of SSEN Transmission's Inveraray to Crossaig 275 kV OHL Reinforcement Project EIA. Suitable habitat for badger foraging is present across some of the Survey Area within the broadleaved woodland. Setts may also be present within the inaccessible plantation coniferous woodland, including within a section of coniferous woodland under the footprint of the Associated Development. Therefore, it is recommended that further focussed surveys are required in and adjacent to areas that will be directly affected by the Project prior to construction.

---

<sup>18</sup> Should emergency works be required, the proposed access tracks may be used, but this will not be a regular occurrence.

#### 4.3.5 Pine Marten

Pine marten scat was recorded within the Survey Area along the access tracks (see TNs 2, 12, 13 and 14). No dens were identified. There is suitable habitat for this species within the Survey Area consisting of broadleaved woodland, and coniferous plantation woodland. All suitable habitat was surveyed for pine marten with the exception of the dense coniferous woodland. The coniferous woodland will be affected by the Associated Development and therefore, further focused surveys are required prior to construction in and adjacent to the areas that will be directly affected.

#### 4.3.6 Red Squirrel

All suitable habitat was surveyed for red squirrel with the exception of the dense coniferous woodland, which was difficult to access safely. Areas accessible were searched for signs of red squirrel activity, including dreys and feeding signs, but no signs were recorded. There is suitable habitat for this species within the Survey Area, including the plantation woodlands (less accessible) and the adjoining semi-natural broadleaved woodlands.

Therefore, further focused surveys are recommended prior to construction in and adjacent to the areas that will be directly affected by the Project.

#### 4.3.7 Wildcat

No field signs of wildcat were identified during the EP1HS<sup>19</sup>. However, wildcat are native to Scotland and are known to be present in the area of the Project<sup>21</sup>. Wildcat have a preference for woodland edges, uplands with rough grazing and moorlands with limited pastures in the west of Scotland<sup>22</sup>. Although the habitat to support them is declining across much of Scotland leading to a decline in their distribution range and population<sup>23</sup>. There is suitable habitat surrounding the Project, consisting of semi-natural broadleaved woodland, and coniferous planation. Therefore, further focussed surveys are recommended prior to construction in and adjacent to the areas that will be directly affected by the Project

#### 4.3.8 Birds

No birds with special protection under Schedule 1<sup>20</sup> were recorded during the EP1HS.

Suitable habitat to support other breeding birds was identified during the survey and a number of common and widespread bird species (listed below) were recorded during the EP1HS.

- UK Red Status Birds of Conservation Concern (BoCC)<sup>21</sup> including mistle thrush (*Turdus viscivorus*);
- UK Amber Status BoCC including kestrel (*Falco tinnunculus*), sparrowhawk (*Accipiter nisus*), meadow pipit (*Anthus pratensis*), and woodpigeon (*Columba palumbus*); and,
- UK Green Status BoCC including common buzzard (*Buteo buteo*), blackbird (*Turdus merula*), and robin (*Erithacus rubecula*); and,
- SBL species recorded during EP1HS included kestrel.

These incidental records of bird species recorded during the survey are similar to the species identified during SSEN Transmission's Inveraray to Crossaig 275 kV OHL Reinforcement Project EIA with common woodland and upland bird species recorded. The recording of similar bird species

<sup>19</sup> Surveys followed guidance and methodology as described in Forestry Commission Scotland Guidance Note 35d: Forest operations and wildcats in Scotland. Available at <https://forestry.gov.scot/publications/36-forest-operations-and-wildcats-in-scotland/viewdocument/36>

<sup>20</sup> RSPB The Schedules. Available at: <https://www.rspb.org.uk/birds-and-wildlife/advice/wildlife-and-the-law/wildlife-and-countryside-act/schedules/>

<sup>21</sup> Birds of Conservation Concern 5. Available at <https://www.bto.org/sites/default/files/publications/bocc-5-a5-4pp-single-pages.pdf>

indicates the underlying conditions around the Project have not changed since the surveys undertaken to inform SSEN Transmission's Inveraray to Crossaig 275 kV OHL Reinforcement Project, therefore, no additional bird surveys are required.

#### 4.3.9 Other Fauna

Signs of red fox (*Vulpes vulpes*), and roe deer (*Capreolus capreolus*), were recorded across the Survey Area.

There was a small waterbody present (see TN 10) within the Survey Area support breeding amphibian species. An adult female palmate newt (*Lissotriton helveticus*) was observed partially predated along the access track within the Survey Area within 50 m of the small pond.

The purple moor grass grassland within the broadleaved woodland rides offers good foraging habitat for amphibian and reptile species.

## 5. SUMMARY AND RECOMMENDATIONS

### 5.1 Summary

Coniferous plantation woodland, mixed plantation woodland, semi-natural broadleaved woodland, semi-improved neutral grassland, marshy grassland and bare ground were the main habitat types recorded across the Survey Area. The habitat within the footprint of the Project is recently felled woodland plantation where there is currently no evidence of replanting undertaken.

No invasive non-native species were recorded within the Survey Area. There were two non-native species recorded within the Survey Area; Himalayan honeysuckle and butterfly bush.

A suspected pine marten scat was found approximately 200 m south of the footprint of the Project. No evidence of water vole was recorded within the Survey Area and no suitable habitat was present.

No evidence of roosting bat was recorded within the Survey Area. As stated in **Section 4.3.1.1**, the Sitka spruce plantation trees surveyed are of a semi-mature age and will not reach an age prior to commercial felling whereby roosting features for bats can form. There is limited suitable habitat for roosting bats, though there is suitable habitat for foraging and commuting bats.

No evidence of otter, badger, red squirrel, and wildcat was recorded within the Survey Area. There is suitable habitat for these species within the Survey Area.

Common buzzard, kestrel, sparrow hawk, wood pigeon, meadow pipit, robin, blackbird, and mistle thrush were recorded during the survey.

There are no water bodies recorded within the Project which would offer suitable habitat for breeding amphibians. There is one pond (TN 10) located within 150 m from the Project across the access track to the west. There is suitable habitat recorded for reptile species along the woodland margin edge, of which the Project will not effect this area.

Three habitats which are potential GWDTE were recorded within the Survey Area:

- W4 *Betula pubescens* - *Molinia caerulea* woodland;
- M25 *Molinia caerulea* - *Potentilla erecta* mire; and,
- MG10 - *Holcus lanatus* - *Juncus effusus* rush-pasture.

W4 *Betula pubescens* - *Molinia caerulea* woodland is generally considered to be of high GWDTE though this habitat was recorded alongside small watercourses and the Douglas water, indicating a surface water influence. M25 *Molinia caerulea* - *Potentilla erecta* mire and MG10 - *Holcus lanatus* - *Juncus effusus* rush-pasture are considered to be a moderate GWDTE habitat. No GWDTE are within the Project. The nearest GWDTE from the Project is approximately 50 m.

The Project will use the existing access track unchanged and with further access tracks proposed to be constructed on recently felled woodland plantation, no further surveys are considered necessary.

### 5.2 Recommendations

Following the completion of the EP1HS and the NVC surveys, no further habitat / flora surveys are necessary, with the exception of a potential Ancient Woodland survey.

There is the possibility that tree pruning and tree removal maybe required on trees within the unnamed Ancient Woodland adjacent to the existing access track. If works are required with the woodland, then the following is to be undertaken:

- A pre-construction Ancient Woodland survey is to be undertaken (April – June);
- An ECoW should be present when any tree works are to be undertaken within an Ancient Woodland.



As stated in **Section 5.1** above, further surveys (see below) are recommended for badger, pine marten, red squirrel, and wildcat.

- Badger - in the areas of conifers to be lost due to the proposed tower and in a buffer of up to at least 100 m in where suitable habitat occurs.
- Pine marten – in the areas of conifers to be lost due to the proposed tower and in a buffer of up to at least 100 m in where suitable habitat occurs. Further scats should be sought also from the previous location where they were identified (bridge at TN10) that lies along the watercourse to the west of the proposed substation site. Any scats found pre-construction should be collected and sent for eDNA analyses to confirm that they are pine marten.
- Red squirrel – in the area of conifers woodland to be lost due to the proposed tower and a buffer of 50 m (red squirrel) where suitable habitat occurs.
- Wildcat - in the areas of conifers to be lost due to the proposed tower and in a buffer of up to at least 200 m in where suitable habitat occurs.

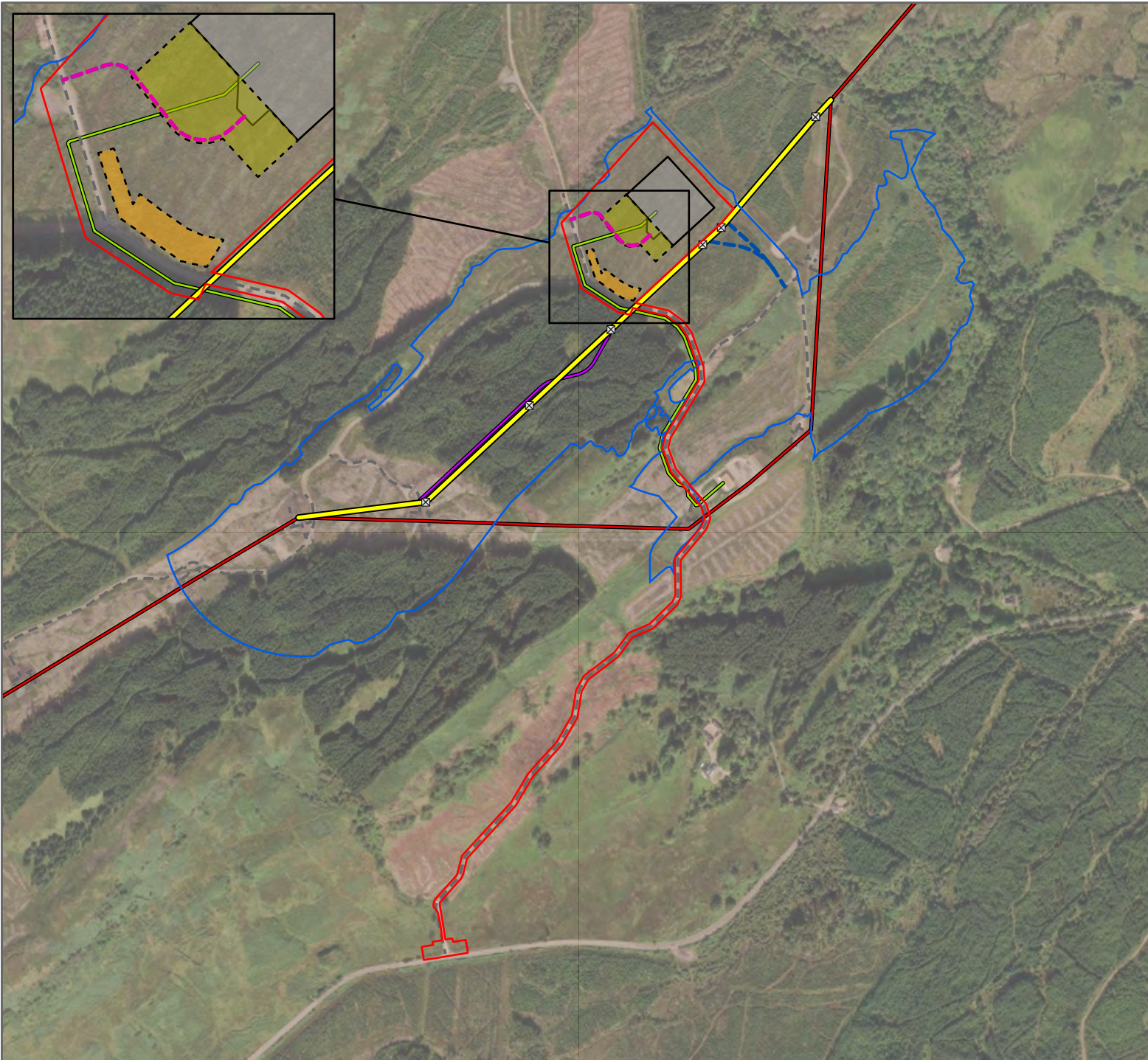
Much of the habitat to be lost will be coniferous plantation and it is evident from the Extended Phase 1 Habitat Survey that it is often dense and access may not be easy, or even possible, in places (see **Section 2.6** Limitations). Given the comparatively small area to be surveyed further, the survey effort should include more detailed surveys along the margins / rides where present and seeking to access the more dense areas.

It is expected that effects on any reptile and amphibian species that may use these habitat would be avoided through the implementation of appropriate mitigation, such as the removal of habitat suitable to support amphibians reptiles being undertaken in a manner that encourages any reptiles present in areas to be affected to move to adjacent habitat that will remain unaffected. No further surveys for reptiles and amphibian species are therefore considered necessary.

Where access prevents any detailed surveys, consideration should be given to the use of camera traps to seek to confirm presence, or a precautionary approach should be undertaken during construction with reliance on the implementation of the SSEN Transmission's Species Protection Plans (SPPs) that have been developed and agreed with NatureScot. If the latter approach is adopted, it is possible that delays to the construction programme may occur if presence of protected species in these dense conifer plantations is confirmed during the removal of the trees (where necessary).

A pre-construction walkover survey by a suitable qualified Ecology Clerk of Works (ECoW) will be undertaken within the Project no sooner than 48 hours prior to construction works commencing to establish if any protected species are present, or there are non-native species. Actions as set out in the SSEN Transmission SPPs will be implemented if necessary to avoid effects on protected species and the spread of non-native species.

## Appendix A **FIGURES**



- Existing Inveraray to Crossaig Overhead Line
- - - Existing Access Track
- Proposed Development:
- - - Proposed Permanent Access Track
- Town & Country Planning Boundary
- Proposed Substation Layout
- Proposed Substation Temporary Works Area
- Temporary Peat Storage Area
- Potential Area for Peat Restoration
- Permitted Development:
- 33kV Interconnector Cable Route
- Associated Development:
- ⊠ Proposed Tower Location
- Proposed OHL Alignment
- Temporary Access Track
- - - Proposed Permanent Access Track



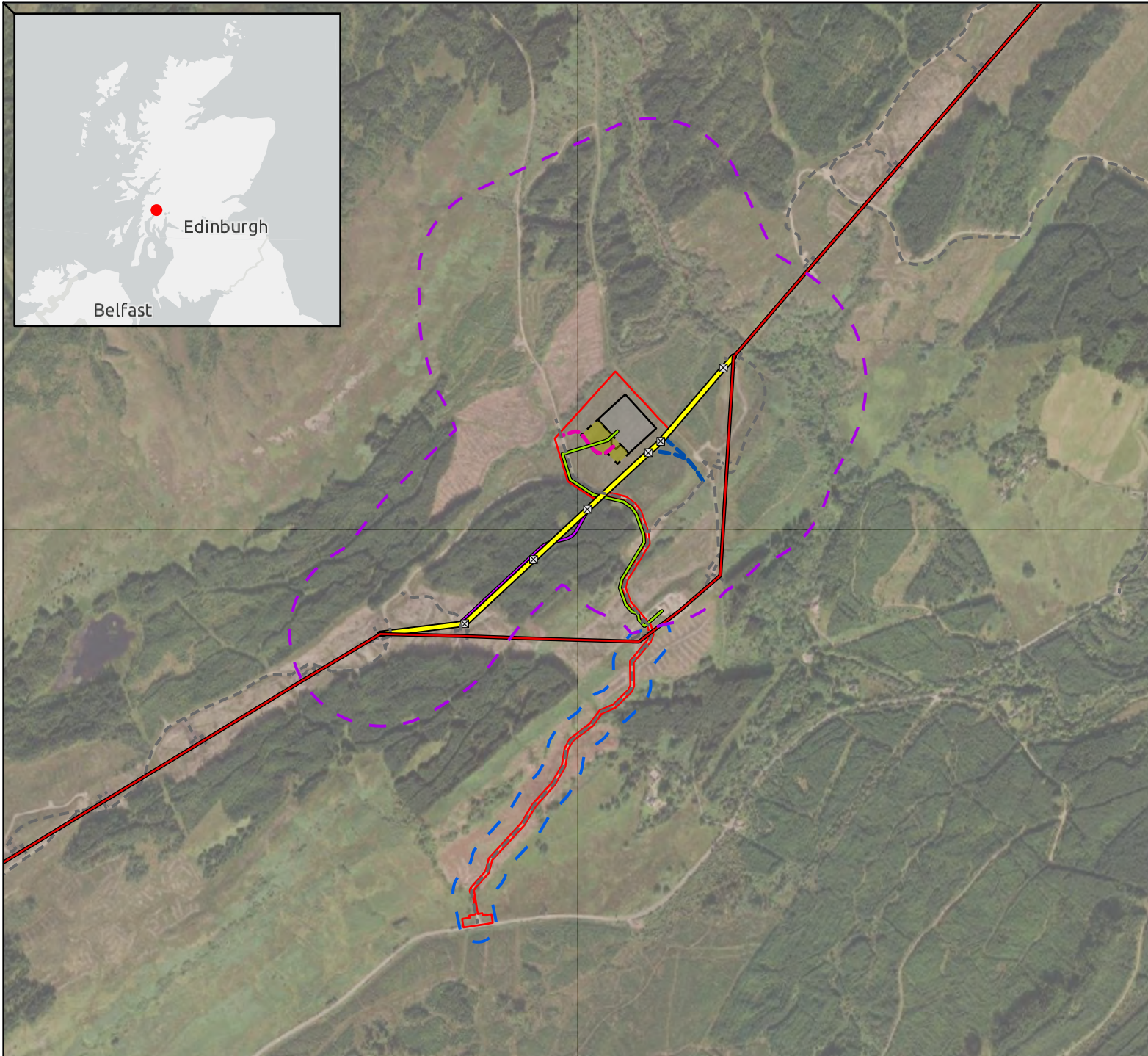
SCALE: See Scale Bar	VERSION: A02
SIZE: A4	DRAWN: DN
PROJECT: 0607366	CHECKED: WB
DATE: 11/07/2022	APPROVED: SW

**Figure G.1**  
**An Suidhe Substation Red Line Boundary**

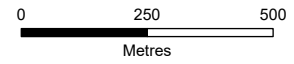


PROJECTION: British National Grid



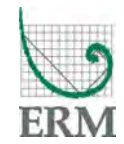


- Existing Inveraray to Crossaig Overhead Line
- Existing Access Track
- Survey Area Buffers:**
- 50 m Buffer of Access Track
- 250 m Buffer of Substation Red Line Boundary
- Associated Development:**
- Proposed Tower Location
- Proposed OHL Alignment
- Proposed Permanent Access Track
- Temporary Access Track
- Permitted Development:**
- 33kV Interconnector Cable Route
- Proposed Development:**
- Proposed Permanent Access Track
- Proposed Substation Temporary Works Area
- Proposed Substation Layout
- Town & Country Planning Boundary



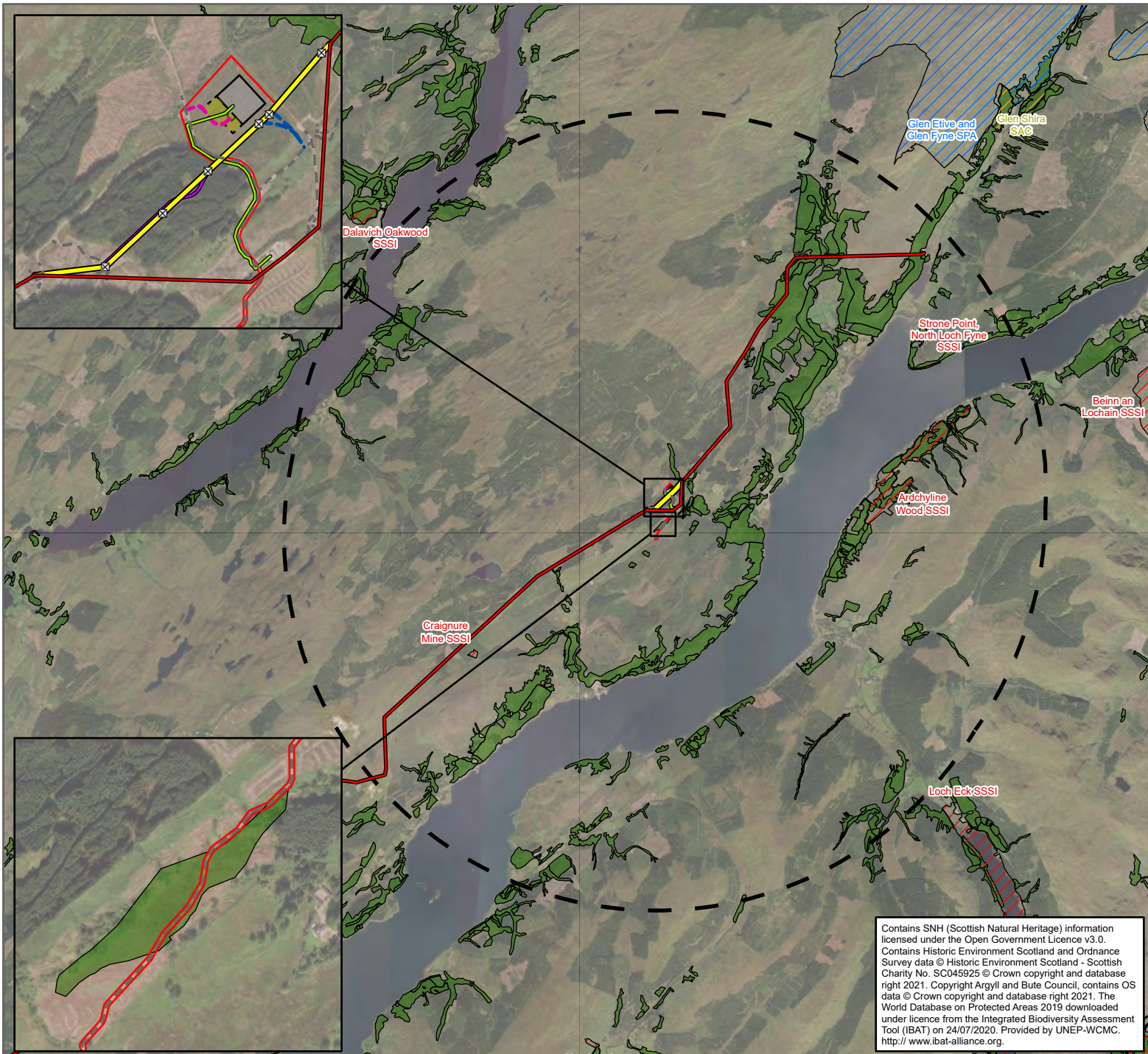
SCALE: See Scale Bar	VERSION: A01
SIZE: A4	DRAWN: DN
PROJECT: 0607366	CHECKED: AH
DATE: 30/05/2022	APPROVED: KG

**Figure G.2**  
**An Suidhe Survey Area**



PROJECTION: British National Grid





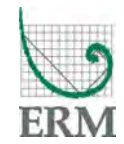
- Existing Inveraray to Crossaig Overhead Line
- - - Existing Access Track
- 10 km Buffer of Substation and Access Track Red Line Boundary
- Associated Development:
  - Proposed OHL Alignment
  - Proposed Permanent Access Track
  - Temporary Access Track
- Permitted Development:
  - 33kV Interconnector Cable Route
- Proposed Development:
  - Proposed Permanent Access Track
  - Proposed Substation Temporary Works Area
  - Proposed Substation Layout
  - Town & Country Planning Boundary
- Environmental Constraints:
  - Special Protection Area (SPA)
  - Special Area of Conservation (SAC)
  - Sites Of Special Scientific Interest (SSSI)
  - Ancient Woodland



SCALE: See Scale Bar	VERSION: A03
SIZE: A4	DRAWN: DN
PROJECT: 0607366	CHECKED: WB
DATE: 30/05/2022	APPROVED: KG

**Figure G.3**  
**Designated Sites and Ancient Woodland:**  
**An Suidhe**

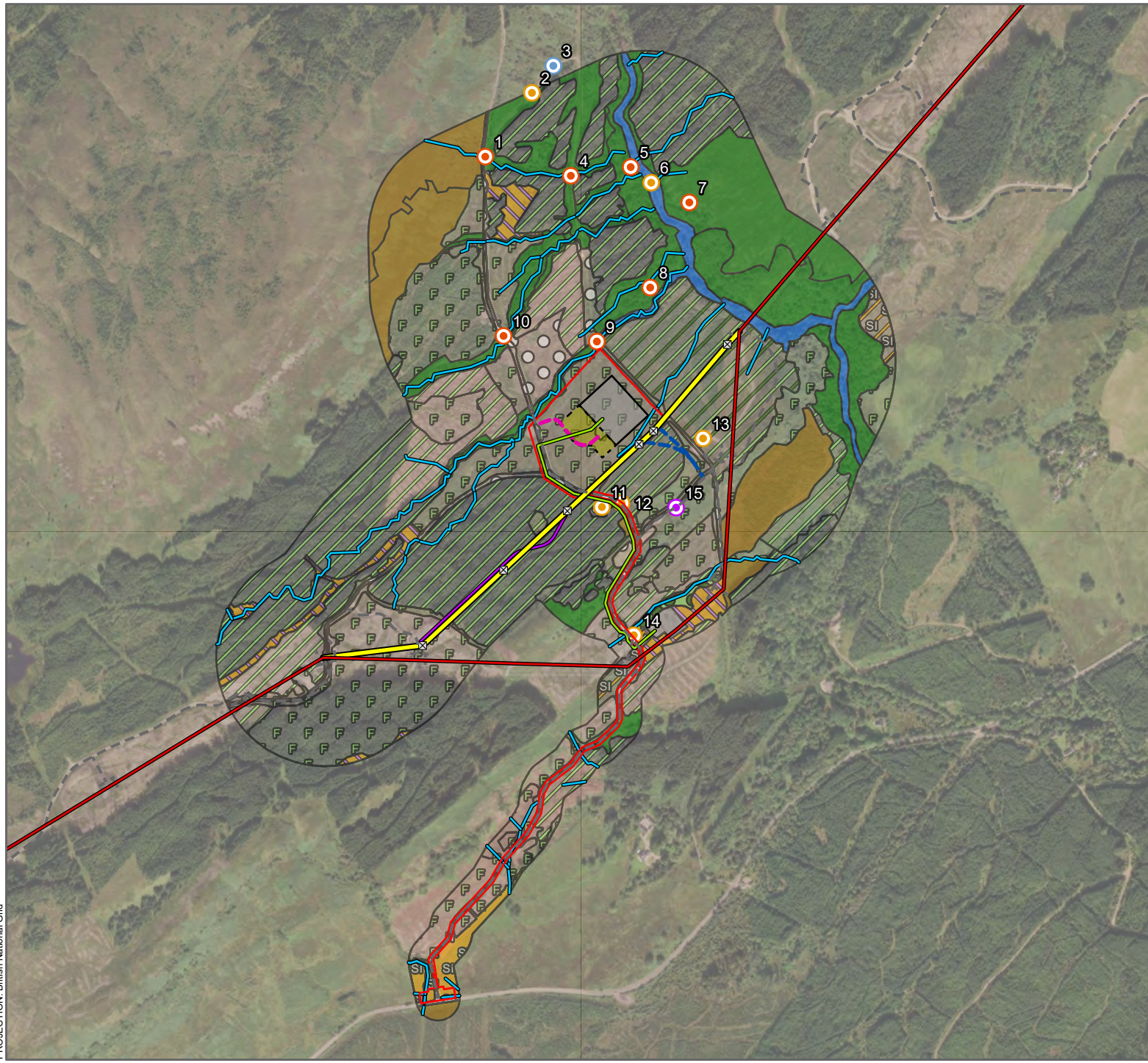
Contains SNH (Scottish Natural Heritage) information licensed under the Open Government Licence v3.0. Contains Historic Environment Scotland and Ordnance Survey data © Historic Environment Scotland - Scottish Charity No. SC045925 © Crown copyright and database right 2021. Copyright Argyll and Bute Council, contains OS data © Crown copyright and database right 2021. The World Database on Protected Areas 2019 downloaded under licence from the Integrated Biodiversity Assessment Tool (IBAT) on 24/07/2020. Provided by UNEP-WCMC. [http:// www.ibat-alliance.org](http://www.ibat-alliance.org).



PROJECTION: British National Grid



PROJECTION: British National Grid

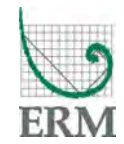


- Bird Target Note
- Habitat Target Note
- Mammal Target Note
- Safety Observation Note
- Existing Inveraray to Crossaig Overhead Line
- - - Existing Access Track
- Associated Development:
- ⊗ Proposed Tower Location
- Proposed OHL Alignment
- Proposed Permanent Access Track
- Temporary Access Track
- Permitted Development:
- 33kV Interconnector Cable Route
- Proposed Development:
- Proposed Permanent Access Track
- ⊗ Proposed Substation Temporary Works Area
- ⊗ Proposed Substation Layout
- ⊗ Town & Country Planning Boundary
- Phase 1 Habitat Classification:
- A1.1.1 - Broadleaved woodland - semi-natural
- A1.1.2 - Broadleaved woodland - plantation
- A1.2.2 - Coniferous woodland - plantation
- A1.3.1 - Mixed woodland - semi-natural
- A1.3.2 - Mixed woodland - plantation
- A4.2 - Coniferous woodland - recently felled
- B1.2 - Acid grassland - semi-improved
- B2.2 - Neutral grassland - semi-improved
- B5 - Marsh/marshy grassland
- C1.1 - Bracken - continuous
- G2 - Running water
- J1.3 - Cultivated/disturbed land - ephemeral/short perennial
- J3.6 - Buildings
- J4 - Bare ground

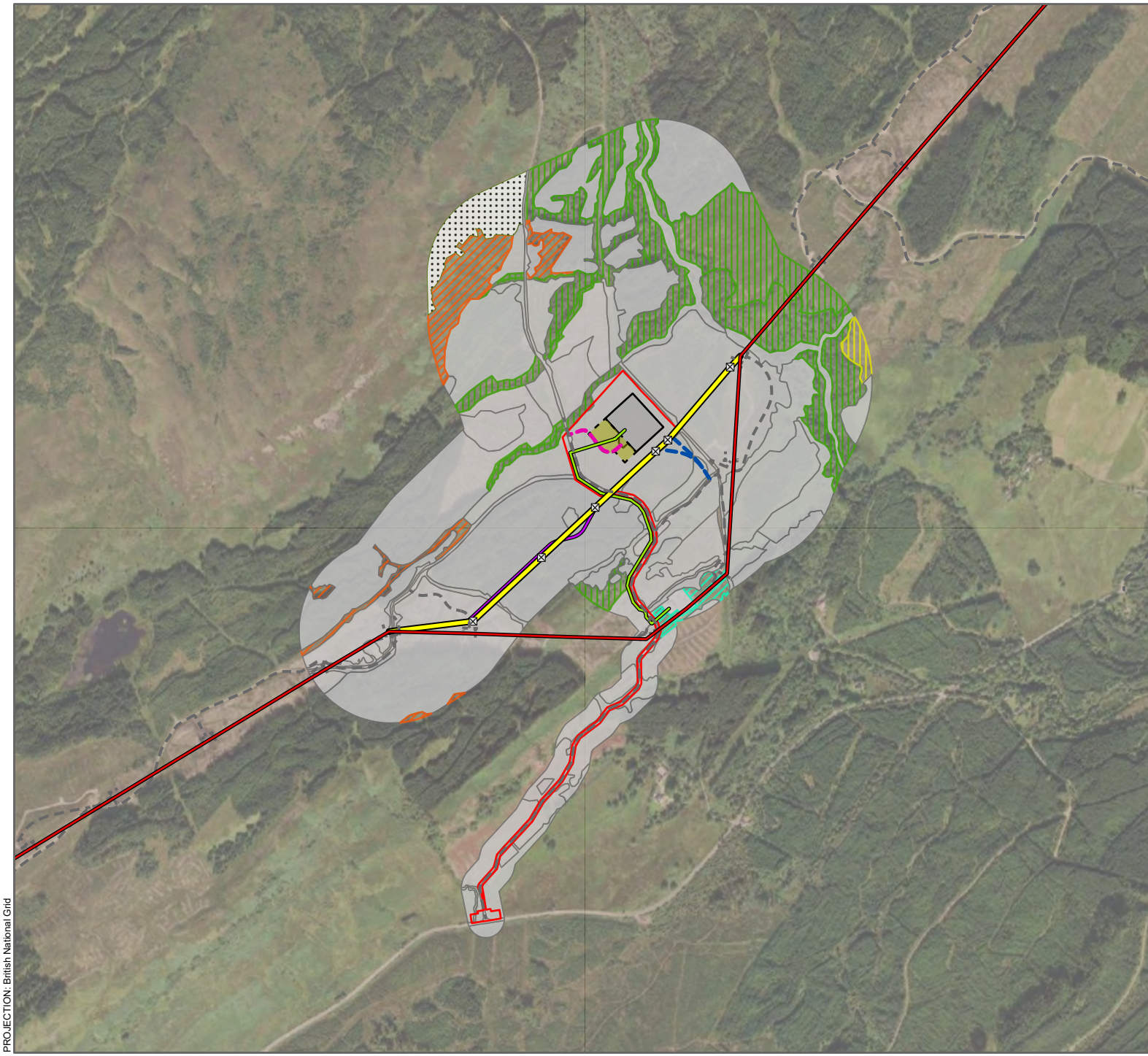


SCALE: See Scale Bar	VERSION: A04
SIZE: A4	DRAWN: DN
PROJECT: 0607366	CHECKED: WB
DATE: 30/05/2022	APPROVED: KG

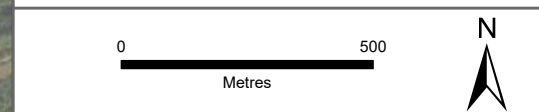
**Figure G.4**  
**Extended Phase 1 Habitat Survey (Oct 2021)**  
**An Suidhe Substation**







- Existing Inveraray to Crossaig Overhead Line
- - - Existing Access Track
- Associated Development:
- ☒ Proposed Tower Location
- Proposed OHL Alignment
- - - Proposed Permanent Access Track
- Temporary Access Track
- Permitted Development:
- 33kV Interconnector Cable Route
- Proposed Development:
- - - Proposed Permanent Access Track
- - - Proposed Substation Temporary Works Area
- ▭ Proposed Substation Layout
- ▭ Town & Country Planning Boundary
- National Vegetation Classification:
- ▨ M25 - *Molinia caerulea* - *Potentilla erecta* mire
- ▨ MG10 - *Holcus lanatus* - *Juncus effusus* rush-pasture
- ▨ U20 - *Pteridium aquilinum* - *Galium saxatile* community
- ▨ U4 - *Festuca ovina* - *Agrostis capillaris* - *Galium saxatile* grassland
- ▨ W4 - *Betula pubescens* - *Molinia caerulea* woodland
- ▭ No NVC survey - limited GWDTE potential

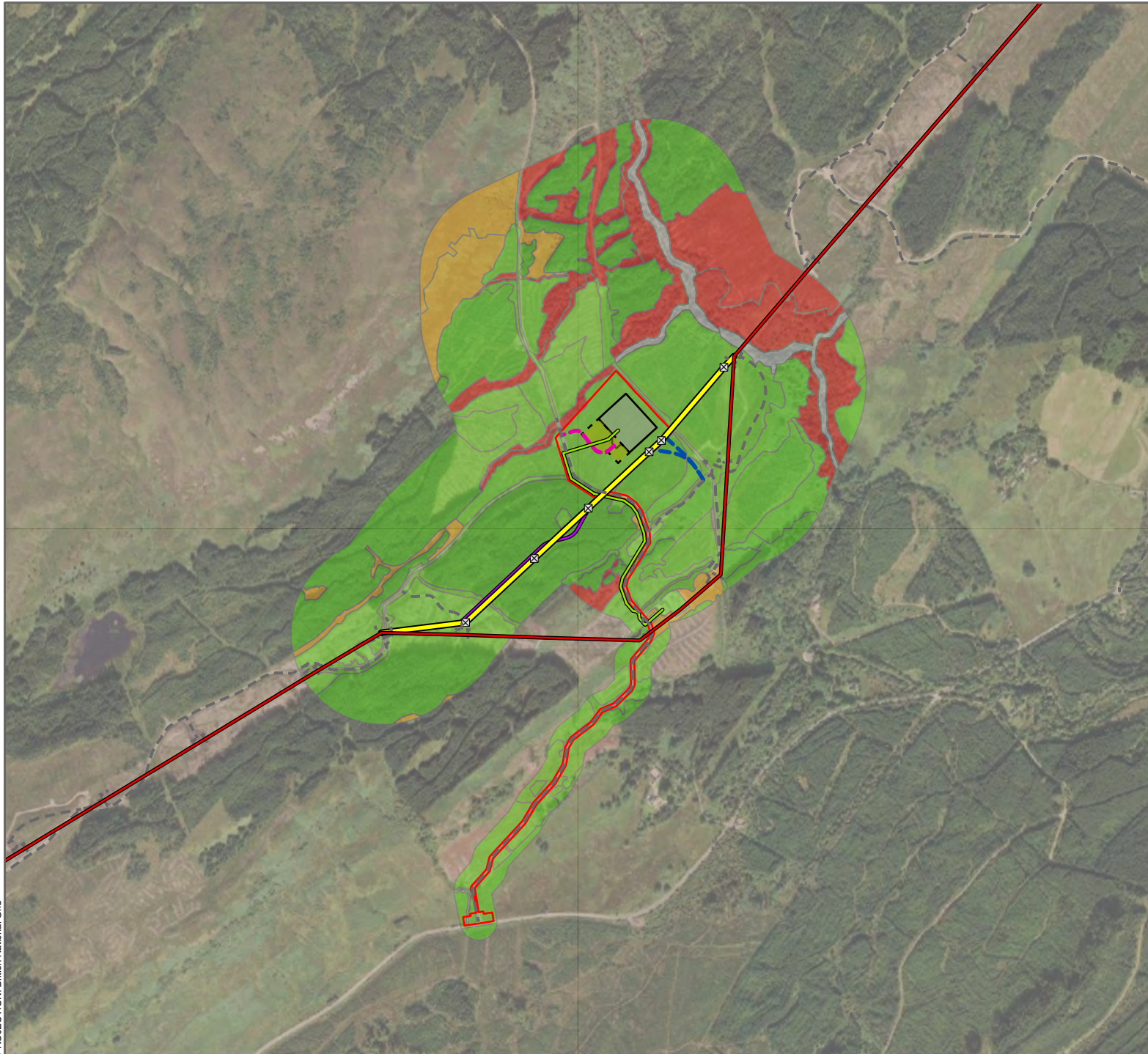


SCALE: See Scale Bar	VERSION: A04
SIZE: A4	DRAWN: DN
PROJECT: 0607366	CHECKED: WB
DATE: 30/05/2022	APPROVED: KG

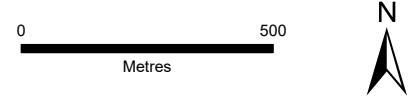
**Figure G.5**  
**Targeted National Vegetation Classification**  
**(Oct 2021)**  
**An Suidhe Substation**





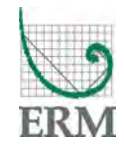


- Existing Inveraray to Crossaig Overhead Line
- - - Existing Access Track
- Associated Development:
  - ⊠ Proposed Tower Location
  - Proposed OHL Alignment
  - - - Proposed Permanent Access Track
  - Temporary Access Track
- Permitted Development:
  - 33kV Interconnector Cable Route
- Proposed Development:
  - - - Proposed Permanent Access Track
  - Proposed Substation Temporary Works Area
  - Proposed Substation Layout
  - Town & Country Planning Boundary
- GWLTE Classification:
  - High
  - Moderate
  - Low
  - GWLTE code not applicable



SCALE: See Scale Bar	VERSION: A04
SIZE: A4	DRAWN: DN
PROJECT: 0607366	CHECKED: WB
DATE: 30/05/2022	APPROVED: KG


**Figure G.6**  
**GWLTE Classification (Oct 2021)**  
**An Suidhe Substation**





PROJECTION: British National Grid


Appendix B **TARGET NOTES**

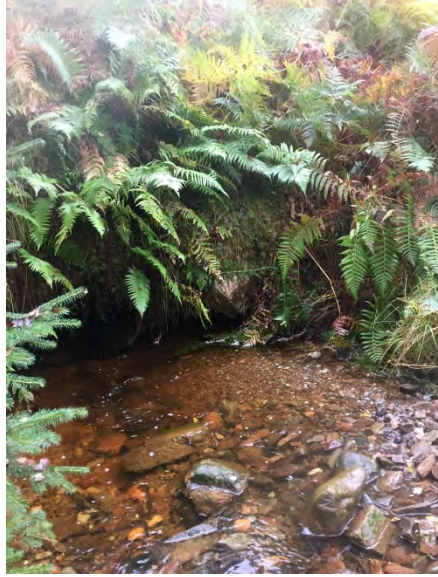
**Table 5.1 Target Notes**

Target Note number	Approximate grid reference	Description of evidence/feature	Photograph
1	NN0456006111	Habitat Target Note: Butterfly bush ( <i>Buddleja davidii</i> ) was recorded alongside the forestry tracks across the Survey Area.	



2	NN0466806256	Mammal Target Note: Rowan berries within potential pine marten ( <i>Martes martes</i> ) scat.	
3	NN0471606320	Safety Observation Note: Only safe to drive for 4x4	


4	1: NN0475606067 2: NN0477106077 3: NN0476006075	Habitat Target Note: Burn, fast flow, clear, approximately 1 m wide, 0.4 m deep, cobble/ boulder, lbh and rbh 0.2 m 90 degrees, adjacent habitats pine plantations. Birch ( <i>Betula pendula</i> ) / Rowan ( <i>Sorbus aucuparia</i> ) woodland, understory consisted of continuous bracken ( <i>Pteridium aquilinum</i> ), and purple moor grass ( <i>Molina caerulea</i> ), and spear thistle ( <i>Cirsium vulgare</i> ).	 <p>1</p>
---	---	--	--





2



3

5	NN0490006091	<p>Habitat Target Note: Douglas Water, river approximately 4 m wide, 2 m deep in places. Fast flowing with boulder bed. Right bank height and left bank height was approximately 3 m in height with 45 degrees. Adjacent habitat was semi-natural broadleaved woodland.</p>	 A photograph showing a small, fast-flowing stream with a rocky bed. The water is clear and turbulent as it flows over the dark, wet stones. The stream is surrounded by lush green grass and various plants, some with yellowing leaves, indicating an autumn setting. The background shows a dense woodland with trees and a slight rise in the terrain.
---	--------------	---	---



6	NN0493706045	Mammal Target Note: Potential otter ( <i>Lutra lutra</i> ) lay-up alongside the Douglas water.	
7	NN0497305959	Habitat Target Note: Silver birch, hazel ( <i>Corylus avellana</i> ), willow species ( <i>Salix spp.</i> ) and alder ( <i>Alnus glutinosa</i> ). Understory consisted of dominate purple moor grass.	

8	NN0493505803	Habitat Target Note: Birch woodland with purple moor grass understory.	 A photograph showing a birch woodland. The trees are mostly bare, suggesting late autumn or winter. The ground is covered with a dense layer of purple moor grass, which is a characteristic feature of this habitat. The background shows more trees and a slightly hazy sky.
---	--------------	--	--

9

1: NN0481605687  
2: NN0481505687

Habitat Target Note: Burn, fast flow, clear, rocky substance, 0.5 m wide, 0.2 m deep, left bank height and right bank height 2 m, 45 degree angle. Adjacent habitat felled plantation forestry.





1




2

10	NN0460105700	Habitat Target Note: Small pond approximately 3 m x 3 m in size, and 1 m deep.	
11	NN0482605307	Mammal Target Note: Deer droppings recorded on trackside verge, thought to be roe deer.	



12	NN0487205317	Mammal Target Note: Potential pine marten scat recorded along track.	
13	NN0505905465	Mammal Target Note: Pine marten scat recorded along track.	

14	NN0501305783	Mammals Target Note: Pine marten scat recorded along trackside verge.	
15	NN0507005316	Bird Target Note: Approximately 15 mistle thrushes ( <i>Turdus viscivorus</i> ) and one kestrel ( <i>Falco tinnunculus</i> ) observed hunting.	

Appendix C **SPECIES LIST**



**Table 5.2 Species List**

Vascular and Nonvascular Plants		SBL <sup>22</sup>	Argyll & Bute LBAP <sup>23</sup>
Common Name	Scientific name		
Alder	<i>Alnus glutinosa</i>	N	N
Ash	<i>Fraxinus excelsior</i>	N	N
Annual meadow grass	<i>Poa annua</i>	N	N
Bent grass species	<i>Agrostis spp</i>	N	N
Bilberry	<i>Vaccinium myrtillus</i>	N	N
Bog myrtle	<i>Myrica gale</i>	N	N
Bog pondweed	<i>Potamogeton polygonifolius</i>	N	N
Bottle sedge	<i>Carex rostrata</i>	N	N
Bracken	<i>Pteridium aquilinum</i>	N	N
Butterfly bush	<i>Buddleia davidii</i>	N	N
Campion species	<i>Silene spp</i>	N	N
Cock's foot	<i>Dactylis glomerata</i>	N	N
Common daisy	<i>Bellis perennis</i>	N	N
Common dandelion	<i>Taraxacum officinale</i>	N	N
Common heather	<i>Calluna vulgaris</i>	N	N
Common hogweed	<i>Heracleum sphondylium</i>	N	N
Common knapweed	<i>Centaurea nigra</i>	N	N
Common mouse ear	<i>Cerastium fontanum</i>	N	N
Common polypody	<i>Polypodium vulgare</i>	N	N
Common primrose	<i>Primula vulgaris</i>	N	N

<sup>22</sup> Scottish Biodiversity List. Available at: <https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fwww.nature.scot%2Fsites%2Fdefault%2Ffiles%2F2020-08%2FScottish%2520Biodiversity%2520List.xls&wdOrigin=BROWSELINK>

<sup>23</sup> Argyll & Bute Local Biodiversity Action Plan 2010-2015 (latest published plan). Available at: <https://www.argyll-bute.gov.uk/sites/default/files/planning-and-environment/AandB%20BAP%20Draft.pdf>

Common sedge	<i>Carex nigra</i>	N	N
Common sorrel	<i>Rumex acetosa</i>	N	N
Common reed	<i>Phragmites australis</i>	N	N
Creeping buttercup	<i>Ranunculus repens</i>	N	N
Creeping thistle	<i>Cirsium arvense</i>	N	N
Crested dog's tail	<i>Cynosurus cristatus</i>	N	N
Cross-leaved heath	<i>Erica tetralix</i>	N	N
Devil's-bit scabious	<i>Succisa pratensis</i>	N	N
Dock	<i>Rumex spp.</i>	N	N
Eared willow tree	<i>Salix aurita</i>	N	N
European larch	<i>Larix decidua</i>	N	N
False oat grass	<i>Arrhenatherum elatius</i>	N	N
Foxglove	<i>Digitalis purpurea</i>	N	N
Greater plantain	<i>Plantago major</i>	N	N
Grey willow	<i>Salix cinerea</i>	N	N
Hard fern	<i>Blechnum spicant</i>	N	N
Hazel	<i>Corylus avellana</i>	N	N
Heath rush	<i>Juncus squarrosus</i>	N	N
Jointed rush	<i>Juncus articulatus</i>	N	N
Leyland cypress	<i>Cupressus x leylandii</i>	N	N
Lodgepole pine	<i>Pinus contorta</i>	N	N
Marsh thistle	<i>Cirsium palustre</i>	N	N
Meadow sweet	<i>Filipendula ulmaria</i>	N	N
Meadow buttercup	<i>Ranunculus acris</i>	N	N
Meadow foxtail	<i>Alopecurus pratensis</i>	N	N
Mountain fern moss	<i>Hylocomium splendens</i>	N	N

Norway spruce	<i>Picea abies</i>	N	N
Ostrich fern	<i>Matteuccia struthiopteris</i>	N	N
Pedunculate oak	<i>Quercus robur</i>	N	N
Perennial ryegrass	<i>Lolium perineum</i>	N	N
Purple moor-grass	<i>Molinia caerulea</i>	N	N
Ragwort	<i>Jacobaea vulgaris</i>	N	N
Red fescue	<i>Festuca rubra</i>	N	N
Reed canary grass	<i>Phalaris arundinacea</i>	N	N
Rowan	<i>Sorbus aucuparia</i>	N	N
Selfheal	<i>Prunella vulgaris</i>	N	N
Sika spruce	<i>Picea sitchensis</i>	N	N
Silverweed	<i>Argentina anserina</i>	N	N
Silver birch	<i>Betula pendula</i>	N	N
Sharp-flowered rush	<i>Juncus acutiflorus</i>	N	N
Spear thistle	<i>Cirsium vulgare</i>	N	N
Soft rush	<i>Juncus effusus</i>	N	N
Star sedge	<i>Carex echinata</i>	N	N
Sycamore	<i>Acer pseudoplatanus</i>	N	N
Sweet vernal grass	<i>Anthoxanthum odoratum</i>	N	N
Tormentil	<i>Potentilla erecta</i>	N	N
Tufted hair grass	<i>Deschampsia cespitosa</i>	N	N
Tufted vetch	<i>Vicia cracca</i>	N	N
Violet	<i>Viola spp</i>	N	N
White clover	<i>Trifolium repens</i>	N	N
Willow	<i>Salix spp</i>	N	N
Wood avens	<i>Geum urbanum</i>	N	N

Yarrow	<i>Achillea millefolium</i>		
Yorkshire Fog	<i>Holcus lanatus</i>	N	N
<b>Mammals</b>		<b>SBL</b>	<b>Argyll &amp; Bute LBAP</b>
<b>Common Name</b>	<b>Scientific Name</b>		
Badger	<i>Meles meles</i>	N	N
Fox	<i>Vulpes vulpes</i>	N	N
Otter	<i>Lutra lutra</i>	Y	Y
Pine marten	<i>Martes martes</i>	N	N
Red squirrel	<i>Sciurus vulgaris</i>	N	Y
Roe Deer	<i>Capreolus capreolus</i>	N	N
Water vole	<i>Arvicola amphibius</i>	N	Y
Wildcat	<i>Felis silvestris</i>	Y	Y
<b>Amphibians</b>		<b>SBL</b>	<b>Argyll &amp; Bute LBAP</b>
<b>Common Name</b>	<b>Scientific Name</b>		
Palmate Newt	<i>Lissotriton helveticus</i>	N	N
<b>Birds</b>		<b>SBL</b>	<b>Argyll &amp; Bute LBAP</b>
<b>Common Name</b>	<b>Scientific Name</b>		
Blackbird	<i>Turdus merula</i>	N	N
Common Buzzard	<i>Buteo buteo</i>	N	N
Kestrel	<i>Falco tinnunculus</i>	Y	N
Meadow Pipit	<i>Anthus pratensis</i>	N	N
Mistle Thrush	<i>Turdus viscivorus</i>	N	N
Robin	<i>Erithacus rubecula</i>	N	N
Woodpigeon	<i>Columba palumbus</i>	N	N

Appendix D **NORTH ARGYLL ORNITHOLOGY CONSULTATION SEPTEMBER 2021**

---

**ERM has over 160 offices across the following countries and territories worldwide**

Argentina	The Netherlands
Australia	New Zealand
Belgium	Norway
Brazil	Panama
Canada	Peru
Chile	Poland
China	Portugal
Colombia	Puerto Rico
France	Romania
Germany	Russia
Ghana	Senegal
Guyana	Singapore
Hong Kong	South Africa
India	South Korea
Indonesia	Spain
Ireland	Sweden
Italy	Switzerland
Japan	Taiwan
Kazakhstan	Tanzania
Kenya	Thailand
Malaysia	UAE
Mexico	UK
Mozambique	US
Myanmar	Vietnam

**ERM**

6th Floor,  
102 West Port,  
Edinburgh  
EH3 9DN.

T: 0131 221 6750

[www.erm.com](http://www.erm.com)